

**Status Report  
Modeling Technical Review Group (MTRG)  
Savannah Harbor Expansion Project  
March 30, 2000**

A meeting was held on Thursday, March 30, 2000 in Atlanta, GA at the EPA Office. The goals of the meeting were as follows:

Discuss multiple component rates for CBOD  
Present status of In-Stream Data Report  
Present initial in-stream LTBOB data  
Update on hydrodynamic model

The following persons attended and provided input to the MTRG discussions:

William Bailey	USACE	912-652-5781	william.g.bailey@sas02.army.mil
Wade Seyle	USACE	912-652-5508	wade.f.seyle@sas02.army.mil
Jim Greenfield	USEPA IV	404-562-9238	greenfield.jim@epa.gov
Larry Neal	Harbor Committee	770-499-6791	lneal@lawco.com
James Martin	USACE, WES	601-634-3714	martinj@wes.army.mil
Steve Peene	ATM	770-850-4960	<b>Error! Bookmark not defined.</b>
Bo Ellis	ATM	843-884-8750	boellis@worldnet.att.net
Steve Davie	ATM	770-850-4960	<b>Error! Bookmark not defined.</b>
Dan Mendelsohn	ASA	401-789-6224	mendo@appsci.com
Paul Conrads	USGS	803-750-6140	<b>Error! Bookmark not defined.</b>
John Sawyer	City of Savannah	912-964-0698	jsawyer@ci.savannah.ga.us
Roy Burke III	GA EPD	404-675-1665	roy_burke@mail.dnr.state.ga.us

### **General Discussion**

#### **Multiple Rate Component for CBOD**

Law Engineering performed a LTBOB test on a mixture of low-rate (oxygen consumption) with a moderate-rate effluent sample. The laboratory was able to calculate a mass balance of the 2 effluent samples within the mixture with their respective rates.

Law Engineering presented a plot of NBOD versus TKN to discuss the issue of kinetics for nitrification. Georgia EPD presented the state's rationale for not using multiple component rates for CBOD in the model. Georgia EPD reiterated it's position that the model development should proceed according to present EPD modeling frameworks because of the need to maintain fairness and consistency throughout the state.

The Harbor Committee asked ATM to look at the LTBOB data and plot NBOD versus TKN. This will assist in verifying the kinetics used in the model for the nitrification process.

#### **In-Stream Data Report Presentation**

The in-stream data presentation was an opportunity for the MTRG to view some of the results of the 1999 Monitoring Program, which will be presented in detail in the draft data report. No specific recommendations were made by the MTRG relative to the data, since this meeting was solely for

preliminary information and coordination purposes. MTRG recommendations relative to data analysis and results will be provided at future meetings after review of a draft data report.

ATM presented an update on the in-stream data report and its schedule.

ATM received all of the "J" values from Savannah Labs and AES. "J" values were not reported earlier because they are data below the reporting limit and above the method detection limit. At the January 20<sup>th</sup> meeting, the MTRG requested that ATM ask the labs for all of the "J" values for the conventional water chemistry data collection. All of the data has been received and several of the scatter plots and distribution plots were presented to the group. The only outstanding issue is BOD5 and CBOD5. The labs reported down to 1.0 mg/L versus 2.0 mg/L. ATM requested that the labs send the raw dissolved oxygen data so that raw BOD5 and CBOD5 numbers can be calculated. This task has not been done by either laboratory. The MTRG did recommend that ATM identify in the data set and on plots which data are "J" values.

### **In-Stream LTBOD Data**

ATM presented several LTBOD samples from the first round of samples and demonstrated the application of the LTBOD program developed by Roy Burke of Georgia EPD.

### **Hydrodynamic Model Update**

The upstream river model that is being developed by EPA Region IV will be extended down to Moodys Cut. This will allow overlap of the upstream 1-D river model and the downstream 3-D estuarine model between Clio (RM +61) and Moodys Cut (RM +31)

ATM will provide GAEPD and EPA the bathymetry data that will be used in the estuarine model upstream of I-95 Bridge.

Bo Ellis reported that the SEG expressed concerns that coarsening the grid may affect the ability of the proposed model to be applied to the various impact evaluations being developed. ATM presented the latest hydrodynamic runs for the coarse grid. The recommendation was made previously by the MTRG to test a coarse grid as a way to reduce model run times. The MTRG agreed that the resolution of the model should be appropriate for the environmental evaluations being developed.

ATM presented how thermal effects are handled in BFHYDRO.

The MTRG recommended looking carefully at the solar radiation data that was collected during the summer of 1999. The thermal effects in BFHYDRO would use solar radiation as an input. The group's concern was does the solar radiation data include longwave and shortwave radiation and how the model would handle the data as an input.

### **Future Meeting**

The next MTRG meeting will be held in Savannah on May 10, 2000 from 9:00 am to 3:00 pm.