DRAFT MEETING NOTES
Dioxin/PCB TMDL Stakeholder Meeting
H-GAC Conference Room A
Second Floor
3555 Timmons Lane Houston, TX 77027
Tuesday, November 27, 2012
1:30 to 4:00 PM

1. Welcome & Introductions
   Rachel Powers called the meeting to order at approximately 1:35 PM. She thanked everyone for coming. Self- introductions of stakeholders, public participants, and H-GAC staff followed.

2. Review Agenda
   Rachel quickly reviewed the meeting agenda.

3. Adopt April 4, 2012, Meeting Summary
   Rachel asked the stakeholders to review the April 4, 2012 meeting minutes. The minutes were adopted with a few minor corrections.

4. Review the Stakeholder Group Roster
   Rachel reviewed the stakeholder group roster, and apologized for not filling the vacancies on the roster. There are three openings:
   - Clean Rivers Program
   - Citizen/Environmental Justice
   - Wastewater Industry

   She said that she hopes to have the vacancies filled by the next stakeholder meeting.

5. Update on the Draft Houston Ship Channel Total Maximum Daily Loads (TMDL) and PCB TMDL Projects, Ron Stein, Texas Commission on Environmental Quality

   Mr. Stein began by stating that there are three separate PCB and Dioxin efforts in the Houston area: the Galveston Bay Survey, the PCB TMDL, and the Dioxin TMDL. He mentioned that Dr. Rifai would have more information in her presentation regarding the PCB TMDL and the Galveston Bay Survey. The goal with the PCB TMDL is to get the work wrapped up and a TMDL adopted by the next fiscal year. For the Galveston Bay Survey Dr. Rifai's group is collecting data and analyzing fish tissue samples from the Galveston Bay system. For the Dioxin TMDL, they are looking to develop a TMDL with a sediment focus. They have determined that other sources of Dioxin coming into the system (i.e. Dioxin transfer via atmospheric deposition) would not be a significant cause for the

Dioxin problem. TCEQ has determined that going after these other sources of Dioxin would not be the best use of resources. Currently, the Dioxin TMDL is going through internal review. The TCEQ is reviewing dredging permits and is holding executive management briefings.

Q: Regarding the Dioxin TMDL, it seems like I've heard the same thing for the past few years, i.e. internal review, etc. What is the process for getting this document out?
A: This is a difficult problem because the Dioxin is in the sediment. There is not a clear regulatory program that can address this issue. It is not a clear TMDL problem because it cannot be solved by reducing loads. We do not have a sample density or a clear prediction. All I can say is that we are making progress.

Q: If there are problems internally, how are they handled? Are there any thoughts of asking the legislature to make recommendations and assist the TCEQ with this problem?
A: The TCEQ is prohibited from lobbying the legislature; it is just something we are not allowed to do. This problem is difficult, but we will figure out a way through it; however, we are prohibited from interacting with the legislature.

Q: Is there a possibility that given the issues with the TMDL, that we could move forward and discuss implementation? We know that the Dioxin is a legacy issue. This can help determine what programs can work toward the goals of the TMDLs.
A: Yes, you are right. This is a difficult problem with unique aspects. Because this is a legacy problem, no one owns the legacy except all of us. We do need to look at how to implement it. This is a good idea. We can bring folks together. We have had preliminary discussion with H-GAC to facilitate an implementation plan. They are interested.

6. PCB TMDL Project – Project Updates, Dr. Hanadi Rifai, University of Houston

Dr. Rifai began by stating that she thinks it is a good idea to move forward with implementation. The Dioxin issue has been going on for many years and that it is a legacy problem. She stated that the Dioxin issue is not limited to the Houston Ship Channel. She provided a map showing fish tissue sampling locations from the 2011/2012 dataset. Catfish, trout, and Atlantic croaker were caught and analyzed. The data shows that there is a Dioxin problem in all of Galveston Bay and that we cannot ignore the larger bay system. For instance, the data has shown us that there is a Dioxin issue in Trinity Bay. PCBs have been found on the west side of Galveston Bay, moving down toward the island.

Q: Are the numbers on your map, at the location sites, averages? Did you use a half-detection limit and then averaged the rest?
A: Yes

Q: Instead of averages, could you provide a median amount at the next meeting? A median would be able to tell us if there was one high sample and many non-detects. It would be very useful for interpretation.
A: I would be happy to share that information

Dr. Rifai stated that in regards to PCBs, there are three datasets: before Hurricane Ike, following Hurricane Ike, and beyond Hurricane Ike. The datasets have been used to calibrate and validate models. In the Houston Ship Channel, they sampled to investigate the suspended and dissolved components of PCBs. PCBs do not concentrate on particulates like Dioxin. They sampled within the tributaries of the HSC. Some tributaries had higher concentrations than what was recorded in the ship channel.

