

**Meeting Summary**  
**Houston Ship Channel/Upper Galveston Bay TMDL Stakeholder Group**

**January 7, 2004**

**STAKEHOLDERS PRESENT:** Chris Barry; Winston Denton; Tracy Hester; Pam Kroupa; Ed Matuszak; Lial Tischler; Jack Wahlstrom; John Westendorf; Scott Aspelin

**STAKEHOLDERS ABSENT:** Henrietta Allen; Charles Beckman; Erwin Burden; Ronald Crabtree; Luke Giles; Guy Jackson; Kristy Morten; Juan Parras; Linda Shead; Luis Sueiro; Kerry Whelan; Kirk Wiles; Bob Wood.

**SUPPORT TEAM PRESENT:** Michael F. Bloom; Linda Broach; Kirk Dean; Larry Koenig; Carl Masterson; Mary Jane Naquin; Randy Palachek; Tina Petersen; Hanadi Rifai; Monica Suarez.

**OTHERS PRESENT:** Louis Brzuzy; Dina Cappiello; Oscar Correa; Jennifer Davis; Faith Hambleton; Russell Kiesling; Joe Phillips; Dave Ramsden; Steve Weishar; Chuck Wemple.

**WELCOME & INTRODUCTIONS**

Mary Jane Naquin opened the meeting at 2:10 PM and self-introductions were made.

**REVIEW AGENDA**

Members accepted the agenda as proposed.

**ADOPTION OF MARCH 26, 2003 MEETING SUMMARY**

There were no changes to the meeting summary and it was adopted by consensus.

**TMDL PROJECT STATUS**

Dr. Hanadi Rifai and the technical team gave a slide presentation restating the problem, and the reason for doing the Dioxin TMDL study and showing the status of the study, summarizing the activities and findings of Phases I and II and outlining the forthcoming activities of Phase III. The slide presentation will be made available for viewing or downloading on H-GAC's Web Site.

**The basic problem** is that due to elevated levels of dioxins in the lower portion of the Houston Ship Channel (HSC) and upper Galveston Bay in 1990, the Texas Department of Health issued a seafood advisory for HSC and Galveston Bay stating that no one should consume more than one seafood meal per month (8 ounces/month), and women of child-bearing age and children not consume any sea catfish or blue crabs from this area. These segments of the HSC and Galveston Bay were included on the State List of Impaired Waters (303(d) list).

**Phase I** of the Dioxin TMDL study encompassed an assessment of existing data concerning current dioxin levels and trends in the project area (Houston Ship Channel/Upper Galveston Bay), an assessment of major sources and fate and transport of dioxin in the environment and development of work plans and cost estimates for Phases II and III. This phase also included incorporation of more recent information that had become available from EPA and other State agencies.

The assessment of data revealed limited sediment data from the previous decade, no water quality data, very little source data, and 80% of 93 tissue samples exceeded the EPA risk level criterion and that the highest average concentrations of pollutant in fish and crab tissue were in Segment 1006 of the HSC.

**Phase II** incorporated additional data collection, refining the conceptual model, developing a steady-state water quality model, and sensitivity analyses. This phase was completed in August 2003. Results of the Phase II work showed that total water concentrations exceed Texas Surface Water Quality Standards more than 80% of the time, 83% of sediment samples exceeded a Total Organic Carbon-

normalized target (there are no standards for sediment), 96% tissue samples exceeded the health-based standard, segment 1006 showed highest dioxin concentrations in water, sediment and fish, segment 1005 had the highest crab concentrations, Phase II concentrations (sediment and tissue) in general were as high or higher than historical levels, nonpoint source load estimate was about twice the point source loads, and loading from domestic wastewater treatment facilities was estimated to be about twice that from industrial wastewater treatment facilities.

