

**Community Advisory Panel Meeting Summary**  
**Memorial Park Building**  
**Tittabawassee Township**  
**December 3, 2003**  
**4:30 p.m.**

Attendees: Ruth Averill, Mary Jo Bean, Len Ballosh, Drummond Black, Vince Castellanos, Robert Cowling, Betty Damore, Kevin Datte, Tracey Easthope, Garret Geer, David Gustafson, Rick Hayes, Gary Henry, Kathy Henry, Michelle Hurd Riddick, Terri Johnson, Michael Kelly, Brian Kischnick, Chuck Lichon, Donna Mallonee, Sandy Mannion, Kathie Marchlewski, Bill McQuillan, Terry Miller, Rob St. Mary, Douglas Spencer, Jeremiah Stettler, William Webber, Greg Whitney, Mary Whitney and Melissa Whitney.

Department of Environmental Quality (DEQ) staff in attendance: Joy Brooks, Allan Brouillet, Brenda Brouillet, Steve Buda, Cheryl Howe, Ginny Himich, Trisha Peters, Liane Shekter Smith, Al Taylor and Terry Walkington.

Department of Community Health (DCH) staff in attendance: Brendan Boyle, Linda Dykema and Kory Groetsch.

Department of Agriculture staff in attendance: Brian Hughes.

Agency for Toxics and Disease Registry (ATSDR)/U.S. Public Health Service staff in attendance: Mark Johnson.

### **Opening Remarks and Introductions**

Cheryl Howe, Moderator, welcomed everyone to the fourth meeting of the Community Advisory Panel (CAP) and asked agency staff and attendees to introduce themselves.

### **Approval of October 8, 2003 CAP Meeting Summary**

Cheryl Howe asked whether there were any comments on or revisions to the draft summary for the October 8, 2003 CAP meeting. None were raised.

### **Preliminary Exposure Investigation (PEI)**

Dr. Linda Dykema presented an overview of the PEI using Powerpoint slides (attached). The presentation handouts provided at the meeting are available upon request. The PEI protocol may be obtained from Dr. Dykema or is available on the DCH website at [http://www.michigan.gov/mdch/0,1607,7-132-2945\\_5105-83774--,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2945_5105-83774--,00.html). The protocol can also be accessed at [www.michigan.gov/mdch](http://www.michigan.gov/mdch) by clicking on "Inside Community Health," then "Health Administration," then "Environmental Epidemiology and Toxic Substances," and then scrolling down to "Features."

### **Questions**

**Why exclude people who have lost more than 15 pounds in the last year from participating in the PEI?** Blood lipids may not be at steady state levels. Under the protocol, lipid analysis is being done in order to determine the lipid-adjusted levels of dioxins in blood.

**What about excluding people with weight gains?** There is a question about this in the questionnaire. This will be looked at in the pilot investigation.

**Why are pregnant women being excluded?** They are being excluded due to the risk in drawing 80 milliliters (ml) of blood.

**Is what was presented the final draft of the protocol?** The Saginaw and Midland County Health Department representatives indicated that they would have appreciated seeing the protocol before it was published. Dr. Dykema indicated that the draft protocol was just approved by the ATSDR and was not released prior to this approval.

**What are the health effects of dioxins?** A wide spectrum of health effects have been seen, primarily in lab animals, and some in humans. At low levels, they include immune system and developmental effects. At high levels, chloracne has been observed. The World Health Organization, Environmental Protection Agency (EPA) and ATSDR consider dioxin (2,3,7,8-TCDD) to be a known human carcinogen, primarily causing lung cancer. The dioxin congener mixture typically seen is considered a probable human carcinogen and has been shown to cause cancer in lab animals. There is some dispute over the cancer data. Dr. Dykema mentioned a study of exposed Netherlands children. In the human studies, it is hard to determine whether the health effects seen are from PCBs or dioxins since people are exposed to many chemicals.

**Is testing being done for other contaminants?** No, testing is just being done for dioxins/furans and PCBs with dioxin-like toxicity.

**Has anyone seen the study? No. Who reviews the study? ATSDR. Because they're funding it? Yes.**

**What is the cost of the study?** ATSDR costs will be about \$40,000. DEQ soil sampling analytical costs will be \$250,000 to 300,000. Dust sampling costs will be about \$30,000. The total cost will be about a half million dollars and will vary depending on whether the dioxin levels are high or low. The ATSDR has not yet provided funding, but has indicated a commitment to doing so.