They are now trying to cover data caps and are investigating tributaries that were not covered previously. Because Dioxin bonds to particulates, they do see higher concentrations of Dioxin in the sediments; however, this is not indicative that Dioxin is the only problem and not PCBs. They do see PCBs in areas around industrial activities. Their models are showing that the Dioxin problem in Trinity Bay is not as bad as what was previously expected. There is a better understanding of circulation mechanisms within the system. The plan moving forward is to expand both the PCB and Dioxin models to include the entire bay system.

She stated that in the summer of 2012, she wanted to do a snapshot of PCBs in the Houston Ship Channel. They sampled around the whole HSC system. They found significant concentrations of PCBs in and around Patricks Bayou. Upstream in the ship channel they found relative concentrations; however, moving down the ship channel the concentrations were higher. As they moved farther away from development the concentrations were smaller. They found both a suspended and dissolved differentiation. As for Dioxin, they found increases in the industrial region, but also high concentrations elsewhere. The highest concentrations of PCBs were located in and around industrial activities and development.

Dr. Rifai stated that phase one of their project is complete and they are now moving on to the next phase. She would like group and agency guidance on where the study should be headed. Currently they do not have a complete dataset. They are set to work more on modeling runoff then air deposition.

Q: Looking at the map, are there "hot spots" or areas of high concentrations in Clear Lake and Armand Bayou?
A: Yes

Q: Do you know the migratory patterns of the fish that you are sampling?
A: Someone sent us some data; we haven't looked at that really. We know trout go everywhere; cat fish are more "sedentary." Cat fish and blue crabs are the animals with highest concentrations because they do not migrate. The highest samples were taken down near the San Jacinto Monument. Bottom feeders don't go that far.

Q: Have you incorporated the EPA superfund data into your datasets and/or models?
A: That is something we can look into.

7. EPA Oversight, including an update on the San Jacinto River Waste Pits, Gary Miller (EPA)

Gary Miller joined the meeting via telephone. He provided a PowerPoint presentation, which he said was originally used for a community meeting at the Highlands Community Center. The first slide contained a map of the location of the San Jacinto Waste Pits (SJWP) Superfund Site. Work for remediating the site is being done by the responsible parties, International Paper and McGinnis. He stated that the site is located on the west side of the San Jacinto River. Waste, mainly industrial paper pulp waste, was placed in these waste pits in the 1960s. The main contaminates are Dioxin and furans.

The next slide contained a map of nearby residential soil sampling locations. Ten samples were collected. At all sample locations the results were low. The highest sample was 12-13 ppt (parts per thousand) for Dioxin. The EPA soil standard is 50 ppt. Mr. Miller discussed river sediment sampling at the SJWP site. He provided a map of the river sediment sampling locations. For river sediment, cores of up to ten feet were taken of the sediment. In the waste pits the highest sample was 31,000 ppt. Outside of the waste pits the highest sample was 153. That sample was taken northwest of the site.

Soil samples were taken at the waste pits. Over 200 samples were taken from the site. The highest level in the soil surface was 303.24 ppt. This sample location was within the southern impoundment. He also stated that the EPA conducted a number of tissue samples, mainly of catfish and clams. The highest levels measured were between 5 and 6 ppt. The state department has a benchmark of requiring advisories when the range is above 2.3 ppt. All of the tissue sample results were higher than that benchmark.

Mr. Miller stated that the EPA has new information regarding the southern impoundments. He provided a map showing sampling locations of soil borings within the southern impoundment. Many of the locations had a TEQ (toxic equivalent) of higher than the 665 benchmark. He said that these results are a cause for concern. He stated that the EPA has also installed ground water monitoring wells. The results show a highest reading of 47.32 pg/g (pictogram per gram). The benchmark is 30 pg/g. Dioxin is in the groundwater; however, currently it is not known how deep the dioxin is located.

He also provided a map of the pore water sampling locations of the armor cap installation. The cap was installed to prevent material from entering the river. The pore water samplers were installed in the cap. They were left to absorb water for a month and half. Dioxin was measured at the top, middle, and bottom of the cap. Dioxin was not detected and furan was detected in three of the locations. The bottom line is that the cap is successful in isolating dioxin from the river. The cap is not meant to be permanent. A final determination for the site will be made after public comment.

Mr. Miller stated that next week he should receive the Remedial Investigation Report, and a final report should be approved by spring of next year. The Feasibility Report has been submitted for review and comment. This report discusses the pros and cons of different clean up evaluations. The public comment period will be in 2013. Mr. Miller also provided an update on the cap. Much of the cap is now underwater. They have quarterly inspections of the cap. Inspections have been conducted in February, May, and October. The cap appears to be in good shape. So far they have not recorded any evidence of trespassers on the cap. However, during one the inspections they did notice some erosion on the western side of the cap where the geo-textile fabric had been exposed. In order for the cap to work correctly, one foot of rock needs to be covering the fabric. A repair plan was submitted and the repair work was done on August 6th. Heavier rock was placed at the erosion site.

Q: Regarding the feasibility study, what final remediation methods are being considered?
A: We are looking at a range of things, such as cap removal, treatment, digging up, low temperature absorption, disposal offsite, and/or beefing up the cap. All things are on the table and need to be assessed. These options will be discussed in the feasibility study.

