PCB & DIOXIN TMDL STAKEHOLDER MEETING
Draft Meeting Summary

December 9, 2009
1-4 PM

Members Present: Winston Denton (Texas Parks and Wildlife), George Guillen (Environmental Institute of Houston), Nicole Hausler (Port of Houston Authority), Tracy Hester (Bracewell & Giuliani LLP), Steve Hupp (Harris County), Ed Matuszak (Private Citizen, with URS), Gordon Pederson (Gulf Coast Waste Disposal Authority), Jeff Stevenson (Shell), Bob Stokes (Galveston Bay Foundation), Lial Tischler (industrial representative), John Westendorf (Occidental Chemical Corp)

Members Absent: Charles Beckman, Ronald Crabtree, Luke Giles, Sara Metzger (City of Pasadena), Kristy Morten (USACE), David Ramsden (URS Corp), Gerardo Ruiz (City of Baytown), Kerry Whelan (Reliant Energy), Kirk Wiles (Texas Department of Health)

Support Staff Present: Kristi Corse (H-GAC), Bill Hoffman (H-GAC), Ayo Jibowu (H-GAC), Carl Masterson (H-GAC), Rachel Powers (H-GAC), Larry Koenig (TCEQ Austin), Erin Reese (TCEQ Austin), Hanadi Rifai (UH), Stephen Tzhone (EPA), Donn Walters (EPA), Robin Brinkmeyer (TAMUG), Patrick Louchouarn (TAMUG), Michael Tenant (TDSHS)

Others Present:

Al Axe (Winstead)
Latrice Babin (HCPHES)
Dana Blume (Port of Houston Authority)
Bruce Bodson (Legacy Land Trust)
Cindy Bowes (Environmental scientist, private citizen)
Linda Broach (TCEQ)
Brandy Brooks (TCEQ Superfund)
Louis Brzuzy (Shell Oil Products),
Kathy Cameron (Syngenta)
Marilyn Christian (Harris County)
Catarina Cron (Harris County)
Felicity Dodson (USACE)
Sherry Dunlap (HCFCD)
Stephen Ellis (TCEQ Superfund)
Larry Engle (URS Corp)
Charles Foultry (EPA)
Linda Henry (Port of Houston Authority)
Nathan Howell (University of Houston)
Tom Ivy (Texas Stream Team Volunteer)
Steve Johnston (GBEP/TCEQ)
David Keith (Anciter QEA)
Jaejin Kim (University of Houston)
Rod Kimbro (TxDOT)
Karen Kottke (AECOM)
Divigar Lakshmanan (University of Houston)
Carole Lamont (Harris County)
Mark Landress (Project Navigator, Ltd.)
Brandt Mannchen (Sierra Club)
Alisa Max (Harris County)
Scott McDonald (Harris County)
Evelyn Merz (Sierra Club)
Lisa Miller-Marshall (Galveston Bay Foundation)
Maria Modelska (University of Houston)
Philip Moore (Private Citizen)
Brian Mueller (EPA/TMDL)
Lesley Nelson (State Senator Mario Gallegos)
Angela O'Regan (Parsons)
Lucio Ortiz (TxDOT)
Randy Palachek (Parsons)
Sneahal Patel (Harris County)
Will Petit (Galveston Bay Foundation)
Ellis Pickett (Gulf Restoration Network)
Eric Reese (TCEQ)
Nick Russo (Harris County)
Jennifer Sampson (Private Citizen)
John Sullivan (UTMB)
Laurie Thanheiser (Private Citizen)
Matthew Thompson (TxDOT Environmental Consultant)
Charlotte Wells (Galveston BayKeepers)
Mark Wooden (OxyChem)

Welcome & Introductions

Rachel Powers called the meeting to order at approximately 1:45 PM, following extensive technical challenges. She thanked everyone for coming. She introduced the presenters. Self- introductions of stakeholders followed.

Review Agenda and Approve Meeting Notes

Rachel reviewed the agenda and the group approved the meeting notes from July 2009.

Update on the Draft HSC Dioxin TMDL, Larry Koenig, TCEQ

Larry Koenig explained that the Dioxin TMDL is still undergoing internal review at TCEQ. He did not predict when that review might be complete. Once the review is complete, the TMDL report will go through public comment.

Q: Is the Chief Engineer's Office involved in the internal review, or is it solely the Office of Water?
A: Formally, only at the Division Director level—based on the new organizational structure that was released nine days ago.