**Why are 80 milliliters of blood being collected?** This is what the Centers for Disease Control recommends.

**What if you don't find anything?** The DCH will be happy if the PEI shows no problems. There are still a lot of issues with funding the expanded investigation, since the state does not have the money available for this. However, the data can be used to draw a relationship between local levels and other levels in the country (e.g., if the samples show levels are greater than 90 percent of the norm, they will be considered to be elevated).

**Can comments be made on the protocol?** Comments are welcome, but the DCH will be proceeding with the protocol. Later in the meeting, Dr. Dykema clarified that page 2 of the protocol states that public comments will be accepted for 30 days. [Note: Subsequently, the DCH extended the public comment period to February 6, 2004.]

**Further Discussion:** A CAP member commented that a video of Dr. Linda Birnbaum of the EPA which gives an interesting perspective of the effects on human health can be viewed on the Tittabawassee River Watch website and it only takes about an hour to watch. Dr. Dykema indicated that Dr. Birnbaum also talks about the Viet Nam veterans' health effects (e.g., diabetes) and concurred that as a source of education on what the EPA has to say, the tape is excellent. Dr. Birnbaum is highly recommended as a speaker. Another CAP member said that the EPA officially says dioxin is not a carcinogen. Dr. Dykema clarified what she had said earlier by explaining dioxin's role as a cancer promoter. Another CAP member mentioned that a book (Poison That Fell From the Sky) about the Seveso, Italy release documented the health effects residents suffered from shortly after exposure to severe contamination (e.g., lesions and

a number of other problems). The more interesting studies are of the lower level exposures. Another CAP member commented that this was a more mature presentation than previous ones, but said they were troubled about the DCH saying that they will talk with the local health departments, but don't do it. ATSDR final approval was only received the previous Tuesday [refer above for the timeframe for submitting comments on the PEI protocol]. Another CAP member commented that there is no trust with the local health department (Saginaw County). A question was asked about how the PEI results will be interpreted and provided to people. This will be done by letter and possibly by other follow up. Another CAP member asked whether the DCH met with the county health departments about the exposure investigation in August. Dr. Dykema responded that they did, but were unable to share the protocol document until now.

## **SOW Updates**

Al Taylor and Cheryl Howe provided an update on the status of Dow's SOW-related submittals and the DEQ's responses. A summary table was provided as a handout (attached).

**Notice of Deficiency.** Following receipt of the SOWs on August 11, 2003, DEQ staff met with Dow and its contractor in a series of about seven meetings to discuss the revisions that need to be made to the SOWs for approval. At the time of the CAP meeting, the DEQ was close to completing its review process and drafting the Notice of Deficiency (NOD) on the SOWs. Once the NOD is transmitted to Dow, an additional two weeks beyond the 30 days for response allowed in the operating license will be provided due to the holidays. The SOWs need substantial revision in order to be approved. The major deficiency was the lack of implementable Interim Response Activities (IRA) Work Plans. Other deficiencies will generally include the need to indicate that Remedial Investigation regulatory requirements will be met, identify the nature and extent of contamination (including contaminants other than dioxins and furans), compress the timing (e.g., conducting IRAs as soon as possible and conducting Remedial Investigation sampling during the 2004 field season rather than in 2005), and proposing all work in the form of work plans submitted for phased review and approval as required by the operating license,

**Wild Game Study.** Limited approval of the Wild Game Study was granted on November 7, 2003, and Dow's contractor expects to complete collection within about a week. It took longer than expected to get the Department of Natural Resources collection permit. Results are due back in early February.

**Parks IRAs.** DEQ and DCH staff met with some of the representatives of local municipalities and parks to discuss Dow's IRA responsibilities related to the parks under the hazardous waste facility operating license that was issued in June 2003. It is expected that future meetings on the Parks IRAs will include Dow and other stakeholders.

**Riverside Blvd. IRA.** Dow submitted a draft letter to Riverside residents rather than an IRA Work Plan as referenced in the DEQ's preliminary SOW review comments and in subsequent review meetings with Dow. The draft document is under review. The DEQ considers submittal of an implementable IRA Work Plan for this area to be a high priority. Other IRAs that have been discussed with Dow, but not yet submitted are listed in the handout table. As with the Riverside Blvd. IRA, Dow is expected to submit implementable work plans for these IRAs.

**Ecological Risk Assessment.** It was clarified that the ecological risk assessment that Dow is required to submit is not an IRA Work Plan, but is a component of the required submittals under the SOW.

