

Need for Additional Point Source Monitoring

Stage 2 PCB TMDL

January 11 and 20, 2005



Additional Monitoring Required by the Stage 1 PCB TMDL.

1. NPDES monitoring.

All permits issued after the approval of the TMDLs in December 2003 must be consistent with those TMDLs.

- ✓ Additional monitoring using Method 1668A.
- ✓ A requirement to conduct PCB minimization and reduction programs.

2. Additional Data for Stage 2 PCB TMDL

- ✓ EPA requires a refined Stage 2 PCB TMDL.
 - Multi-homolog based modeling.
 - Better characterization of loading.

All new monitoring requirements will follow the recommendations of the TAC's Data Quality Subcommittee

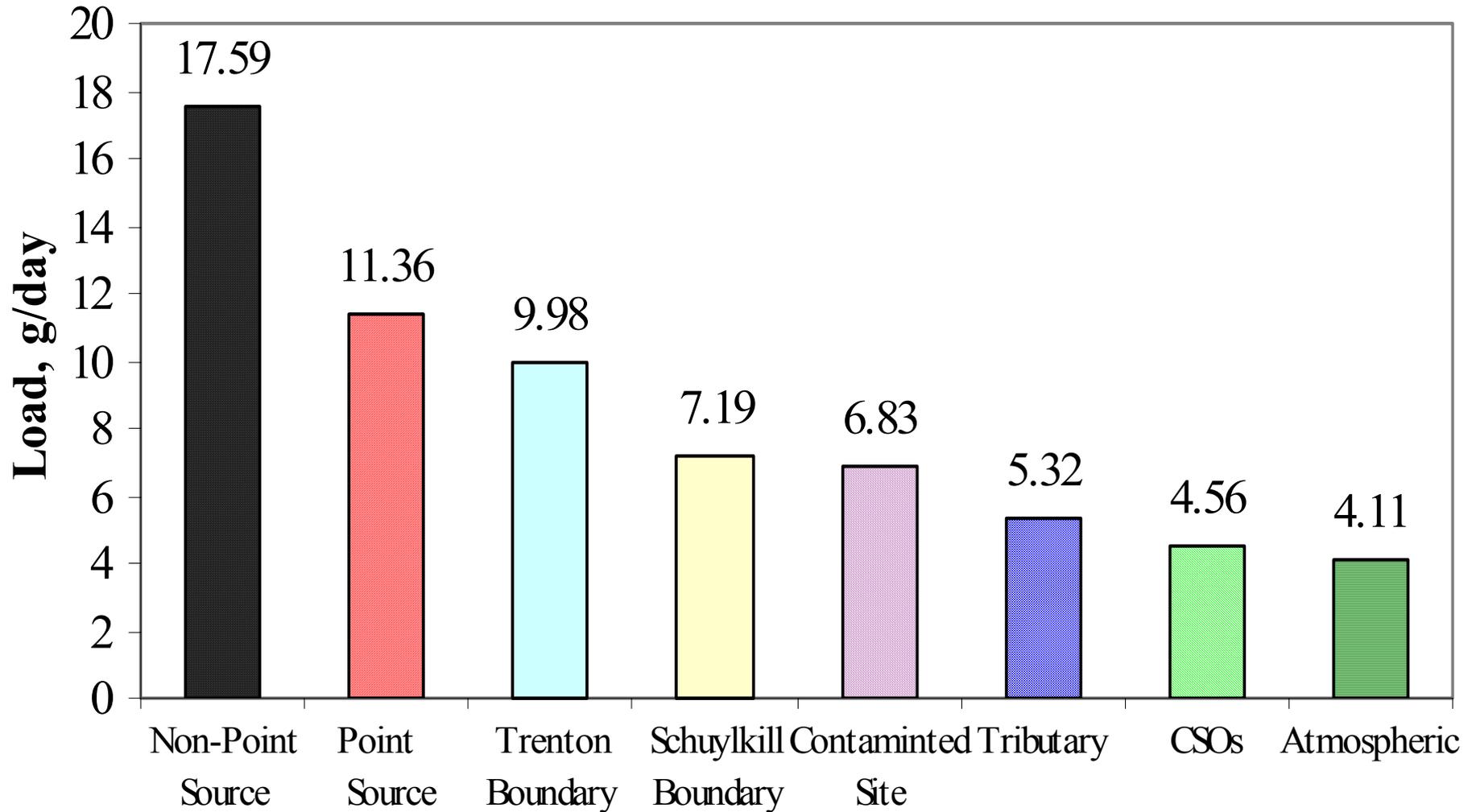
Limitations of Data Collected During Stage 1 PCB TMDL

- ✓ Analytical methodology not specified.
 - Methods 8082A and 1668A were used
- ✓ Required analysis of PCB concentrations for 82 congeners.
- ✓ Congener reporting limits were between 250 pg/L and 1250 pg/L.
- ✓ Samples were not adjusted for blank contamination.

