

River Sampling in May 2004

Turner, Turner, and Jensen

Multiple Objectives

- Prototype improved approach to riverbed sediment sampling for use by DEQ - “guzzler”
- Test hypothesis of ongoing Hg source beneath riverbed adjacent to plant via “guzzler” and drive point water sampling
- Float to obtain total dissolved Hg readings between DuPont and Doods.
- Obtain single dissolved MeHg from oxbow

Types of Samples Obtained

- “Guzzler” sediment samples (<0.1 mm) from between patchy sand/gravel deposits near shore, above and below outfalls
 - both “shallow” and “deep”
- Filtered pore water samples from patchy sand/gravel deposits near shore, above and below outfalls
 - both “shallow” and “deep”

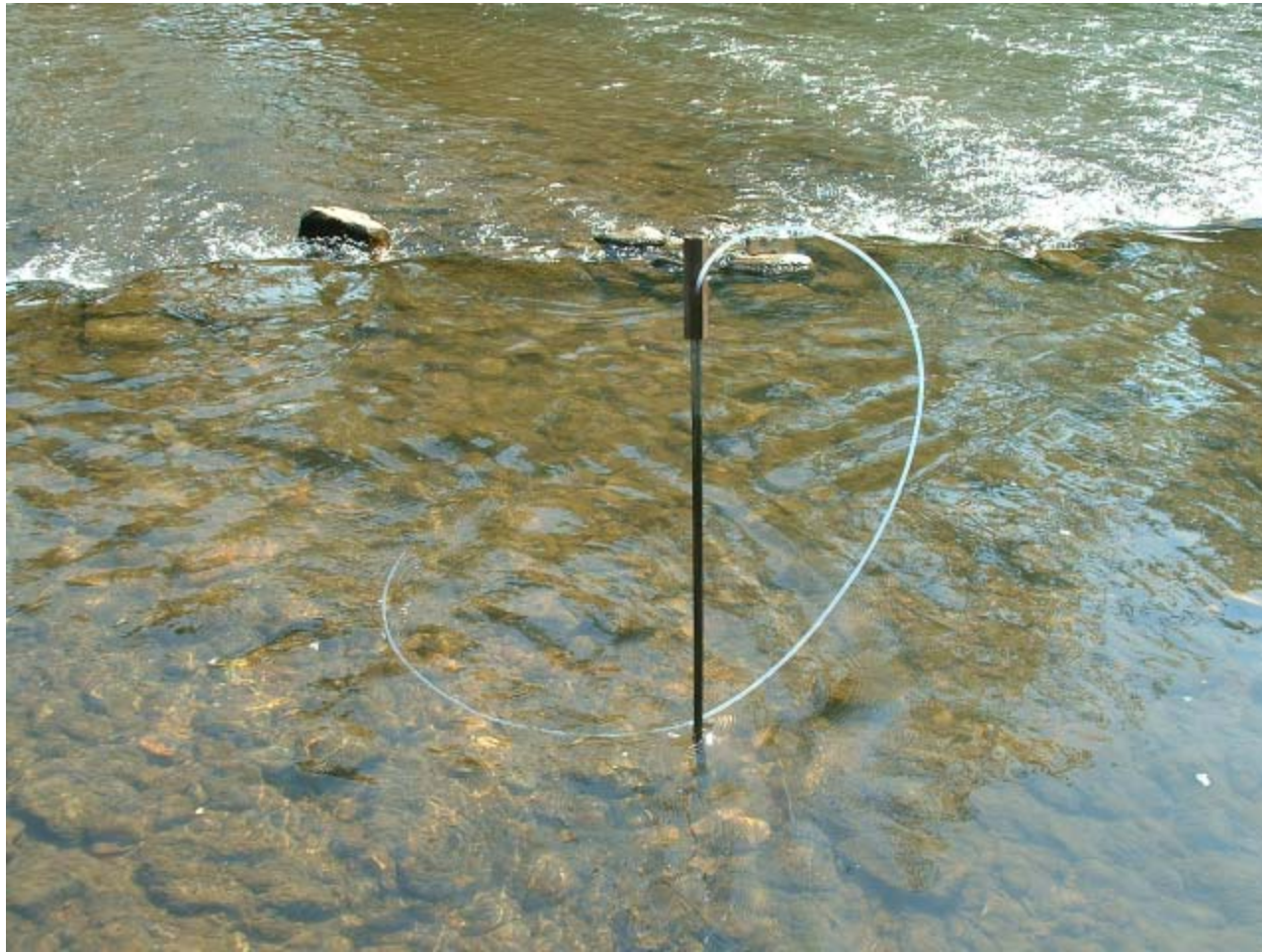
Boat Used for May Sampling



“Guzzler” and Filter



Drive Point Pore Water Sampler

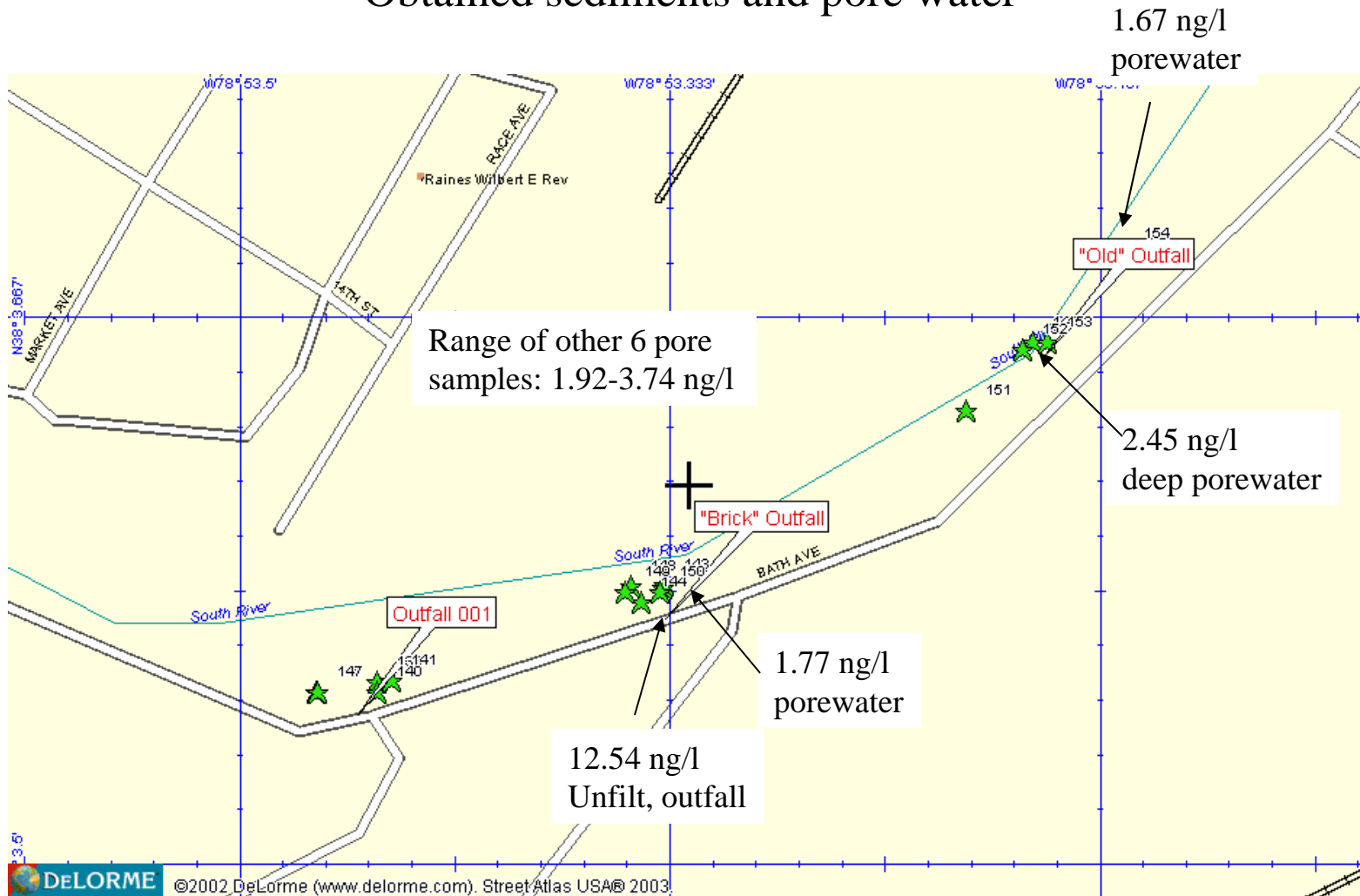


Results Near Plant

- River bed is fractured/corroded bedrock with little sediment. Samples obtained from limited available fractures. May need to do more work.
- Filtered pore water samples do not suggest important source beneath gravel and cobbles
- Waiting on “guzzler” sediment results before drawing any conclusions

