

New York District guidance document entitled, *Guidance for Performing Tests on Dredged Material Proposed for Ocean Disposal or the Regional Testing Manual (RTM)* (EPA Region 2/USACE-NYD, 1992). Applicants are instructed to analyze the following 22 PCB congeners: PCB 8, 18, 28, 44, 49, 52, 66, 87, 101, 105, 118, 128, 138, 153, 170, 180, 183, 184, 187, 195, 206, and 209.

The recommended method for estimating total PCB concentrations referenced in the RTM was changed on February 14, 1996 (EPA, 1996). The change was based on a review of various data sets that measured an extended list of PCB congeners (106 or more). The data indicated that total PCB tissue residue could be more reliably estimated by doubling the subtotal of the 22 PCB congeners listed above. The rationale and data sets supporting this change are described in the human health scientific peer review charge for the scientific peer review (EPA, 2001). After doubling the dredging project 28-day worm tissue bioaccumulation results of the 22 PCB congeners to obtain a total PCB tissue residue value for dredged material, the resulting total PCB tissue residue value is adjusted to reflect equilibrium conditions (steady state) by multiplying by 2. The resulting total PCB tissue residue value for dredged material will be compared to the 113 ppb HARS-specific PCB worm tissue criterion, for each dredging project.

Wait for Completion of the 2002 Scientific Peer Review Prior to Promulgating the 113 ppb HARS-Specific PCB Worm Tissue Criterion

A number of those who commented on the proposed rule suggested that EPA should wait for completion of the scientific peer review prior to promulgating any revision to the old 400 ppb matrix value for PCBs. EPA categorically rejects this view. The 400 ppb worm tissue matrix value, established as guidance in 1981, was based entirely on a non-degradation policy, and was not based on any kind of risk assessment. There is broad scientific consensus that the 400 ppb guidance value is not adequately protective of human health and the environment. Failure to revise the matrix value could result in propagating adverse impacts at the HARS that EPA is endeavoring to remediate.

In contrast, the 113 ppb worm tissue value is a rational, risk-based value, protective of human health and the environment, based upon available scientific information pending completion of the current scientific peer review and evaluation process. There is,

moreover, solid evidence that further protective measures are needed. For example, for a number of years, the States of New York and New Jersey have had advisories for "limited consumption" of several species of fish (striped bass and bluefish) and lobster tomalley caught in the waters of the New York/New Jersey Harbor and Bight area, and have, in some cases, prohibited the sale, consumption, and/or harvesting of fish, crustacea, and shellfish due to toxic contamination, especially of PCBs and dioxins.

The HARS designation Supplemental Environmental Impact Statement (SEIS) (USEPA, 1997a), among other documents, contains significant evidence that dredged material disposal has contributed contaminants to the area, and therefore has likely contributed to the present conditions observed in the New York Bight Apex. Organisms living in or near these degraded surface sediments in nearshore waters will be continually exposed to contaminants until the contaminants are buried by natural sedimentation, placement of Remediation Material, or otherwise isolated or removed. Exposed sediments can directly and indirectly impact benthic and pelagic organisms. Impacts to terrestrial organisms (including human beings) are also possible if the contaminants were to undergo trophic transfer. Those conditions are cause for concern. In particular, contaminant bioaccumulation by infaunal organisms presents the potential for food chain/trophic transfer, potentially posing a risk not only to aquatic animals but also to seafood consumers. For example, elevated levels of PCBs and dioxin/furan compounds were found in the tissues of infaunal species and the hepatopancreas of lobsters collected from the vicinity of the former Mud Dump Site (MDS). The total PCB and 2,3,7,8-TCDD (dioxin) levels in lobster hepatic tissue sampled in the Bight Apex exceeded Food and Drug Administration (FDA) consumption guidance that, in most cases, recommends no consumption, or at least limited consumption, at those levels. (See SEIS Chapter 3.5.1.1.) (USEPA, 1997a).

The 113 ppb criterion appropriately furthers the remediation goals of the HARS. The need for remediating the HARS is extensively documented in the HARS designation rulemaking record, including the **Federal Register** notices (62 FR 26275 and 62 FR 46142), HARS Response to Comments Document (EPA, 1997b) and the HARS SEIS (EPA, 1997a). Bioaccumulation in organisms collected within the HARS was one of

the factors leading to the selection of the Remediation Alternative in the HARS SEIS. It is EPA's conclusion that continued use of dredged material that bioaccumulates above 113 ppb in worm tissue would not advance, but would rather hinder, the goals of the HARS remediation and could result in increased tissue levels for organisms living within the site. EPA also concludes that continued ocean placement of dredged material that results in total PCB bioaccumulation above 113 ppb in worm tissue could contribute to human health effects.

EPA strongly disagrees with those comments that suggest that the current peer review process should be completed before any action is taken to update the old 1981 matrix value of 400 ppb. EPA believes that it is entirely inappropriate to perpetuate an outdated and non-protective criterion simply because scientific consideration of the matter is ongoing. Indeed, science is by definition always ongoing, and in this context scientific developments will continue long after the current peer review of the HARS criteria is completed. Completion of the peer review process will certainly be an important milestone, and EPA anticipates that at that time, the criteria for many contaminants of concern will be revised. It is possible, perhaps even likely, that further revisions of the value for PCBs will also be made at that time. But it is unreasonable to suggest that EPA should not act today, based on the best scientific information available at present, to replace a demonstrably unprotective value with a protective one, simply because better information may be available several years from now.

The scientific peer review process was initiated in 1998, continues today, and more time will be necessary to complete it. EPA believes that the interim PCB criterion is reasonable, based on the currently available scientific information, and is appropriately conservative to provide for the continued management of the HARS to reduce impacts within the Primary Remediation Area (PRA) to acceptable levels in accordance with 40 CFR 228.11(c), as required in 40 CFR 228.15(6)(A). It is important to implement a more appropriately conservative PCB criterion now, rather than to continue using guidelines that could potentially perpetuate benthic conditions that would need further remediation.

It is also important to note that the human health portion of the 2002 scientific peer review has been completed. The consensus opinions of