

**Dioxin CAG Meeting Summary**  
**Saginaw Valley State University- Curtiss Hall**  
**Monday, March 15, 2010, 6:00 PM – 9:00 PM**

**CAG Members, and Ex-Officio Members Present**

Ronald Campbell  
Drummond Black  
Carol Chisholm  
Leonard Heinzman  
Michelle Hurd-Riddick  
Ryan Jankoska  
Lametria Johnson-Eaddy  
Judith Lincoln  
David Meyer  
Annette Rummel  
Michelle Steele

**Ex-Officio Members Present**

Todd Konechne, Dow Chemical  
Mary Logan, US EPA  
Al Taylor, Michigan DNRE

**CAG Members Absent**

Charles Curtiss  
Michael Espinoza  
Deborah Huntley  
Wendy Kanar  
Michael Kelly  
Janet McGuire  
Laura Ogar  
Daniel Sosa  
Paul Vasold  
William Webber  
Joel Tanner

**Ex-Officio Members Absent**

Joe Haas, US FWS

**Support and Agency Staff Present**

Wendy Carney, US EPA  
Don DeBlasio, US EPA  
Jeff Kelley, US EPA  
Diane Russell, US EPA  
Cheryl Howe, DNRE  
Doug Sarno, Facilitator  
Blair Giesken, Note taker

Doug Sarno called the Meeting to order at 6:10 PM. He provided a review of the agenda and introduced the speakers. Agenda items included the following:

1. History of the Dow Midland Plant
2. Environmental Regulatory history
3. Approach to cleanup of the rivers and bay
4. Approach to segmenting the cleanup activities
5. Review community values and next steps
6. Finalize the CAG charter
7. Discuss process for selecting co-chairs
8. Select the CAG name

### **1. History of the Dow Midland Plant**

Todd Konechne, Dow Chemical Clean Up Project Leader, provided a presentation entitled "History Summary and Source Control" which covered the following topics:

- Brief history of the Dow Chemical Company Midland plant;
- Explanation of early production, process cleaning, & waste management processes over time, and the byproduct of the family of chemicals known as furans which is responsible for much of the river contamination;
- Description of the RGIS groundwater interception system;
- Explanation of how contaminants may have ended up in the river
- Summary of source control measures in place.

Key Questions and answers related to Todd's presentation included:

- It was asked if an explanation of Dioxin exposure modes (inhalation vs. exposure to soil, etc.) could be given; Mary Logan explained that these types of questions would be more fully explored at a future meeting;
- It was asked if anyone has ever tried to determine a quantitative amount of the material that has been released into the river; to Todd's knowledge, no such figure is available, however AI explained that of target list of compounds that is collected through the RGIS system is analyzed on a yearly basis and a comprehensive study of these compounds is conducted every 4 years;
- It was asked whether production of military products such as Agent Orange occurred at Dow Chemical; Todd responded that not recently, but that during WWI and WWII there were military operations at the plant.

### **2. Environmental Regulatory History**

AI Taylor, Michigan Department of Natural Resources and the Environment, provided a presentation entitled, "Nature of Dioxin Contamination: Regulatory History and Authorities," which covered the following topics.

- Contamination released from the Dow plant is not limited to Dioxin; other related components are also present and will be discussed in the future;
- Description of Dioxins and the larger family of furans to which dioxin belongs;
- How Dioxin regulation has changed over time;

- History of State of Michigan and USEPA recommendations, precautionary measures, and corrective action;
- Description of implemented Interim Response Activities (IRAs);
- Update on current Dow response activities and the Corrective Action process;
- AI also addressed the earlier question regarding production of components for Agent Orange; noting that this was one of a number of different Dioxin producing processes;
- Overview of off-site contamination investigation activities.

Key Questions and answers related to Todd's presentation included:

- It was asked about other sources of contamination and whether or not this has bearing on the rivers and Saginaw Bay; AI agreed that other areas are important in understanding the findings of other components that are not related or linked to Dow;
- It was asked how many contaminants of concern have been identified as being from Dow Chemical; AI estimated that over 200 such contaminants have been identified, though there may not be analytical methods currently present for all of these contaminants;
- It was asked if each member of the Dioxin family found on the Dioxin Family slide have been released into the environment by Dow; AI responded that yes, of the Dioxins and Furans, the components shown on the slide are present as a result of Dow processes. However, AI noted that it is important to note that these components are not intentional products of Dow, but, rather, waste products from other processes;
- It was questioned whether the federal government is required to play any role in the cleanup of the Dioxins, since Dow Chemical produced components for Agent Orange for our nation's military use. Mary responded that they are currently investigating the Federal Government's obligation in regard to this issue;
- Judith asked about the difference of opinion regarding the acceptable level of toxicity for dioxins; AI responded that this is a very complex and controversial question that will need to be addressed in a future CAG meeting. Each state has different criteria as it is an evolving science;
- It was suggested that the "fingerprint" graph of chemicals related to the Dow plant (which was not included in the "Nature of Dioxin" presentation) be provided to everyone for future reference.

### **3. Approach To Cleanup and Segmenting of The Rivers and Bay**

Mary Logan, EPA Remedial Project Manager, gave a presentation on the approach to cleanup activities which covered the following topics:

- Description of three major cleanup tasks to control exposure, target highest levels of risk, and remove contamination;
- Discussion of how cleanup will be conducted in discrete segments moving from upriver at the Dow Plant to the bay to avoid recontamination.