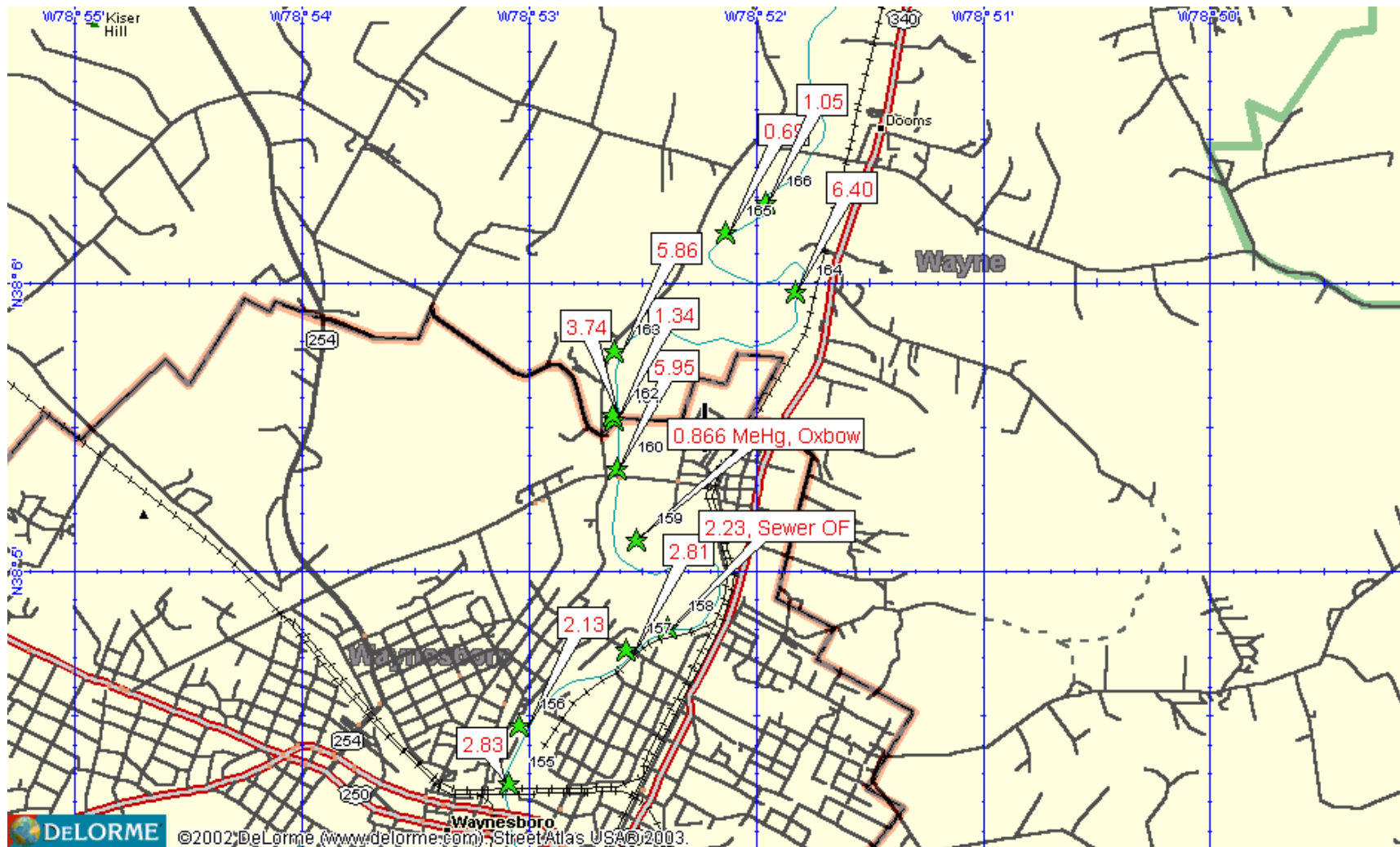
Sample Locations Along Plant

Obtained sediments and pore water



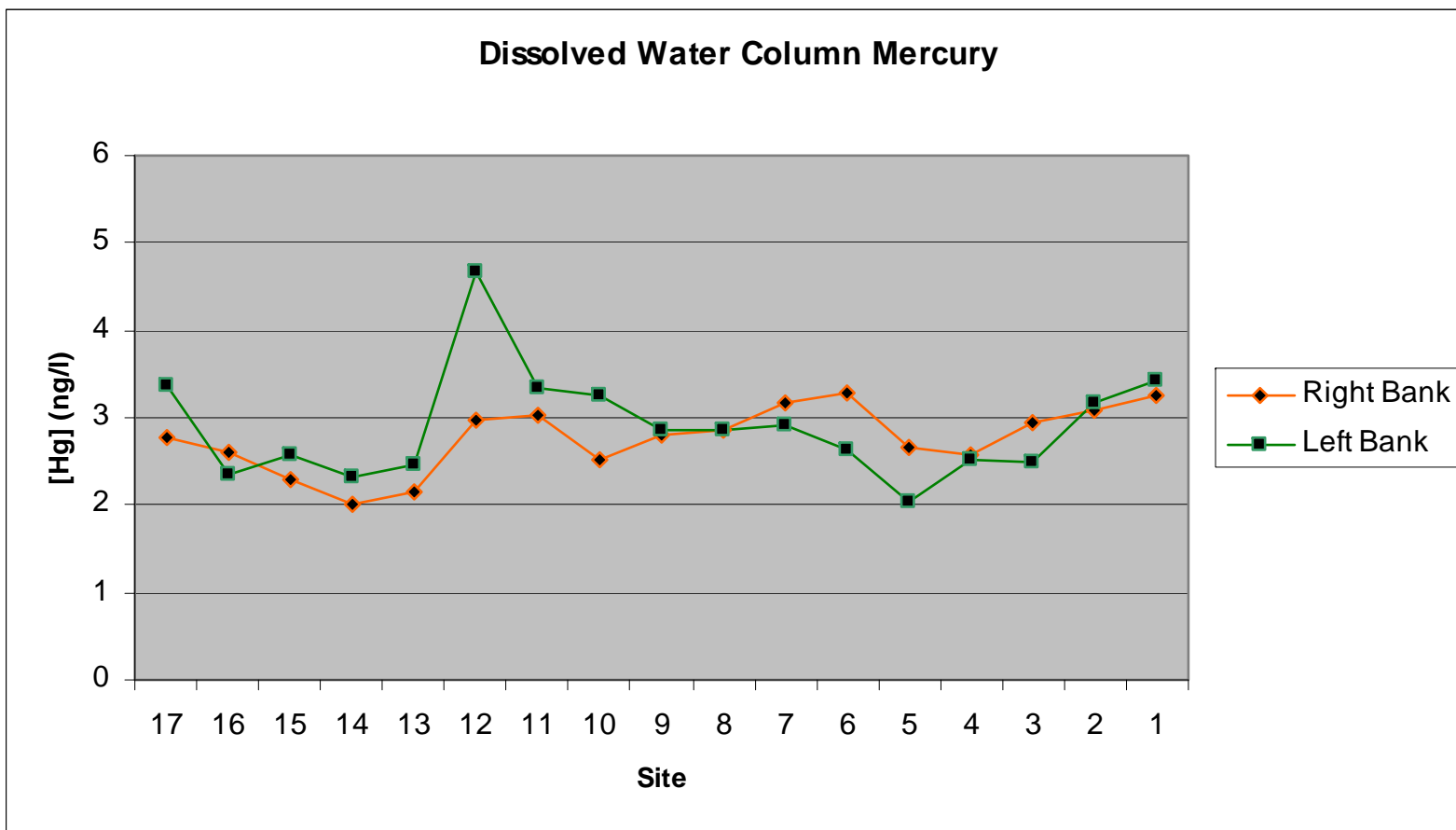
Dissolved Hg

ng/l, Turner 05/04



South River Survey Sweep Results

Upstream to downstream, left to right



Possible Next Steps

- Material balance (H_2O , Hg, TSS) around plant reach - August?
- Additional reaches/floats for dissolved Hg
- MeHg mapping in key areas