

This document summarizes information received at a meeting on the Framework for an Agreement between the Michigan Department of Environmental Quality and The Dow Chemical Company held April 6, 2005. The DEQ will compile and respond to the questions after all meetings have been completed so that one document can group and effectively respond to the issues raised. The notes and responses to questions from all meetings will be posted in the DEQ website as the documents become available.

COMPILED NOTES SUMMARY
Midland Dioxin Community Focus Group Meeting
Department of Environmental Quality (DEQ)/The Dow Chemical Company (Dow)
Holiday Inn, Midland

April 6, 2005

Phil Davis, Facilitator.

Invited participants at table. Public observers seated in audience. Minutes taken to capture comments, but comments not attributed to participants. Copy of minutes available to public; fill out a card to get a copy.

DEQ Director Steve Chester: DEQ issued an operating license to Dow in 2003. We were more process-based than results-oriented. Developed Framework for an Agreement Between the State of Michigan and Dow (Framework) for the remediation of dioxin/furan contamination in Midland, along the Tittabawassee River, the Saginaw River, and Saginaw Bay. The Framework provides a path forward to get the process back into the public domain. This is the second of four convening meetings in the four affected areas.

Do not know who all the potential stakeholders are. The stakeholders familiar with the community are asked to help us design a process for going forward with broader based public outreach.

Dow Vice President and Director, Michigan Dioxin Initiative, Susan Carrington: Many challenges, competing interests that need to be understood. Need your help regarding the future process, informing public, and keeping broader community involved.

The bottom of the agenda shows three ways to get comments to DEQ. Suggested questions can be found on back of the agenda, but participants are not limited to those questions. Comments and questions/answers from all four meetings are being compiled.

Chester made a presentation on the DEQ/Dow Framework.

Questions and Comments

Q: How does this process relate to enforcement of Dow's hazardous waste license?

Chester: The operating license remains in full force and effect. The operating license lays out what reports and work plans have to be submitted, but there are not specific deadlines for the actual work.

C: Complete characterization of the contamination was promised after the 1996 DEQ dioxin studies done after the U.S. Environmental Protection Agency studies in 1984. It has been on hold since 1996.

Chester: Framework does establish a path forward. Activities have been undertaken that had not occurred in the past; these activities indicate a commitment by Dow/DEQ to go forward.

DEQ Deputy Director Jim Sygo: Regarding the 1996 data, we are doing that. Characterizing Midland will be done subsequent to the bioavailability study. The Remedial Investigation (RI) work plan will be completed by the end of this year. We are assuming the bioavailability study will be completed by year-end so we will have the information to move forward.

Q: That still doesn't leave us much protection until this area is fully characterized.

Chester: Toxicology Excellence in Risk Assessment (TERA) is an independent body engaged to review the bioavailability study.

Q: There are two issues here: property-related and health-related. Where do public health issues fit into your scope?

Chester: Under law, Dow has corrective action responsibilities for historical contamination. We can rely on generic residential standards or, as we move forward, we can apply other site-specific standards if called for -- after the bioavailability study is done.

Q: Soil levels versus what is in people's bodies?

Carrington: Soil or bodies are two ways can study dioxin levels; so we are doing both.

Sygo: Our focus is soil, fish in the river, and consumption of fish. We are looking at the food chain. Other studies as well are trying to look at exposures from various perspectives. Dr. David H. Garabrant's study on soil contamination is looking at exposure in Midland/Saginaw Counties. We hope over-sampling in contaminated areas will reveal patterns. We are still dealing with trying to identify what the cleanup numbers will be. This question is associated with the bioavailability study as well.

Q: So a fair amount of assessment is still to be done?

Sygo: Yes.

Chester: Dow will then offer remedial options.

Q: You referred to a bioavailability study a number of times. Is there a list of other studies? What status do all the other studies have in terms of the impact on remedial activity? Does DEQ view them as having different levels of status?

Chester: Different studies have different values, because they provide different kinds of data *visa vis* cleanup criteria. A bioavailability study is more closely related to, and has a more direct impact on a cleanup standard vs. a blood serum study, which is conducted for a different purpose. But it only helps to have additional, rather than less, information.

