

**Saginaw-Tittabawassee Rivers Contamination CAG  
Full CAG Meeting  
Memorial Park, Freeland MI  
Monday, May 18, 2015  
6:00 PM – 8:30 PM  
DRAFT**

**CAG Members Present**

Drummond Black  
Charles Curtiss  
Leonard Heinzman  
James Krogsrud  
Terry Miller  
Luis Mulford  
Lee Pavlik  
Nancy Pavlik  
David Sommers  
Joel Tanner  
Bryce Wakeman  
Bob Wiese

**CAG Members Absent**

Armando Falcon  
Michael Kelly  
Jim Koski  
Rachel Larimore  
William Marsrow  
Laura Ogar

**Ex-Officio Members Present**

Todd Konechne, Dow Chemical  
Al Taylor, MDEQ  
Mary Logan, EPA

**Support and Agency Staff Present**

Kip Cosan, Dow Chemical  
Janelle Pistro, Dow Chemical  
Diane Russell, US EPA  
Doug Sarno, facilitator

Doug Sarno called the meeting to order at 6:10 PM. Agenda items included:

- CAG Updates
- EPA Project updates
- Update on the AOC program
- Floodplain cleanup decision and planned 2015 activities

Copies of all meeting summaries and presentations are available at [www.saginawcag.com](http://www.saginawcag.com).

Materials and additional information on the Dow Chemical Site including all presentations from CAG meetings are also available at the EPA web site at <http://www.epa.gov/region5/cleanup/dowchemical/cag.htm>

## **1. CAG Updates**

Five people have applied for membership and are recommended by the membership committee, four were present and voted onto the board. The new members are:

- Terry Miller
- Luis Mulford
- Lee Pavlik
- Nancy Pavlik

Communications Committee. The photo on web site was changed based on input from previous meetings. The committee has developed some brief materials which were distributed including a card advertising the CAG and a one page summary of the site cleanup for use in talking with the community and also has been posed on the CAG web site.

MSU provided an overview of the community engagement work they are doing through NIEHS.

Discussion was conducted regarding a potential river tour prior to the July meeting.

Diane Russell discussed a session to be presented at the 2015 EPA Community Involvement Conference, August 4-6, in Atlanta. The session will present the outreach activities conducted with regard to the floodplain cleanup plan is scheduled 8:30 AM Tuesday August 4. Information is at [epa.gov/cicconference](http://epa.gov/cicconference).

Diane and Doug Sarno will be attending and a CAG member was also desired to provide the range of perspectives. Dave Sommers volunteered, Bryce Wakeman agreed to be a backup.

## **2. EPA Updates**

### **Segment 2.**

There are three bank stretches in Segment 2 where stabilization work will take place.

### **Floodplain.**

In the planning process to get ready for implementation.

## **3. Midland Cleanup Update**

Art Ostaszewski from MDEQ presented this information. Dow has provided annual updates on this project.

The project was completed in three years, ahead of the original schedule of five years. The project focused on air deposition of dioxins from past practices at the Dow incinerator complex. The initial area for cleanup developed in 2012 from looking at historic deposition pattern.

Dow conducted the work under approval and supervision from MDEQ. Permission was requested of homeowners to sample their yards. The cleanup level for dioxin was 250 ppt. Properties were identified as clean (<220 ppt), needing more sampling (220 to 280), or requiring cleanup (>280). As needed, cleanup was conducted and landscaping plans were developed—replaced vegetation, rebuilt decks. A foot of soil was removed from contaminated areas.

A typical property was remediated in about a week's time. Creating the standard of removing one foot of soil helped to speed the process. A final walkthrough was conducted with residents at end of each process and Dow would send a completion letter to the homeowner.

Dow provided annual report to MDEQ each year.

Approximately 1683 total properties requested sampling, 134 total properties were cleanup up (8.1%), 48 denied access, and 1501 did not require cleanup. This equaled a 97.1% participation rate.

At approximately 10,000 feet away from the incinerator, the number of remedies dropped off significantly. Older homes (1940s) required more cleanup than newer homes.

Dow submitted a final report on December 15, 2014 providing an overview, human health and ecological risk pathways addressed and appropriateness and completion of the remedy. It is a 675 page report with and additional 8,000 pages of appendices.

Over 200 different substances were evaluated. Arsenic was the only contaminant found at a level of concern for human health other than dioxin. Dioxins and Furans were the only contaminants of concern from an ecological risk perspective.