**Discussion on SOWs and IRA Work Plans.** In response to a question, Mr. Taylor explained what is meant by contamination exacerbation. A CAP member commented that other than a reference to Phase II sampling, the IRA Work Plans don't mention dioxin and should be revised

to do so. Also, the wash station signs should be located closer to the wash stations. A question was raised about whether the DEQ is split sampling on the Wild Game Study. Yes, the DEQ will obtain split samples of the game. What about soil? Yes, DEQ staff will be observing the collection of the soil samples and will obtain splits, but there is no reason to believe that the subject areas are not highly contaminated. Will DEQ be split sampling in Midland? Yes. Who will be defining signage? Dow, DCH, DEQ, and local health departments will need to reach agreement on this in coordination with the parks management. Another CAP member commented that the dates of the SOWs should be clearly identified on the documents so they are apparent on printed copies, rather than just in the link on the DEQ web page. The SOW documents were placed on the website in the form they were received and were not dated.

Another CAP member commented on the transparency issue (e.g., reiteration of opportunity to comment on the DCH PEI). Dr. Dykema again responded that comments are welcome and will be implemented, if appropriate. Since the protocol was just approved last week, this is the first opportunity for community feedback. With respect to transparency, DEQ staff commented that they are trying to make sure the CAP is aware of Dow submittals. Another CAP member asked why Dow doesn't want to share draft documents (e.g., draft Riverside Blvd. letter) -- the CAP would have numerous comments to share. DCH staff commented that with respect to the transparency of "living documents," it may be that we need to produce a document that is in good shape before we can hand it to others for review. Sharing preliminary drafts may not be productive.

Another CAP member asked about when IRA Work Plans would need to be submitted by Dow. DEQ expects these to be submitted in 45 days after Dow received the NOD. This CAP member stated they were appalled that the DEQ is allowing Dow to delay IRAs when we knew of some of these problems from the beginning. DEQ staff responded by agreeing with the need to do a better job with this. Another CAP member asked for an explanation from Dow on this. Dow staff said they are here to participate and listen and that a lot of effort has gone into the SOWs. DEQ staff concurred that there is a lot of work involved with developing and implementing the SOWs for the off-site corrective action and that the DEQ is committed to working with Dow to revise the SOWs and in getting the residents' comments during this process.

Another CAP member asked what the holdup is on the signage in the parks and indicated they would like to see Dow get agreement on the signs. DEQ staff suggested that Dow technical staff attend the CAP meetings. Dow indicated that they would consider this; their attendance would probably be agenda driven. Dow commented that some things just take longer than expected (such as getting the wild game collection permits). The CAP member responded that since Dow is a Fortune 500 company with an army of lawyers, they should be able to address the signage. Another CAP member commented that signage needs to be addressed in the Midland parks as well. The DEQ committed to following up on this.

### **Definition of Frequently Flooded**

Allan Brouillet discussed the definition of what constitutes a frequently flooded area of the flood plain in the context of the Supplemental Advisory prepared by the RRD. Mr. Brouillet used a handout (available upon request) showing USGS river water levels from 1960 to 1999 to illustrate historical flood events. The graph showed 12 flood events over about an 80-year period. In 1984, Dow implemented dioxin controls on its wastewater discharge to the Tittabawassee River. It is assumed that dioxin discharges have decreased since that time and will continue to decrease in the future under Dow's discharge permit requirements.

As an example of property considered to be frequently flooded, Mr. Brouillet discussed Imerman Park. Looking at the 100-year flood plain location for Imerman Park, all of the areas sampled within this boundary and known to flood frequently show high dioxin levels. Areas outside this boundary show levels closer to the state-wide background. This and other sampling results in

similarly flooded areas show elevated dioxin levels. This was the basis for the decision to put out the advisory. About 2000 property owners along the river were notified by the DEQ about the dioxin contamination and the soil movement and supplemental advisories.

**Discussion:** A CAP member stated that yard samples on their property outside the 100-year flood plain (above it at the back door) show 242 parts per trillion (ppt) dioxin. Based on this, people may need to be concerned about more than the 100-year flood plain. DEQ staff responded that this is likely because some properties were built on fill material from the flood plain. In cases where levels exceed the 90 ppt level, property owners are subject to the facility disclosure requirements under Part 201 of Act 451. Generally, if anyone has lived at their property since 1986 and has seen it flood, it should be considered to meet the definition of frequently flooded. However, DEQ staff cautioned that there may be explanations for contamination that the advisory does not cover, such as property possibly being located in an old oxbow area. Another CAP member asked when residential sampling shows contamination, what does the DEQ tell people. So far, the DEQ has not seen residential sampling results that do not reflect contamination in the areas that are expected to be contaminated. Sampling results and locations are transmitted by letter, e-mail, and/or phone call. What does the DEQ tell people to do? Follow the soil movement advisory and take the precautions outlined in the brochure. It was suggested that more should be done for the residents (i.e., more contact with definitive answers so they don't use property inappropriately). Dow is proposing to investigate flood plain levels as part of the Remedial Investigation. This information will be provided to residents when it is available.