Carrington: Bioavailability information will be used in the cleanup criteria algorithms. We are also trying to provide information to the community regarding blood levels here where there may be higher dioxin soil levels vs. comparison communities elsewhere in the state. We hope this data will help inform the community here as it makes decisions. This data could be useful as we go forward with those other studies (e.g., ecological study information for waterway discussions).

C: I applaud your looking at other studies. I am not as close to bioavailability studies yet (not as familiar with bioavailability studies), but I would encourage you not to discount what is learned from the University of Michigan (UM) exposure study. It is a great opportunity to establish any relationship between soil and blood levels of dioxin. Also, it would be important to look at other variables such as diet, lifestyle, etc. that could affect exposure levels. Soil levels alone do not mean much.

Q: To date, I am very pleased with the public process on the UM study. Will there be the same opportunity with the bioavailability study? Will the public be involved in every phase as the study progresses as before (with previous studies)? We reviewed decisions before they were made and want the opportunity to participate.

Chester: We will not just say "this is the number." There will be public awareness of the process.

C: I would like you to outline how you will engage the public in the bioavailability study.

Chester: I am not sure of the appropriate points for public involvement. I will take your question back to DEQ and get an answer.

C: I suggest you propose a process and let us comment on it.

Facilitator: We are looking for these types of comments in the next phase of discussion.

Chester: If you could give us some examples of what you would like to see in a process that would help us.

Q: I liked the way Dr. Garabrant engaged the public during UM blood studies. The city of Midland will engage its own experts.

Q: Would the general public be involved in engaging the city's expert(s)?

(Participant at table in response to above question) To the extent that the public wants to be involved in a city council meeting.

Chester: The Framework (see page 7) provides funding for the public to retain expertise.

Q: How would we apply for that money?

Chester reads the relevant section of the Framework (III.A.3):

To help local groups and community members understand technical issues and provide substantive input, Dow will provide a grant of \$50,000, for retention by the group of stakeholders of an independent expert from a list of qualified, neutral individuals developed by Dow and the State.

Chester: This provision demonstrates open and collaborative decision-making.

Q: Is it a fact that the Framework still maintains 95 parts per trillion (ppt) as the threshold? [Note: Michigan's cleanup criteria is 90 ppt, not 95 ppt.]

Chester: That does not change. The Framework acknowledges pursuit of a bioavailability study that leaves the door open for site-specific cleanup criteria.

Q: Can you confirm that the Framework document does not address any change in the regulation on the facility label?

Chester: That is correct; it does not change Part 201¹, of the regulation, enacted in 1995. That was a revolutionary law. The Legislature (state) and Governor thought it was important to eliminate strict liability and went to a causation standard. As a result, that law was pretty successful in encouraging Brownfield redevelopment. It protects innocent property owners and places the responsibility for cleanup on the responsible party. The Framework does not amend that law.

Q: If a property had remediation conducted on it, would it come off from being labeled as a facility?

¹ Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.

Chester: Right, that is correct.

Q: How is that documented? But, individual properties are not labeled as facilities. So if remediation is completed on an individual property, do you get a coupon or something?

Chester: A process has been in place for that since 1995. It is the obligation of the liable party.

Q: Are parcels in those geographic boundaries [Midland Priority 1 Interim Response Activity (IRA) Areas] currently labeled facilities?

Chester: Those parcels may exceed the 1000 ppt threshold. As an interim step, Dow is obligated to speak to those owners and implement IRAs from a menu of available remedies. They are probably well over 90 ppt. If Dow does a bioavailability study, that may have an impact on the status.

Q: Are those parcels going to be cleaned up in 2005?

Carrington: We are obligated to take short-term or interim actions on those parcels to interrupt contact with soil and dust in 2005, but not a final cleanup. We are talking with residents this week in Midland, and talked with Tittabawassee River residents a few weeks ago.

Q: Are those properties facilities or not?