During this phase the technical team also sampled for PCBs in the HSC. In spring 2003 fish and sediment samples were analyzed for PCBs, while only 4 water samples and no crab samples were analyzed for PCBs. The sampling results showed that water quality criteria were exceeded in 18% of the samples (segments 1006 and 1007), crab samples showed few exceedances, more than 60% of the fish samples exceeded target value (0.47 ng/kg).

**Phase III** is anticipated to take two years and the major tasks will be to develop a Quality Assurance Project Plan (QAPP) for additional data collection, conduct dioxin monitoring and additional data collection in the HSC, model the fate and transport of dioxins in the HSC using sophisticated models, participate in the stakeholder process and estimate TMDL allocations. This phase was scheduled to begin September 2003, but until TCEQ and EPA approve the QAPP, data collection cannot begin. TCEQ submitted an approved QAPP to EPA on December 9, 2003.

During Phase III, 17 in-channel locations will be monitored for water (dissolved and particulate matter), sediment, fish and crab twice, 11 tributary locations will be monitored for fish and crab once, sediment cores will be taken at 6-8 locations to gather data on the historical deposition of dioxins and furans as well as accumulation rates, and ambient water samples will be collected at confluences with main tributaries – 11 locations, twice.

**The stakeholders** raised and discussed a number of issues and questions. There were no clear-cut answers to the questions and it is very likely discussion of these issues will continue through the end of this project. The issues and questions included:

- Unknown Sources – Simple preliminary model analyses suggest that measured sources do not account for the amount of dioxin observed in segments of the HSC, implying that significant unknown sources may exist. The project team will review the data from a congener-specific perspective, and consider adjusting remaining sampling activities to determine if/where other sources exist.
- Atmospheric deposition – what direction is it coming from and what is the difference in contribution between deposition vs. ground sources?
- Storm water runoff – need to sample at storm drains, do studies show smaller particles of dioxin come down with rain?, and need to look at different markers in storm water.
- Need to look at the drop out of dioxin caused by mixing of saline and fresh water.
- Need to look at the effects of significant dredging of the HSC.
- Need to look at different bioaccumulation rates and go back to statistical analysis to determine what congeners are really causing the biggest problem.
- Why is there no seasonal variation in fish and crab data?
- The need for a food chain model to really understand how fish and crab accumulate the dioxins/furans and help us identify relevant sources (e.g. sediment versus external sources).
- The need to include disequilibrium in the modeling instead of just assuming equilibrium and wondering why the mass balance does not balance.

### **MEMBERSHIP ISSUES**

The main membership issue was the need to discuss the vacancy situation. As of the beginning of the meeting there were three definite vacancies – The Port of Houston representative and two others. The Port has assigned **Scott Aspelin**. At the close of the meeting the group, by consensus, welcomed two new members for the remaining vacancies. These new members are **Louis Brzuzy** of Shell Chemical and **Steve Weishar**, who will be representing the Greater Houston Partnership. Several other members were identified who have missed meetings or contact has been difficult. It is believed that Henrietta Allen has suffered

health problems and contact has been impossible, so the outreach team will begin the search for a replacement. Others to be contacted following the meeting to determine their continued participation include: Charles Beckman, representing local government (Harris County Pct. 2), Juan Parras representing environmental justice (Unidos Contra Environmental Racism), Linda Shead representing environmental groups (Trust for Public Land), and Luis Sueiro and Bob Wood representing industry (Donohue Industries).

#### **REVISIONS TO THE DIOXIN TMDL STAKEHOLDER GROUNDRULES**

The Stakeholders were asked to review the amendments to the Groundrules that were made in light of changes in the work contract between TCEQ and H-GAC. There was also a modification made in the scope of the work that increased the segments under study from nine to twelve, and included the tidal segment of Cedar Bayou. The amendments will be adopted at the next Stakeholder meeting.

#### **NEXT MEETING**

No definite date was set for the next meeting. When the project manager and technical team determine the need for another meeting, the outreach team will communicate with stakeholders and interested parties.

#### **ADJOURN**

The meeting was adjourned at approximately 4:15 PM.