- The overall approach to river cleanup also includes addressing areas in need of more immediate need for cleanup, rather than following a straight downstream pattern where higher risk areas may not be reached until far down the line.
- Flood Response and previously determined IRAs will still be taking place while options for the comprehensive cleanup will be planned and implemented;
- Criteria for segmenting the river for cleanup is underway and the CAG and public will be provided the opportunity for input to this criteria;
- Mary asked whether or not the CAG would like input into cleanup options before they are presented to the public and it was noted that this was an important role for the CAG;
- Doug commented that the CAG would act as a sounding board in this instance before proposals would be made to the public to help ensure that key public interests and concerns were addressed.

Key Questions and answers related to Mary's presentation included:

- It was asked how Exposure Units (EUs) are identified or defined. Mary and Al explained that areas that were flooded and of highest-concern early on were given the earliest sequence of numbers, but that, at this point, the numbering scheme is essentially unimportant and immaterial as they will not be taken in order;
- It was requested that a summary document posted to the vSpace site as to what remedies have been implemented thus far or what has been done up to this point. Todd and Mary noted that these items are on the agenda for future meetings;
- It was asked if it would be an annual, 3-mile by 3-mile process to evaluate these stretches of the river. Mary responded that the breakdown will potentially be in 3-5 mile stretches over multiple years. Frustration was expressed that the cleanup could take decades if performed this way and it was acknowledged that this is a long-term cleanup process;
- A question was raised about how much more investigation was required before cleanup can begin. Mary explained that we will never have enough data to understand every inch of the river, so we must look at what we do have to extrapolate information and apply information from what we know about certain geological areas to other areas we may know less about;
- It was asked whether the CAG will be able to have a hands-on experience of the river this summer to visually understand the structure and progress of the overall cleanup. It was noted that a tour or tours will be explored;
- It was asked whether once each section was complete that it would not be revisited. Mary responded that it is the hope for this to be the case that when one section of cleanup is completed, it be finished without need for revisiting.
- It was asked if the same level of priority would be assessed in terms of residential use properties on the floodplain to older couples as opposed to couples with children. Mary said that currently all residential use properties are lumped together, but that there may be future determinations of highest-priority areas based on different factors.

#### **4. Discussion of Segmenting Criteria**

Doug opened the discussion for the CAG to identify factors that are important to the community in determining how to segment the rivers for cleanup. The following potential criteria and topics were identified:

- Time of year and construction seasons;
- Level of contamination may affect segment lengths, as less contaminated sections may take less time to clean up (therefore, larger segments can be done within the same time frame in these areas);
- Property ownership and lot sizes may affect segmenting;
- Some areas have transient occupants, so it may be difficult to use age or family structure as a determining factor in the segmentation process;
- Working on the floodplain is limited due to seasonal levels of the water;
- It was asked if we have an approximate time frame for how much work can be done on a segment in a given period; Todd commented that we should remember there will be overlap- potential remedies for one segment or site can be developed while work is still being performed on the previous segment;
- It was asked if it were really important to divide into segments; Mary responded that, yes, this is important from a management perspective so we can analyze existing data and proceed in an orderly fashion limiting the risk of recontamination. However, these boundaries may become a bit fuzzy during the process, and segments may shift slightly based on findings;
- It was asked who will perform the actual work once decisions are made, and will their capabilities and capacities to get the job done influence the decision; Mary responded that the EPA anticipates that Dow will do the work; Todd stated that Dow anticipates that Dow will oversee the work, but that local contractors will be hired to actually perform it;
- It was suggested that cleanup be coordinated with local municipalities to understand Master Plan status of different parcels so that these details be considered when planning various remedies.

#### **5. CAG Management and Administrative Issues**

- It was decided that a subcommittee would take the values input to date and draft a comprehensive values statement for the CAG to review. Judith Lincoln, Ryan Jankoska, and David Meyer volunteered to be part of the subcommittee.
- Doug asked whether members would be willing to provide a brief biographical paragraph and list of affiliations to be shared with the community so that they may know about the CAG members who are representing them. Doug noted that this information would be published, perhaps on the established website to show the community who we are as a CAG.
- Doug noted that someone had mentioned there is no Public Health (Ex-officio) representative currently on the CAG. Mary agreed to take on researching who might be an appropriate candidate to fill this gap. It was suggested that a local representative might be appropriate, while others believed a state representative was more appropriate. Mary agreed to meet with other officials to come up with ideas for how such a representative should be engaged.

- Doug explained that consensus is not precisely defined in the Charter at this time. He noted that we will strive for unanimity if at all possible, but if not, we must evaluate if we've gotten as close as we could to a level of agreement, but that minority voices must still be adequately reflected as well. After some discussion, members agreed that a minority report should be included with any written recommendation or report provided by the CAG. It was noted that a minority report would also be helpful to the public to see the rationale behind the decision and that some purposeful, deliberate discussion did take place. At least one member disagreed with providing a minority report, because it may show division within the CAG, and that the discussion could be reported without pointing out which members did or didn't agree with a specific decision.
- It was noted that meetings summaries would not be written for attribution, but that all members would have an opportunity for review prior to final, and that if an individual would like attribution for a specific position or statement presented in discussion, it would be represented in the minutes.
- It was decided that the Co-Chair Candidates form a sub-committee to discuss and determine how the leadership and chairmanship be structured, and that this group would return at the next meeting with a proposal for the group on how this will be conducted.
- Doug reviewed that the issues at hand are whether or not to include Dioxin in the name and whether or not to tie the name to a specific geographic area; Doug suggested Tri-County Superfund CAG and raised the issue for further discussion. At least one member wanted to revisit discussion of the term Superfund.
- The group agreed to reconvene the issues of Name Selection and vSpace tutorial to next month's agenda.

Doug Sarno adjourned the meeting at 9:06 PM.

Copies of all presentations can be found at [www.epa.gov/region5/sites/dowchemical/](http://www.epa.gov/region5/sites/dowchemical/).