Another CAP member commented about the need for real estate agents education and cited a River Road property example where the realtor was vague and told potential buyers not to worry, just make a lower offer, there was nothing to be concerned about. DEQ staff indicated that information had been sent out to the realtors association. Another CAP member stated that it is the property owner's responsibility to disclose. Another CAP member asked what do you tell people about the property. The advisory brochures can be shared with the potential purchaser. Disclosure only needs to be made for the portion of the property that floods and has contamination greater than the criteria. It was requested that educational language be developed on what should be said and outreach should be done. So far the only outreach has been the pamphlets that were provided in August. The DEQ committed to doing some targeted outreach to realtors associations. Another CAP member asked whether something could be done through the Register of Deeds or in the title review. It was reiterated that it is legally the seller's responsibility to disclose.

### **Farmers Outreach**

Dr. Brian Hughes announced that a town meeting with farmers was scheduled for December 11, 2003 from 7:00 to 9:00 p.m. at the Freeland Elementary School. Planned topics include an overview of the dioxin issue in the flood plain, farming practices, soil movement, and Conservation Reserve Program/Conservation Reserve Enhancement Program enrollment. Farm owners and lessees have been invited to the meeting. CAP members are also welcome to attend.

### **Update on Dow Off-Site Corrective Action Activities**

**Note:** Prior to providing this status update, Mr. Taylor asked a person in the room who was videotaping the meeting who he was and why he was taping the meeting. They replied that they were taping the meeting for their brother-in-law, who could not attend the meeting. CAP members commented that it had been decided in an earlier meeting that taping of meetings would not be allowed. Ms. Howe asked this person to talk with her after the meeting.

**Update:** Dow's consultant Limno-Tech has been in the field doing Remedial Investigation pre-work on the Tittabawassee River Flow and Solids Monitoring Work Plan to determine water stages and transect locations. Poling has been done and clad pads have been placed for measurement of solids accumulation. Dow has been notified that chemical characterization needs to be done on the accumulated solids. The rebar and flags visible on the river were placed there by Limno-Tech as part of this work.

### **Update on Superfund Innovative Technologies Evaluation (SITE) Project**

Mr. Taylor indicated that the U.S. Environmental Protection Agency has asked the DEQ to participate in a study being conducted by Batelle to identify more economical and rapid dioxin analytical screening technologies. The DEQ has collected Tittabawassee River flood plain and Tittabawassee/Saginaw River sediment samples. Dow has declined to participate in the SITE project. The city of Midland also declined to allow the DEQ to collect samples at previously sampled parks and schools. As a result, the DEQ is looking at collecting samples in Michigan Department of Transportation road rights-of-way and at private residences in Midland. The DEQ will provide notification of this sampling to the city of Midland and the Midland County Health Department.

**Questions/Discussion:** A CAP member asked how Dow could prevent the DEQ from sampling their property. This is because the SITE sampling is for non-regulatory purposes. The DEQ decided to pursue other options because of the timing issue – samples were due last week. Samples collected last week by Sue Kaelber-Matlock were conducted in the same manner as former sampling so that results can be added to the database. A comment was made that it is difficult to understand how Dow can claim they are stepping up to the plate when they have refused to participate in the SITE sampling. Terri Johnson said she could not speak to that. Another CAP member asked whether Ms. Johnson could find out why and report back. Ms. Johnson responded that she would work through Ms. Howe on that. Another CAP member stated that this seemed to indicate a lack of good faith, transparency, and willingness to cooperate. Mr. Taylor reiterated that the SITE sampling is not intended to be for site characterization purposes, but rather to assist the EPA with technology development.

### **Wrap-up**

A CAP member stated that they were concerned that the meeting had been videotaped, so this issue was revisited. Taping is inconsistent with the CAP's ground rule that comments made by CAP members are not for attribution. As a result, the person who was taping the meeting offered to give the tapes to Ms. Howe. The CAP was satisfied with this. The tapes were turned over to Ms. Howe and the meeting proceeded.

Mark Johnson expressed appreciation to Dr. Dykema for development of the PEI. Some discussion ensued regarding funding of the larger study that will follow the pilot. Potential topics for the next meeting are: Responses by Dow in follow-up to the flip chart items at the September meeting and education on other clean up projects (e.g., Woonasquatucket River). Thanks to Tittabawassee Township for providing the meeting place and snacks at the last minute for this meeting. The next CAP meeting is scheduled for 4:30 - 7:00 p.m. on Wednesday, January 7, 2004, at the Green Point Nature Center.

The meeting was adjourned at about 7:00 p.m.