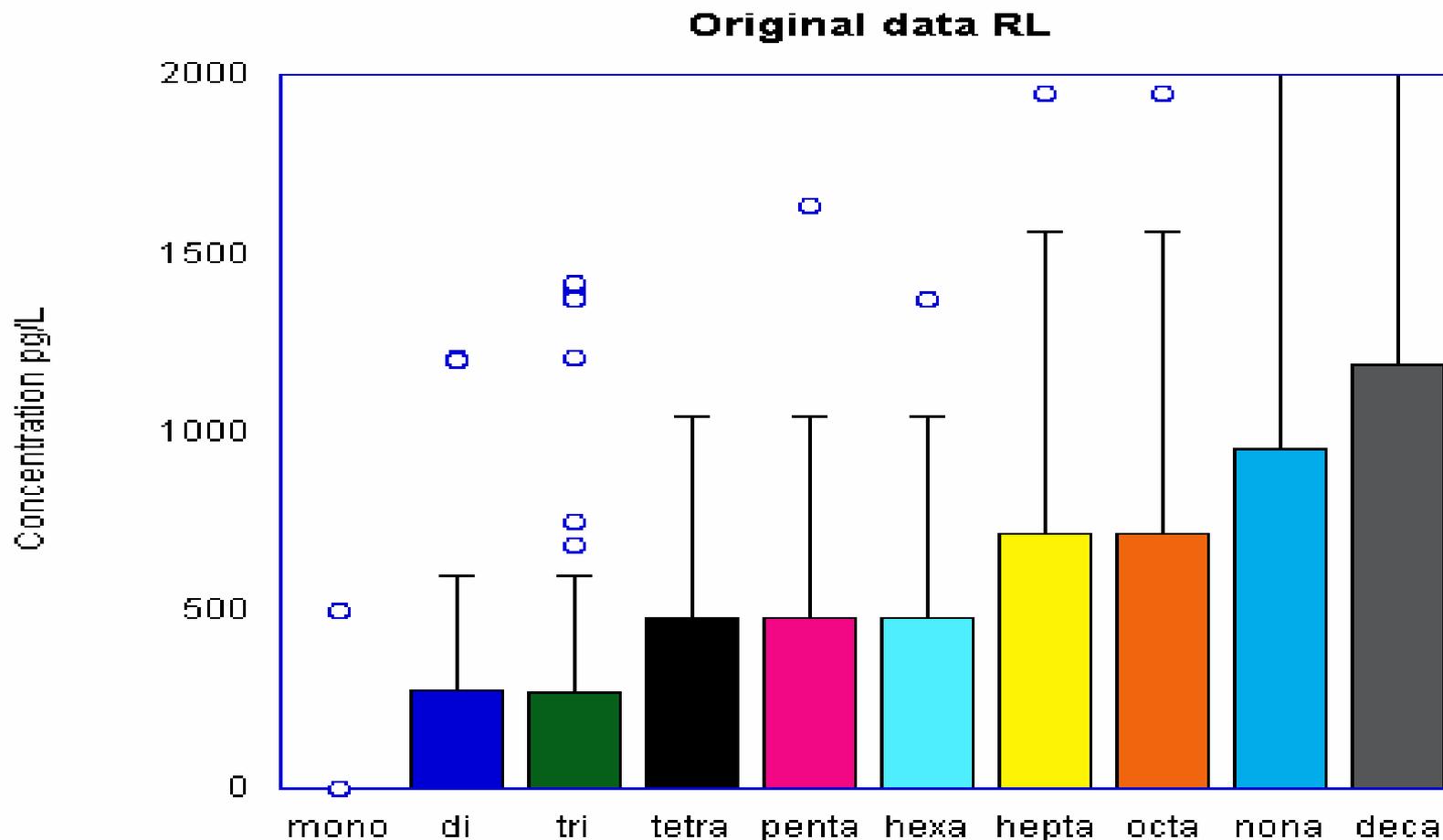
Congener Distribution by Homolog

Homologs	82 congeners	209 congeners	82 congeners as a % of total
Mono	0	3	0%
Di	1	12	8%
Tri	6	24	25%
Tetra	13	42	31%
Penta	19	46	41%
Hexa	18	42	43%
Hepta	13	24	54%
Octa	8	12	67%
Nona	3	3	100%
Deca	1	1	100%
TOTAL	82	209	39%