PCB TMDL Project--Project Updates, Hanadi Rifai, University Of Houston

Hanadi Rifai provided an update on the sampling in the PCB TMDL project. The study area stretches from the Houston Ship Channel turning basin to Upper Galveston Bay. Three sampling efforts have occurred so far, in 2002-2003, in 2008, and in 2009. Samples collected in 2009 include:

- 50 water samples
- 35 sediment samples
- 30 catfish samples
- 16 sea trout/croaker samples

Hanadi displayed maps showing PCB levels found at each sampling site for the various sample types. She highlighted information about section 1006, which is the industrialized portion of the ship channel. A high volume sampling method was used for 2009 samples, the same method used during the two previous sampling efforts. At some locations all four sample types were collected, while at others some combination of the various types was collected. The results she presented summarized information for 43 congeners, although data is available for individual congeners. Results from sampling efforts indicate:

- By and large, concentrations in water are about ten times the level they should be, except in Patrick Bayou, where concentrations are about 100 times higher than the level they should be (0.855 nanograms/Liter). Concentrations in sediment, for which there are no standards, are not inconsistent with concentrations in water. Concentrations in fish tissue are also not inconsistent with other sampling results, with highest levels near Patrick Bayou and where the Ship Channel meets the San Jacinto River.
- HSC data showed dissolved PCB concentrations to be higher than their suspended counterparts which is generally NOT the case in other water bodies and in the case of dioxin for this water body.
- PCB concentrations are generally lower in storm water, except for in the highly contaminated locations. In general, concentrations in storm water were about five times the standard.
- After Hurricane Ike, PCB levels, previously thought to be stabilizing or declining, increased, particularly those near Patrick's Bayou and Galveston Bay. Hanadi pointed out that the group

might end up considering whether how the 2009 post-Ike data should incorporated into the TMDL.

- Some samples collected from industry effluents contained PCBs on the order of five to ten times the standard, although many plants were compliant. Additional sampling of industry effluent will be conducted.

Pending Galveston Bay System Survey for Dioxin and PCBs, University of Houston

New, strategically placed sampling sites are being chosen based on six criteria. The six criteria are reference conditions from previous sampling, potential sources, spatial distribution, physiography and hydrography, add-on opportunities, and secondary consideration. A map showing potential sites for future sampling efforts was shown. Researchers hope to expand the sampling to include additional species to more clearly define the extent of the health risk. All present were asked to submit suggested sampling locations to Rachel, Hanadi, or Larry.

Questions about HSC and Bay System studies

Q: Were all catfish sampled of the same species?
A: No. Samples came from whichever species (hardhead or blue) happened to be present at the time of sampling.

Q: Were differences found in PCB levels between fish species?
A: This could not be determined with the small number of samples collected of the various species.

Q: Is the purpose of the sampling to quantify health risk, or to determine how the pollutants are distributed and/or moving through the system? Or through trophic levels?
A: Geographic movement.

Q: Has there been an attempt to classify PCBs to the arochlor level?
A: This was done at the beginning, but was found to be ineffective.

Q: Is surface sediment being sampled?
A: Yes, but it is a composite sample.

Q: Are the sources of PCBs known?
A: Some possibilities have been mapped, but these are under evaluation.

Q: Will the old sampling locations continue to be sampled?
A: Ideally, one would want to continue monitoring existing sampling locations. The EPA previously indicated it did not want to continue monitoring existing locations, but this may have changed as a result of Hurricane Ike.

Sampling Results at the Waste Pit Site, Patrick Louchouarn, TAMU—Galveston

Patrick Louchouarn provided an update on analyses that have occurred at the San Jacinto Waste Pits. A vertical core sample, one meter in depth, was collected prior to Hurricane Ike in the waste pits. A graph of the results was shown. Results indicate:

- Dioxin concentrations increase with depth in the waste pit site.
- Not only are total concentrations high, the samples are dominated by the most toxic congeners.
- There seems to be little sediment remobilization of dioxin downstream.
- The distribution of congeners in the waste pit sites match the signature of dioxins created in pulp and paper mill waste.

Those involved in the research have been looking for signatures in the tetra congeners to determine the source. Tetra congeners specific to pulp and paper mills are the most toxic. Other industries are dominated by other less toxic congeners.

Q: Do you sample deeper than one meter?
A: The deepest horizon sampled is from around 1960 when the waste pit was created. It is thought dioxin concentrations will decrease after one meter.

Q: What is the focus of the project?
A: The initial intention was to measure the fraction of black carbon. Black carbon is a constituent that is created from incomplete combustion of fuels. Black carbon in sediments with contaminants can absorb the contaminants. Activated carbon is a type of black carbon. The project has since become a project on environmental fingerprinting as well.

Q: Were these samples taken before or after Hurricane Ike?
A: Before.

