From:	Robert Law
To:	Naranjo, Eugenia
Cc:	Peter Israelsson; Willard Potter; LaPoma, Jennifer; Vaughn, Stephanie; William Hyatt
Subject:	NBSA Model
Date:	Monday, January 04, 2016 4:30:18 PM

Eugenia:

The CPG requests the following information from USEPA Region 2 to support the development of the NBSA portion of the model.

Thank you.

R/

Rob

Requested information:

1) Sediment contaminant concentration data

We have noted some discrepancies between the surface sediment data used in the EPA FFS CFT model write-up and in our database. Specifically, we are missing some of the data points shown in the map of TCDD ICs presented in Figure 3-14 of the 2014 FFS Report, Appendix BIII Contaminant Fate and Transport Model (Pg. 148). We therefore request:

- The sediment data that was used to develop EPA's initial conditions for 2,3,7,8-TCDD, tetra-CB, and mercury for the NBSA, the Kills, and the Hackensack River. We would like both surface and subsurface data, with the study IDs clearly identified (along with other pertinent information to using the data).
- The sediment data from the same regions presented in the model calibration figures (for 2,3,7,8-TCDD, these are shown on Figures 4-31 to 4-33 in the CFT model report, Appendix BIII), to the extent that they are not covered by the above request.
- Any additional sediment data in the region that have subsequently become available (surface or at depth)

2) Geomorphic area delineations and deposition rate estimates in the 2011 Phase I and Phase II Sediment Deposition Report

To support potential refinement of the contaminant mapping of NBSA, we request all GIS coverages presented in the following figures from the 2011 TSI Phase I and Phase II Sediment Deposition Report (including any subsequent updates to these data):

- Figure 1-1: REGIONAL MAP
- Figure 2-1: REGIONAL FEATURES
- Figure 2-2: PHASE I AND PHASE II SEDIMENT COLLECTION LOCATIONS
- Figure 3-2: USACE SEDIMENT ACCUMULATION AREAS
- Figure 4-1: PHASE I AND PHASE II ESTIMATED DEPTHS OF 1940 HORIZON
- Figure 4-2: PHASE I AND PHASE II DEPTH TO NATIVE RED CLAY LAYER
- Figure 5-1: NEW YORK/NEW JERSEY HARBOR DEEPENING PROJECT (50 ft)

Of primary interest are the delineations of the TSI geomorphic groups and USACE sediment accumulation areas, as well as the point estimates of deposition rate that are presented in these reports. However, we request all GIS coverages shown in these figures in the interest of assessing our consistency with the NBSA RI team's delineation of basic features such as the navigation channel, river miles, reach boundaries, HDP contact areas, NBSA boundaries, etc.

In addition, to facilitate our use of these data in deposition rate evaluations, we request electronic versions of the tables in the main body of the 2011 Deposition report (i.e., Tables 2-2 through 5-2 as spreadsheets, including any subsequent updates to the estimates).

3) Biota contaminant concentration data

Given the relative sparsity of historical sediment contaminant data, we would like to evaluate whether biota data can be used to infer trends in contaminant concentrations. The table below is a summary of the NBSA biota data with 2,3,7,8-TCDD concentrations that we have identified to date. We have the following questions/requests:

- Are there other available datasets with contaminant concentrations in biota available?
- Has EPA compiled the available biota data, and if so, can they be shared?

<!--[if !supportLists]-->• <!--[endif]-->Has EPA compiled catch locations for the available biota data, and if so, can they be shared?

<!--[if !supportLists]-->• <!--[endif]-->Has EPA compiled co-located data for other media (e.g., sediment chemistry and physical characteristics, surface or pore water chemistry, prey tissue concentration data, sediment profile imagery)?

Data Inventory of NBSA Biota Data with 2378-TCDD Measurements

Year	Database	Study	Species	Sample Count
1982	NOAAQM	Fin/Shellfish and Sediments	Blue Crab	8
1983	NOAAQM	Fin/Shellfish and Sediments	American Eel	2
			Blue Crab	1
			Striped Bass	2
1989	NOAAQM	Levels and Patterns of PCDD/PCDF in Fish	Striped Bass	2
1991	NOAAQM	Tissues from Crabs & Lobsters	Blue Crab	12
1993	AQ	1993 NYSDEC	Blue Crab	8
1994	NOAAQM	Furans in *Mya arenaria*	Soft Shell Clam	4
1995	AQ	1995 NYSDEC	Blue Crab	12
1999	AQ	1999 Late Summer/Early Fall RI-ESP Sampling Program	Adult Striped Bass	2
			Bluefish	3
			Crab	4
			Mummichog	9
			Transplanted Ribbed Mussel	4
1999	CARP	Harbor Crustacean Collection	Blue crab	18
1999/2000	CARP	Harbor Zooplankton Collection	Zooplankton	7
1999/2000	CARP	Harbor Fish Collection	American eel	2
			Mummichog	6
			Striped bass	8
			White perch	18
1999/2000	CARP	Harbor Benthic Invertebrate Collection	Sevenspine bay shrimp	11
			Ribbed Mussel	24
2000	AQ	2000 Spring RI-ESP Sampling Program	Mummichog	3
2002	CARP	Harbor Worm Sediment Collection	Polychaetes	1
2004	N/A	NJDEP Routine Monitoring Program for Toxics in Fish	Blue Crab	22

4) NBSA RI documents

Please confirm the most recent versions of the following TSI RI reports:

- NBSA Phase I and Phase II Data Assessment Report ➔ March 2010
- NBSA Phase I and Phase II Sediment Deposition Report ➔ October 2011
- NBSA Interim Conceptual Site Model ➔ February 2011
    - Some aspects of CSM were subsequently published in Shrestha et al. 2014, J. Mar. Sci. Eng. 2014, 2, 123-139

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