



DEPARTMENT OF THE ARMY
 NEW ENGLAND DIVISION, CORPS OF ENGINEERS
 424 TRAPELO ROAD
 WALTHAM, MASSACHUSETTS 02254

*File NEW BEDFORD
 4.2
 ARMY CUE*

REPLY TO
 ATTENTION OF:

October 19, 1988



SDMS DocID 000200527

Operations Division

Mr. Frank Ciavattieri
 EPA
 Waste Management Division
 J.F. Kennedy Building (HANCAN2)
 Boston, MA 02203

Dear Mr. Ciavattieri:

I am writing in regard to the New Bedford Harbor Pilot Study and the determination of the PCB flux at the Coggeshall Street Bridge.

We have computed the PCB flux based on our derivation of the tidal prism volume in the upper estuary and EPA Narragansett's (ERLN) PCB concentrations. The values are compared below with those values derived by ERIN. Additional information is provided in the attachment.

<u>Date</u>	<u>PCB FLUX (ERIN)</u> kg/tidal cycle	<u>PCB FLUX (CORPS)</u> kg/tidal cycle	<u>TIDE CORRECTED</u> <u>PCB FLUX</u> kg/tidal cycle
7/11	0.46	0.51	0.38
7/15	0.92	0.53	0.58
7/27	0.56	0.23	0.32
7/29	0.51	0.29	0.37
8/1	0.19	0.14	0.12
8/2	0.38	0.22	0.49

The different computational methods result in flux values that differ by more than a factor of 2 in some cases. This is of concern with the flux being part of the decision criteria and should be discussed with the committee prior to the start of dredging.

Please contact me if there are any questions or if additional information is needed.

Sincerely,

Mark J. Otis

Mark J. Otis
 New Bedford Superfund
 Project Office

Enclosure

PCB FLUX AT THE COGGESHALL STREET BRIDGE

The PCB flux at the Coggeshall Street Bridge was derived using the surface area of the upper estuary as measured off our topographical survey drawings, tide data generated at the gage located just north of the Coggeshall Bridge and PCB concentrations as determined by EPA Narragansett.

Surface Area - Upper Estuary

Elevation 0.0 MLW 6,860,210 FT²
 Elevation 4.0 MLW 8,341,440 FT²

DATE	Tide Range		Volume		PCB Concentration		PCB Flux (kg)	Tide Corrected Flux (kg)
	Ebb	Flood	Ebb	Flood	Ebb	Flood		
7/11	3.44	2.70	0.75	0.59	1.1	0.54	0.51	0.38
7/15	3.24	3.43	0.69	0.74	1.2	0.41	0.53	0.58
7/27	3.76	4.56	0.81	1.00	0.58	0.24	0.23	0.32
7/29	4.52	5.19	0.98	1.14	0.60	0.26	0.29	0.37
8/1	4.69	4.38	1.03	0.95	0.42	0.30	0.14	0.12
8/2	4.48	4.77	0.98	1.04	0.48	0.24	0.22	0.49

Tide corrected flux:

(freshwater volume x mean pcb concentration) +
 (difference between ebb and flood concentrations x mean tidal volume)

Freshwater inflow assumed to be 10 CFS