Long-term monitoring is in place to obtain access to the 13 remaining properties that have not yet granted access. Dow has implemented the MISS DIG program to address future action and other properties that might require future action like undeveloped woodlands. By January 31 each year Dow will provide updates on the status of each of these properties until all are remediated.

Dow had a local office where the public could visit, get information, and talk to folks.

Institutional controls and financial assurances are required for the plan to be implemented moving forward.

A Public Hearing is tentatively scheduled for July 22 to reissue Dow's operating license to manage their hazardous waste management practices on and off the site. A 10 year operating license would be issued in September if no problems are identified.

CAG Question: Was there a correlation with wind direction? Wastes were burned at more than one location so we saw different patterns, but predominantly there was a north-east direction.

CAG Question: With the soil moving around, did anyone look at builder records? No, these were too old (50-60 years) but we could understand what was in the soils vs. what was deposited from air. This is why we sampled every individual parcel as we could not know where the contamination had come from.

CAG Question: What happens if Dow goes away? That is why we have the financial assurance set aside to manage future costs. This year the relicensing also requires financial assurance should the entire plant close.

CAG Question: Were there parks or playgrounds in this area? Yes, and we looked at each unit individually so that the whole property was understood where the contamination might be present. Was the same cleanup level used for these areas, which is above the state level of 90 ppt? Yes, 250 ppt. Only a few parcels were found to need cleanup.

CAG Question: What were the levels at the Dow fence line? Approximately 50 properties were removed from residential use along the fence line.

CAG Question: If the state level of 90 ppt were used, would you still require institutional controls? Yes, it would still not be safe for agricultural use, for example if someone wanted to raise chickens.

CAG Question: Is there a level for agricultural use? No.

CAG Question: Did we see any human health impacts? This cleanup was based on risk assessment, not observed health impacts. Midland did see a higher exposure level in blood as per the UM study.

CAG Question: Was EPA involved in this cleanup? They provided some expert support but EPA is working under Superfund for the River cleanups and the State is taking the lead on the Midland cleanup under RCRA. There is close coordination on both projects.

### **3. Cleanup Segment 3**

Mary Logan, EPA Remedial Project Manager, provide this presentation. Segment 3 includes 4.2 miles of river, beginning approximately 7.2 miles downstream of the Bridge, and includes Reaches R through AA. Focus is on in-channel sediment deposits and riverbanks. The river in this stretch is 250 to 400 feet wide, with natural conditions. Bank areas include natural, agricultural, residential and recreational uses. Quite a bit of investigation of this area has been conducted over time, including 1800 sediment samples were taken from about 250 locations. The goal is to remove sources of future contamination that will contribute to bioaccumulation in fish. Using 1/2 mile sampling units to bring overall levels down. Dioxins and Furans are the main targets and are not distributed evenly. Erosion is not consistent throughout the segment.

2 sediment management areas, each about 0.4 acres, and 11 bank management areas have been identified so far.

Potential cleanup options match what has been done in previous segments—containment, removal, or monitored natural recovery for sediments; stabilization or removal for banks.

There is no presumptive remedy, EPA will look equally at in place and removal options. EPA evaluation criteria include effectiveness, implementability and cost.

The Superfund process includes investigation, options, select remedy, design, construct and operation and maintenance.

EPA will be selecting a cleanup plan later this year and obtain public comments on the proposed plan. Dow is preparing a report on the contamination in Segment 3. Agencies will review and finalize the report. Summer 2015 is the target for the proposed plan, probably in August.

Possible Action: The CAG might want to have another meeting this year depending on the timing of the proposed plan.

Looking to the future, segments 4 and 5 will be combined into one report.

CAG Question: Are we noticing any trends as we move downstream? Still early but expect to see fewer contaminated bank areas. There are deteriorating banks, but not all are contaminated. Sediment contamination is largely determined by the shape of the river and where contaminants might have been deposited.

CAG Question: How will residents be notified? EPA sends out a fact sheet to its email list, newspaper announcements, direct mail, and also reaches out directly to landowners that will be affected in Segment 3.

Other Comments:

The CAG comments on the last proposed plan were excellent, need to make sure new members have them.

Walleye festival was a big success, lots of fisherman on the River and Bay.

The meeting was adjourned at 8:05 p.m.