

**Saginaw-Tittabawassee Rivers Contamination CAG
Summary of Full CAG Meeting
Saginaw Valley State University – Curtiss Hall
Monday, July 15, 2013
6:00 PM – 8:35 PM**

DRAFT

CAG Members Present

Drummond Black
Charles Curtis
Armando Falcon
Matthew de Huis
Leonard Heinzman
Deborah Huntley
James Krogsrud
Frank Kuszak
Rachel Larimore
Judith Lincoln
Donna Mallonee
David Meyer
Laura Ogar
David Sommers
Brian Thomas
Paul Vasold
Bob Wiese

CAG Members Absent

Jeffrey Bulls
Ryan Jankowksi
Michael Kelly
Joel Tanner
William Webber

Ex-Officio Members Present

Mary Logan, USEPA
Todd Konechne, Dow Chemical

Support and Agency Staff Present

Mary Breeden, US EPA
Kim Cousans, Dow Chemical
Joe Haas, FWS
Cheryl Howe, MDEQ
Diane Russell, US EPA
Doug Sarno, facilitator

Deb Huntley called the meeting to order at 6:08 pm. Agenda items included:

- CAG Updates
- General Project Updates
- Segment 2 Cleanup Decision

A videotape of this meeting, along with copies of all meeting summaries and presentations is available at 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 new members were accepted to membership of the CAG by unanimous consent. They are:

Armando Falcon
James Krogsrud
Frank Kuszak
David Sommers
Brian Thomas

Donnas Mallonee was also formally approved. Drummond Black and Judi Lincoln were appointed to new three-year terms.

Michigan State University (MSU) representatives were introduced. Michelle Jakes, Superfund Research Program Community Engagement Corps, noted that she would like to talk with as many board members as are willing.

2. General Project Updates

Diane Russell, EPA, provided updates on a variety of outreach activities. She expressed condolences concerning the death of Roosevelt Abraham. Roosevelt had worked as a river walker for First Ward Community Center. The Bay County Health Department and the Bay City State Park have worked with EPA as communication partners, helping to get the fish advisory out, working on summer programs with Saginaw Youth during day camps on fish advisory and environmental issues. Another program has worked at 28 schools, reaching 2600 students on Bald Eagle and bioaccumulation issues.

EPA is continuing to conduct floodplain outreach and possible cleanup options. The last meeting was held at end of June, now on hold until after the public comment on Segment 2.

CAG Question: For the fish advisory, are you tracking the effectiveness of communication? It has been pretty successful in getting out information and having conversations. About 2,000 contacts have been made to date. It is an advisory, can't make people do it.

CAG Question: Is anyone working on a publication about which fish are safe to eat? The fish advisory has a graphic that identifies the different fish.

CAG Question: There is a walleye festival each year, are those folks getting the message? There are some kids programs associated with that, and EPA has interacted with a lot of folks there. There are information stations and all of the information is there and the Health Department is there as well.

CAG Comment: Would like to see more information about the cleanup itself, and what is actively being done, and how the river is getting cleanup. What is being done? EPA does have its newsletter. EPA will work with their community involvement folks to work on ways to help communicate this.

CAG Comment: A lot of the information that comes out is too complex and scientific, you need to focus on the impacts of what is happening, can we make it simpler for folks and more available and accessible to everyone? This would be a good item for discussion at the September CAG meeting.

Todd Konechne, Dow Chemical, provided an update on Segment 1 activities. Implementation was delayed a few weeks due to high water. By early June, all product recovery was fully installed and operating in SMAs 2, 3, and 6. Also working on the containment system in SMA 2, consisting of a sheetpile wall and cap. There are about 10 folks focused on product recovery and another 8 working on the containment system.

CAG Comment: Where are we on the timing? Were hoping to get out of the filed early, ahead of where we were last year but not as far along as we had hoped. Making good progress though.

3. Segment 2 Cleanup Decision

Mary Logan, USEPA, provided the presentation. EPA issued the proposed Plan and began the public comment period on July 8 to end on August 22. The public meeting is scheduled for July 24. Segment 1 is adjacent to Dow Chemical and cleanup is underway. Segment 2 is immediately downstream of the plant. There are 5 sediment management areas (SMAs) of which 2 were previously addressed, and 7 bank management areas (BMAs) of which 2 were also previously addressed.

The total segment is 4 miles long and about 300 feet across. It consists mostly of natural river conditions, with adjacent agricultural, residential and commercial/industrial uses. Dioxins and furans key contaminant drivers, not evenly distributed. Riverbank erosion varies. The floodplain cleanup is being considered separately. Extensive investigations have been conducted within segment 2. The chemical, physical, and biological study results are available on line. Both in-channel and riverbank actions have already been performed.

Cleanup will begin in 2014, and two construction seasons will be needed.

Proposed actions for sediment management and bank management areas include:

SMA 2-1 and 2-2 monitor and maintain existing caps

SMA 2-3 and 2-4, remove and dispose sediment

SMA 2-5, capping

BMA 2-1 and 2-2, monitor and maintain existing stabilization technologies

BMA 2-3 through 2-7, stabilize riverbanks

All will require detailed remedial design, temporary access, disposal at approved locations, operation and maintenance, health and safety plans, institutional controls.