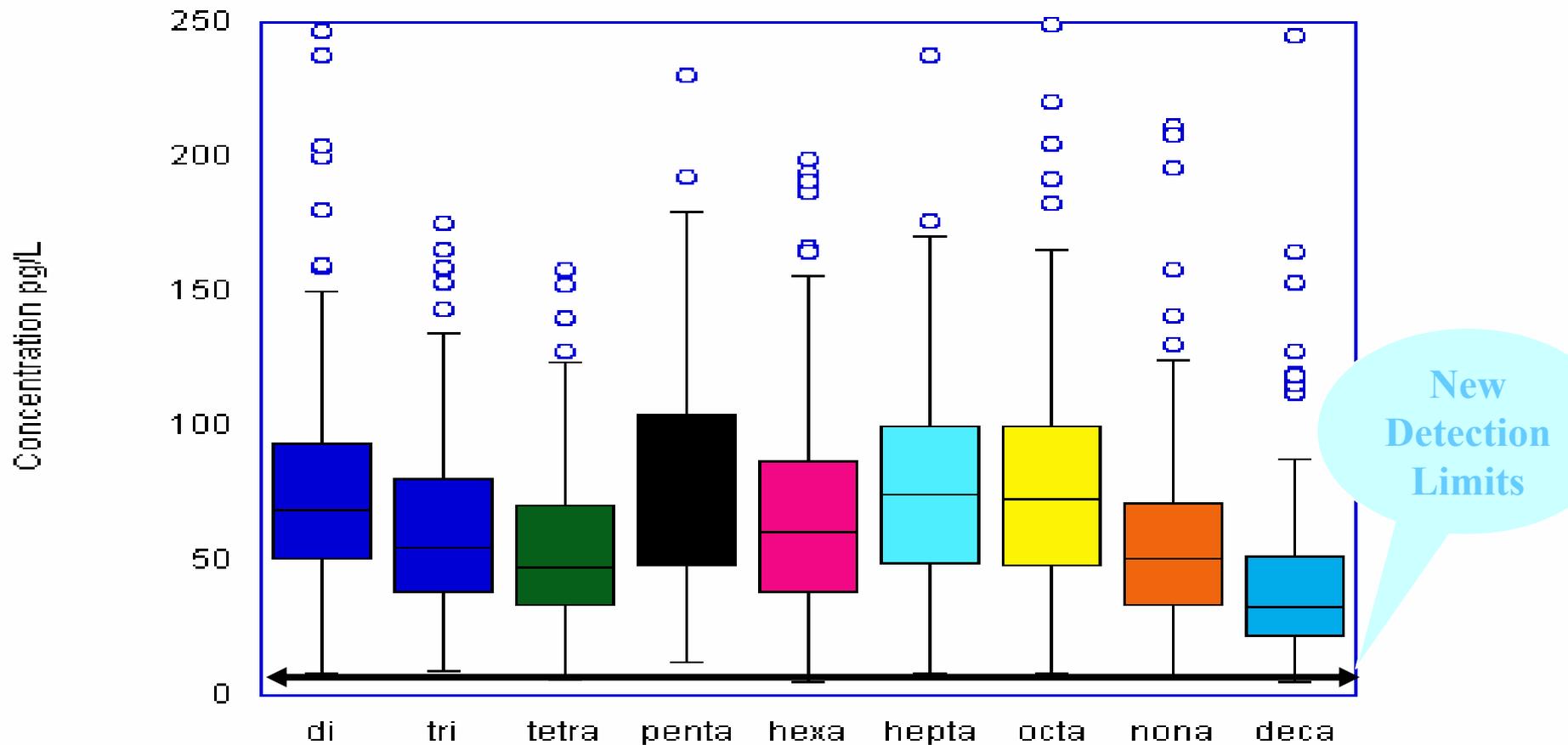
Estimated average daily penta PCB load into the Delaware River Estuary by source category