Update on San Jacinto River Waste Pits Superfund Site, Stephen Tzhone, EPA

Stephen thanked the group for inviting the EPA to speak to the stakeholder group. He introduced members of the EPA team: Dr. Turner, who will be conducting risk analyses; Phillip Alan, who will work on removal strategies; Donn Walters, community relations; and Brian Mueller, part of the EPA's TMDL team.

Stephen began by displaying a site map of the San Jacinto River Waste Pits. EPA is working with participating agencies: natural resource trustees who have specific responsibilities and coordination partners with whom EPA shares information.

Enforcement Process

Stephen reviewed the enforcement process. On July 17, 2009, Special Notice Letters were sent to two potentially responsible parties (PRPs), International Paper Company and McGinnes Industrial Maintenance Corporation, notifying them a remedial study must be conducted. On November 20, 2009, the EPA issued Unilateral Administrative Orders to the PRPs. The PRPs have since agreed to act. The PRPs will begin the RIFS. EPA's Time Critical Removal Action (as opposed to a non-time critical or emergency removal) proposal is being considered by the PRPs, as well. In order to stabilize the site and prevent ongoing releases temporarily, contaminated sediment will be removed from hotspots and the shoreline will be stabilized.

Q: Will the removal start within six months?
A: Removal must start within six months of a legal instrument in place. This instrument is not yet in place. A statement of work must be complete by January 29, 1010. Temporary measures, such as silt fences, might be put in place.

Q: Will removal and remediation proceed while sampling is still being conducted?
A: Yes.

Q: Do the enforcement agencies have a plan to reduce the exposures to people fishing and wading in the area?
A: In the past, warning signs posted have been stolen or ignored. A group is forming to put together a focused message to inform the public. The first meeting of this group will be held next week.
Comment: Harris County is working to replace and improve signs.
Comment: Those fishing at the site are likely not local. It will be difficult to get the message out to them.

Remedial Investigation/Feasibility Study

The next step is to conduct the Remedial Investigation/Feasibility Study (RI/FS). This consists of a sampling plan, a conceptual site model, and a geodatabase. The sampling plan determines the nature and

extent of the contamination. The conceptual site model determines the human and ecological risk exposure pathways. The geodatabase is a central database of historic and future site-related environmental data.

Watershed Management and Permits

Finally the EPA will look at watershed management and permits activity. Stephen showed a map of permits in proximity to the site. EPA, working with a permit committee, will ensure that permitted activities, such as dredging, do not impact remediation or sampling activities and subsequently expose the public to high levels of contaminants. A public notice has been issued that provides guidance to permittees and permit applicants.

Q: Is it possible that levels could be found to be so high that permitted activities would not be allowed to proceed?
A: Yes. It is also possible that contaminated materials may need to be disposed of in an upland, confined disposal area or a hazardous materials landfill.

Q: What activities are being looked at besides dredging?
A: All applicants have to go through a review process if they are getting a permit and all activities will be considered as to their impact.

Q: Will the site be affected by I-10 roadwork?
A: Right now, no. The EPA will be coordinating with the Texas Department of Transportation (TxDOT) if work is done in the future. Recently completed work only involves protecting the bridge from barge collision. Surface and sediment samples were collected as part of the process and are available through the EPA database.

Q: Is the Army Corps of Engineers (Corps) doing any dredging there?
A: The Corps is not dredging at this time, but it is a federally maintained channel on a maintenance schedule.

Q: Will natural resource plans be developed?
A: We are not at that part of the process. We are waiting until the TMDL is complete.

Next Steps

Next steps include proceeding with the RI/FS to define the nature and extent of site contamination, identify ecological and human health exposure risks, and evaluate long-term cleanup options. EPA will also finalize the legal instrument for removal and implementing the activities. The RI/FS work plan will be completed in spring 2010.

Q: Will the cost of the biological resources impacted be determined? And will it be recovered from the PRPs?
A: That is up to the natural resource trustees.

Q: TMDL modeling indicates all dioxin must be removed. What would you do if your cleanup goal is different?
A: The Superfund program can only address health risk and nothing beyond that. The TMDL will probably require actions outside of the scope of the site in addition to actions involving the site.
Comment: Resolving the differences between the TMDL goals and the Superfund goals will be breaking new ground. It is great to have TCEQ and EPA sitting at the same table discussing it.

Rachel then thanked Stephen for his presentation.

Other Business

The water quality standard probably will be changing to a fish tissue standard in 2010.

Next Meeting

The next meeting might be within six months.

Adjourn

The meeting adjourned at approximately 3:45 PM.