Q: Are the administrative records available electronically?
A: Yes.

Q: How deep were the wells on the southern impoundment?
A: The wells are 15 feet deep.

Q: Do we know if the southern impoundment contamination is a result of the paper process also?
A: Yes, we have information. We have found other types of waste in the southern impoundments, such as solvents and hydrocarbons.

Q: How do the "potentially responsible parties" become "responsible parties?"
A: After a consent order is issued and the parties have agreed to that work, then they become responsible parties.

Q: Do you have an update on the Patricks Bayou Superfund Site?
A: I do not; however, I will pass on your inquiries to my colleagues. Perhaps we can have an update at the next meeting.

Q: In regards to the erosion on the west berm, was the geo-textile fabric breached or was it just a removal of aggregate?
A: The geo-textile fabric was not breached. It looked that the rock and other materials covering the fabric were shifted.

8. Public Outreach and Technical Communication Project, San Jacinto River Waste Pits Superfund Site and Fish Advisories: Scott Jones, Galveston Bay Foundation; Jennifer Ronk, Houston Advanced Research Center

Mr. Jones began by stating that the Galveston Bay Foundation received a technical advisory grant (TAG) from the EPA. The purpose of the TAG is to hire a technical consultant to review health and environmental documents and to disseminate that information in ways that the public can digest and understand. Mr. Jones said that after receiving the grant GBF contracted with HARC (the Houston Advanced Research Council), which is a sustainability non-profit organization. He then introduced the consultant that they have been working with from HARC, Jennifer Ronk.

Ms. Ronk stated that she is passionate about Superfund work. She stated that the majority of her work consists of summarizing EPA documents and developing FAQs (frequently asked questions) documents that can be read quickly and understood by the public. She also attends community meetings with and without the EPA present, and is there to answer questions from the public. She acts as a resource for the community.

She has developed document summaries and FAQs that are located on the GBF SJWP. The website also contains links to important documents, such as the Preliminary Site Characterization Report, the Remedial Investigation, and Human and Ecological Risk Assessments.

Mr. Jones went on to showcase the GBF's website for the SJWP Superfund Site. He stated that the website contains a timeline of events for the site. The time line shows when the site was discovered, when it was placed on the NPL (National Priorities List), and when the Time Critical Removal Action (capping the site) occurred. They also have links to the original and complete EPA documents. They are currently working on getting all of the FAQ pages onto one condensed website.

Q: How involved is the community with this project?
A: Last meeting we did not have as many folks, somewhere around 40 to 50 people. Prior meetings have drawn larger crowds. The meeting attendees have many questions and are very engaged. Hopefully the TAG is working. The last meeting was not publicized as well as prior meetings; however, all of this can be improved upon and we are working on different methods of communicating with the public.

Q: How do you contact subsistent fishermen?
A: We have erected 120 Seafood Consumption signs in 60 locations around the site. Signs are in both English and Spanish. We have also sent fliers to school districts. However, subsistent fishing around the site is still a problem. People will fish underneath the signs. We need a large media campaign to get our message across.

Q: I have noticed that RV parks and resorts around the SJWPs advertise fishing. Is there any way of contacting these businesses and asking them to take more responsibility?
A: I have seen that too. I understand that they are trying to run a business, but there is a risk. They are still encouraging fishing in an area with a fish advisory. We need more funding for outreach.

Q: At the EPA meeting in Highlands, there was mention of pesticides in the water, as well as PCBs and Dioxin. Is that something we should be concerned with?
A: The focus of this group is for PCBs and Dioxin; however, pesticides have been found in fish tissue, not in the water. Pesticides are not too terribly soluble. The majority of pesticide compounds attach to particles.

Q: For the Dioxin TMDL, is there information regarding eco-toxicity and human health? Is there information available regarding models that were used to derive that TMDL?
A: Yes, the information is available in the technical documents.

9. Other Business

10. Next Meeting

In response to today's meeting, Rachel summarized key points from the meeting

- Response to Ron Stein: The stakeholders would like to recommend to TCEQ that it initiate implementation planning for two reasons: first, to try to clean up the mess, and second in hopes of encouraging completion of the TMDL.
- Response to Dr. Rifai: The stakeholders would like to see additional sampling to confirm/describe the unanticipated "hot spots" such as the one at Armand Bayou, and also additional sampling just to verify other results. Encourage Hanadi to incorporate EPA sampling data in her modeling and analysis, if possible.
- Response to Gary Miller/EPA: Appreciate the update; would like to hear more about Patricks Bayou at the next meeting.
- Response to Scott Jones: Great resource. Meeting tentatively planned for January 16. (Meeting subsequently scheduled for January 24, 2013)
- Next meeting: Updates from Ron and Hanadi, EPA on SJRWP and Patricks, and a review of implementation resources and examples to kickstart implementation planning.

The BIG confirmed the summary. The next meeting should be sometime within the next six months.

11. Adjourn

The meeting was adjourned.