Original Data Set Reporting Limits for 8082A and 1668A



Estimated Detection limits for Resubmitted Samples using 1668A

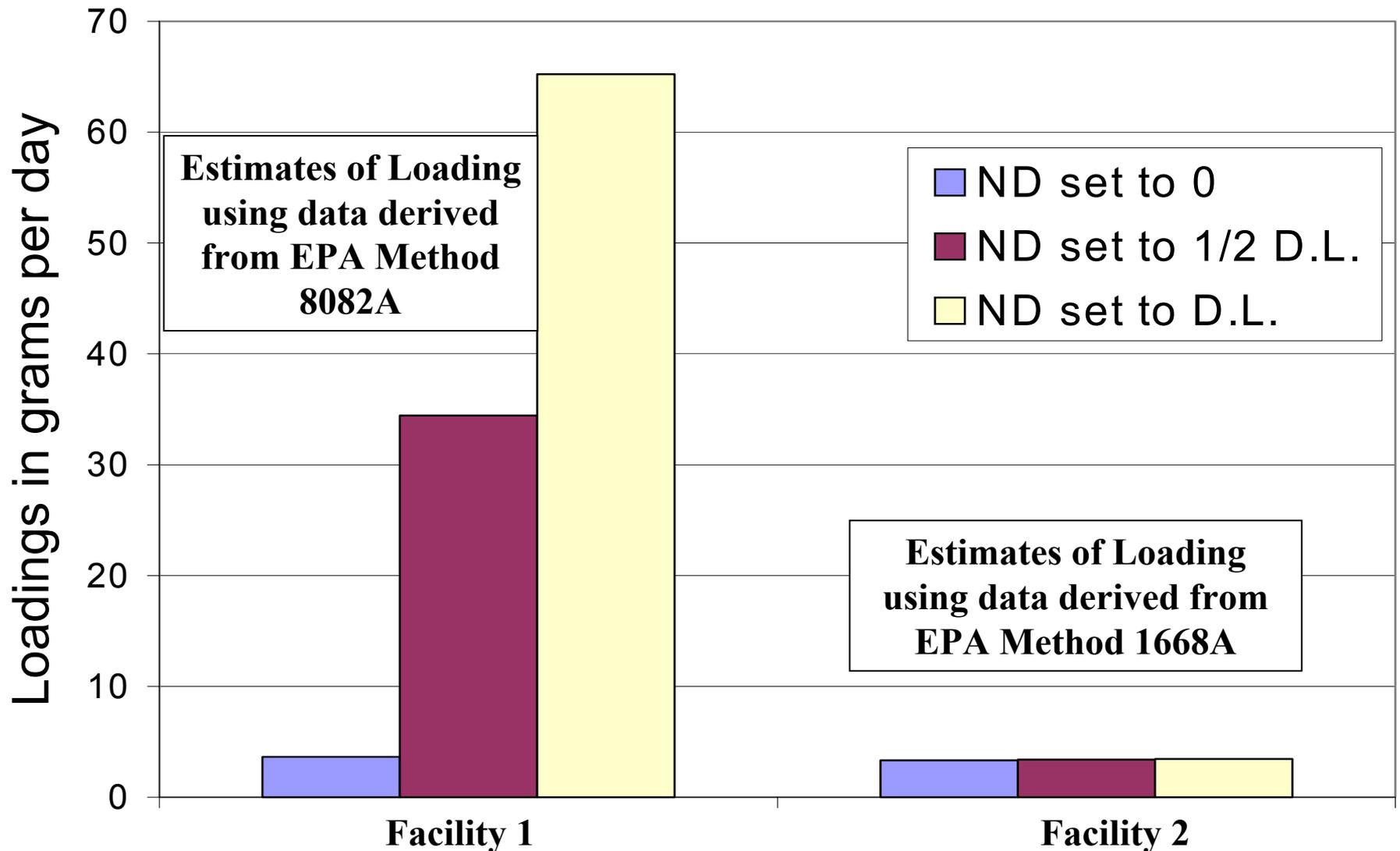


Analytical requirements follow the recommendations of the TAC's Data Quality Subcommittee including:

- Use of Method 1668A.
- 2 liter sample size
- Lower detection limits ~1-3 pg/L
- Analyses for all 209 congeners.
- Specific requirements for blanks.
- Specific requirements for the analytical procedures.

Specific details are available on the web at
http://www.state.nj.us/drbc/PCB_info.htm

Effect of Detection Limit on Loadings Calculation



Use of Data From Stage 2 PCB TMDL

- ❑ Development of more refined loadings estimates in support of the Stage 2 PCB TMDL model.
- ❑ Comparable data sets for all aqueous sampling including; tributaries, main stem, boundary locations.
- ❑ Provide uniform database for use by all interested parties.