Chester: The facility designation applies to contaminated properties (e.g., from Dow's historical operations). We will not know the extent (of dioxin contamination) until the remedial work has been completed. We believe those properties exceed 90 ppt. We will go where the science takes us. We cannot say the number will be higher. It could be the same or a lower number.

Q: If you owned a property in that area, what would your action be when selling? Would you believe you had a facility?

Chester: Whether it is called a facility or not, the critical point is whether it is contaminated or not. If it is contaminated, under law the seller has to disclose that fact to a prospective buyer. I would have a third party clean it up.

Q: You are assuming there is contamination, with no data. How would you know it is contaminated?

Chester: There is data reasonably close near the plant. Based on that data, it is reasonable to assume the contamination exceeds 90 ppt. But in terms of corrective action, it takes time to obtain data and make determinations on to how move forward. [But IRAs are corrective action and have been underway since late 2003.]

Q: Who is going to reconcile/communicate all this data from reports and studies (e.g., bioavailability study, exposure study, soil sampling), and fairly? It is coming out at different times by different parties.

Chester: There is only one bioavailability study - it is being conducted for Dow by the University of Missouri; that would impact both Midland and the Tittabawassee areas. We are looking to you to help us explain, to put together a process for bringing that information to the public, in an understandable manner.

Facilitator: That is at the heart of this meeting: What is the future of the affected communities going to be, and how do Dow and DEQ communicate with those communities in an effective and meaningful way?

Suggestions for DEQ and Dow

P = Participant

P: Midland knows its characteristics vs. the downriver communities. You are facing a very skeptical community. We have learned the lesson over and over that we need open processes so people can draw their own conclusions. I do not know much about the bioavailability study. The UM study is engendering confidence. Dr. Garabrant's approach to the health and environment study was much more useful. [DEQ Note: The UM study is an exposure study, not a health study.] A great deal of information has been made available. He laid out the facts in a very simple way. Just give people the facts. The community is more comfortable with the UM study in contrast to the bioavailability study. The community will not accept it if they do not understand it. The community now trusts retired scientists more than DEQ experts. Consider using all the communications tools like Dr. Garabrant did -- TV interviews, CAP meetings, LTEs, etc. Also various community groups, churches, etc.

P: But this is a very sophisticated community. They can handle the raw data, summaries, theories.

Facilitator: How?

P: Use web sites to get the science out. Communication is critical at churches, schools.

P: It is a science vs. emotion challenge. People do not know anything about the bioavailability study.

Chester: So we really need to communicate widely at service clubs, churches, etc.

P: The Garabrant study is of critical importance. Dr. Garabrant has built trust and credibility. The city of Midland runs very effective meetings-communicates well. I encourage DEQ/Dow to tap into local health departments. This meeting tonight was

very productive. I really appreciate it. It is a departure from the DEQ's Community Advisory Panel (CAP) meetings, which were not well run.

P: Speaking of CAP meetings, it would be a good idea to bring them back. Lower- and middle-income people are often left out of the loop. It could be they work for Dow (as operators or contractors); they may be more exposed. There are many low-income people in Midland. They might be overwhelmed or intimidated at a meeting like this. You need to reach the non-upper class public. Maybe smaller group meetings would be less intimidating, e.g., school district forums.

Chester: How do we do that? If we hold small meetings, we find we are criticized about keeping the public out.

P: Many lower income, mentally ill people are located nearest the plant site. Some who criticize small meetings as closed-door need to look at that (the issue of large meetings being intimidating for some people). I would be willing to give DEQ names and places for smaller meetings that are not threatening.

P: It is a comfort and trust issue. There are socioeconomic differences. Not everyone has the internet access. A tiered approach to your stakeholders is important. You may have to reach out to trusted parts of our community; industry and government, in general, are not trusted vs. clergy and the medical community. You have to provide information to some of those trusted places in the community. It is not perfect. Finding the trust point is critical.

P: The farther down the food chain you go the more trust you are going to get. Top-down is not going to work. If information comes from local health officials, it makes a big difference.

P: DEQ and Dow have to trust each other first. Pointing out where they have agreement is extremely important.