EPA evaluation criteria includes effectiveness, implementability, and cost. All options must be protective and comply with laws and regulations. EPA compares long-term effectiveness and short-term effectiveness. Treatment is also considered but is not a real option here. EPA also looks at technical and administrative feasibility.

Both dry dredging and wet dredging technologies will be used.

Dry dredging. Uses sheetpile to isolate and dewater the work area and allow excavation in dry sediment. Sheetpile is then removed and the hole will be left behind that will be allowed to fill naturally.

Wet dredging. Mats will be placed in the river for equipment and removal conducted with a mechanical dredge. Material will be dewatered and water management is a very important part of the process. Would not expect to see elevated levels of dioxins/furans in the water.

Cellular containment systems similar to what have been used in the past, will be used in some areas with a geocellular material that allows sediment to fill in the cells.

Traditional capping will also be used in some areas placing sand and anchoring material on the river bottom.

For SMAs, the real tradeoff is between capping and removal. Chose removal for SMAs 2-3 and 2-4 because of the higher levels of contamination and the amount of contamination near the surface as removal would provide higher level of protectiveness. SMA 2-5 is a relatively small area and has good vegetation near shore so capping made more sense.

The short-term effects of bank removal did not make sense for any of the riverbanks, so stabilization was selected.

Property owner access will be required for all projects which will be an important aspect of feasibility.

Estimated cost is \$4.5 to 5.4 million, with over \$8 million already spent on previous actions in the segment.

CAG Question: Are the caps a hazard to boating at low river levels. Can these materials harm boat bottoms? The mats are removed after cleanup, and the work areas are controlled during construction. Excavated areas are filled in with normal sand sediment. The water depth for a traditional cap is considered, but these are shallower areas anyway where less boating would occur.

CAG Question: What is the level of contamination in these SMAs? It varies. Some samples exceeded an average of 10,000 ppm and others closer to 500 ppm. Some levels are lower, but the contamination closer to the surface.

CAG Question: Where will dredged material go? Must go to a licensed facility. Local landfills have been used in the past.

CAG Question: What happens when someone won't let you on their property? EPA has met with all of the bank owners to let them know of their rights and are hoping to get cooperation. EPA could compel access but really don't want to do that.

CAG Question: How do you determine where these deposits are? First scientists looked at areas where sediment would most likely deposit, and the thickness of sediment that is more stable. Then extensive sampling was conducted to look at all possible contamination, areas where contamination was found was sampled at a more detailed level.

CAG Question: Does contamination build up more in deeper areas than shallower areas? The bulk of dioxins were released in the early 1900s, so areas that were likely to erode did so long ago leaving areas where sediments have been stable as the locations of contamination.

CAG Question: Is fish the only reason to conduct cleanup, as suggested by the one slide, this could turn people off? The main reason is to keep these areas from continuing to contribute dioxin into the river.

CAG Comment: There is still no scientific consensus on the hazards of dioxin.

CAG Question: How long is long-term monitoring? Essentially in perpetuity for contaminants left in place, or until EPA determines it is no longer necessary. Superfund

requires 5 year reviews of how the remedy is performing. April saw the 5th highest flood stage on record and everything held up pretty well.

CAG Question: How many property owners are there along this segment? EPA will get the precise answer, but in the dozens.

CAG Question: What about bank activity, what is the affect of people walking on the banks, will this harm the remedy? Not at the current level of activity, but we will try to limit this activity over time.

CAG Question: How effective is capping for future recontamination from the covered materials? Dioxin sticks to other particles, and we would not expect much new exposure or movement from under the cap.

CAG Question: What is the process for property owner input? The same as for anyone else. However, EPA is sensitive to their property rights and reached out to each one individually and met with them.

CAG Question: What was the general response of landowners? They were happy to be informed and generally willing to cooperate.

CAG Question: What are the property owners rights if they don't want to have the banks remedied? In the past when contamination was just affecting their own property, EPA did not force cooperation, but if EPA believes that the banks are a threat to the river and others, then we will be taking action. Michigan riparian rights are individual to specific properties, typically property owners do own to at least to the waters edge if not the middle of the river.

CAG Question: Could there be multiple property owners for one BMA? Yes

CAG Question: What percentage of money does Dow pay? All of it.

CAG Question: What is the cost-benefit of the removal? Ultimately we have a much higher comfort with the permanence of the remedy with removals.

CAG Question: What did we learn from the Island MM project and was it worth the effort? Yes, we do not believe that we should have just left it alone as it was eroding very rapidly. We learned some of the challenges of access and managing construction in the river.

CAG Decision: The CAG agreed that a formal set of comments should be developed.

Action: Doug Sarno will send out the CAG recommendation from Segment 1, a blank recommendation template, and notes from the meeting. Matt DeHeus, Jim Krogsrud, and Donna Mallone agreed to work on the recommendation and send it out to the full group.

Action: Laura Ogar offered to develop a letter of appreciation to retired CAG Members.

Public Question

For those sediments designated for removal, is it the plan as for previous cleanups that these sediments will be sent to local landfills, and wouldn't these more appropriately go to a hazardous waste landfill? These sediments are not characterized as hazardous waste. Materials classified as solid waste can be disposed at local sanitary landfills. Dioxin will be immobilized in any landfill. Leachability is one of the main criteria for hazardous materials and dioxins are not likely to leach.

The meeting was adjourned at 8:35 p.m.