Carrington: We are sitting together here tonight.

P: Keep communications simple. You need clarity at the top for this to be possible.

P: Does it make sense to meet geographically, especially in impacted areas? Meet in local schools, voter registration areas, or small meetings.

P: Engaging the public is a slow process; you have to go back again and again, e.g., to the Salvation Army.

P: Show seriousness. If people are invited to a meeting by a letter, you might find you get a pretty good response vs. just an announcement in the newspaper.

P: Scientists love talking about science (e.g., algorithms), but you have to boil it down to a one-page graphic. But you cannot do that until you get decisions made at the top. It will be three or four years before you get there probably.

Chester: We can talk about the interim process.

P: People feel good that things are being done, but if numbers get changed in a couple years, they will wonder what the point of the interim actions was.

P: How have the homeowner meetings gone?

Carrington: We invited homeowners, tenants, and landlords in the Midland and Tittabawassee areas, but attendance was only 6 or 8 percent overall - even with follow-up calls. We expected a better turnout, but we are not getting that. People had choices of meetings (alternative dates). We will continue to persist, but we are not getting the turnout we had hoped for. Meetings were small and informative. Our contractors and the DEQ sat in. The meetings were not open to the public, because they were about individuals and their properties.

Q: If people did come, was the interest and understanding there?

Carrington: It differed. These were ground-level discussions. The real focus was on interim response activities required to be taken by Dow.

P: People in the community believe the UM study will be relied upon for corrective action. You need to get out and communicate about that bioavailability study; it was a big surprise to all of us that it may be relied upon more.

P: You already have the Framework. Tell people about the Framework.

Carrington: The Framework acknowledges that these studies are going forward.

P: Until the results of the studies come back, are you following the Framework?

Carrington: Yes, we are following the Framework, but it is an agreement to develop an agreement. It respects input from the community that had asked for right science, hence the bioavailability study for framing information under the Framework.

Chester: I'm hearing that we need to do a much better job of communicating to the public. That is going to be a challenge for us. We are a lean organization. Meetings take time, effort, staff. We need to figure out a way to be efficient.

P: There is a trust issue. What if someone does not want meetings?

Chester: When we hold small meetings, we get asked by others: How come I cannot come too? But if we start opening it up to additional participants, it soon spirals out of control. So we might require some tiering of stakeholders in planning meetings.

P: Work on priorities. Mine is that public health is number one, not property values. Do some work between meetings to rank priorities?

Chester: We are starting to move forward on the Framework. We are not getting credit for moving forward on those areas with the greatest public health risks first with IRAs.

P: You need to communicate the value of each of the studies -- bioavailability, human exposure, ecological risk assessment, etc. You also need to communicate key Framework elements. We need to hear from many scientists. You must bring in other scientists (i.e., Dr. Linda Birnbaum) from outside industry when there are industry-funded studies.

Chester: Dr. Birnbaum is scheduled to come to the community next week. It is important for us to provide you with information to make intelligent decisions. Our perspective is not always going to be the same as Dow's. We are working closely with Dr. Garabrant as well. The community should hear from all scientists.

Carrington: Dr. Garabrant has four people on the Science Advisory Panel for the UM study - one of them is Dr. Birnbaum.

Chester: Dr. Birnbaum is part of the TERA group (reviewing the bioavailability study) as well.

P: It is critical to get it right going forward; first, by giving a clear and correct definition of stakeholders. I have sent in my explanation in writing. A year ago I asked if the opinions of residents should carry more weight. Before you became Director, Dow and DEQ did not have the same answers. DEQ's credibility is less important than acknowledging the opinions of residents. Residents are the more qualified of stakeholders. I present three exhibits of that qualification:

- My property tax bill
- My dentist's card (he is engaged in the dioxin issue)
- My library card (the library is part of our quality-of-life)

While DEQ does not put much weight on these items, our residents do. Our residents' group repeatedly stated we own property and the quality of life here, which are legitimate interests. Plus we also vote. Far too often, DEQ fails to recognize our interests. We are more important than litigants, NGOs [non-governmental organizations, such as environmental groups] and the media. The media are only interested in sensational coverage. DEQ gives entitlement to NGOs; they are part of the general public, period; their agendas are secondary to the residents' interests. NGOs should compete in Lansing and Washington, but inside the community outreach

process, no NGO is more important than thousands of others. None of them owns property in the community or has the other qualifications I mentioned that property owners have. I have stood in line behind Tracey Easthope, who goes way over her allotted time, with the result that there was no time for residents to be heard. Miss Easthope's opinion should not carry more weight than that of residents. DEQ has to decide whether it is going to give preference to residents' opinions (as it should).

Chester: As we move away from Midland to the Saginaw Bay area, do you think stakeholders should be limited to residents? I am sure you would agree that there are other users: fishermen, hunters, businesses, etc. They are legitimate stakeholders too.

P: I am not saying that residents are the only stakeholders, only that their status not be lower than NGOs. Residents are the most important stakeholders. The Department of Community Health should consult with local health departments. I see them as stakeholders, but weigh them differently.

P: I acknowledge that. I also recognize that there are legal vested interests as you go down the river.

Chester: I am not sure how you got the impression we favor certain groups over others. We meet with businesses and others. Many users belong to Ducks Unlimited, Michigan United Conservation Club, etc. Our mission is to protect health and the environment; we are not captured by any organization.

P: I want to thank Steve for focusing on public health and the environment as priorities. Property values and economics are also important to residents. I think DEQ and Dow need to decide what message they want to get to the community. Craft a schedule. There is a whole lot missing. Interim actions, yes, but where will you be going beyond that? A road map is needed. It is very important to be open and transparent. There are a lot of ways to convey the message, once crafted; the web, media -- MCTV is a good vehicle. Spend time in the community. The city and county has respected leaders who need to be involved. You need to work with local officials. I think we can help. If we are not involved, it is probably going to hurt you.

Chester: By the end of the year we will have much greater detail. We know less about the Saginaw River/Saginaw Bay. We need to know more to reach finality. The Framework shows our commitment to move forward.

P: Dow's poisons have left Midland County and have impacted recreational areas. I think non-resident users of the Great Lakes have every right to be heard. We are in this together. These are our waters to fish and swim in, our air. Some do not own a house, but they are human beings, they are impacted. Think locally--act globally since Dow did not contain the contamination. Make sure different standing does not limit others' use of these resources.

P: For both parties, perception is reality. You guys are behind the eight-ball. You have an enormous job ahead of you. If any information is supplied, it is vague, or above people's heads or not enough. Provide information that is as factual as possible, as much as possible, as often as you can, to whomever you can. You have just got to get stuff out there. Just state the facts to Joe Average citizen out there; to the average citizen who just wants to know what is going on. I think they are awfully confused. They need simple, plain facts. I met Dr. Garabrant. He is successful, because he's pretty simple; he just lays out the facts. You have a tough road ahead of you. You are behind the eight-ball in the perception of the average citizen. Good luck.

P: I want to echo that.

P: But DEQ has done a lot; they've come a long way.

P: Not enough credit has been given to DEQ and Dow regarding the Framework. Some people think the IRAs are the solution. But it is important to clearly delineate this very early in the process. The disappointment with the IRAs is in thinking that is all that is being done.

P: Regarding tools, have public affairs at Dow and DEQ folks look at case studies in the literature (Times Beach, General Electric), where similar difficult cases were successfully addressed. See if there are any creative ideas.

Chester: You are absolutely right that we need to look at such tools. There are tools being used in Europe that are just now coming into use in the United States. We need to mix this with tiering.

Facilitator: It looks like there are no more questions or comments. I am closing this meeting at 8:20. Several of you have indicated that a tremendous amount of work is still to be done. I know the amount of time and effort folks have to put forward to attend meetings and keep informed. There are success stories we can bring to the table. There are academic case studies/business case studies that we can apply here to move forward in a productive way.

Compiled from notes taken by Francis Gillis (Dow Contractor), John Musser (Dow), Terry Walkington (DEQ), and Cheryl Howe (DEQ).