TWO NON-LETHAL SAMPLING TECHNIQUES FOR THE PREDICTION OF HG IN LARGEMOUTH BASS (MICROPTERUS SALMOIDES). Steve Ryba, Jim Lake, Jonathan Serbst, and Suzanne Ayvazian, U.S. EPA, ORD/NHEERL Atlantic Ecology Division, Narragansett, RI, and Alan Libby Rhode Island Division of Fish and Wildlife, P.O. Box 218, West Kingston, RI.

Contaminant bioaccumulation studies often employ destructive sampling techniques such as whole fish or muscle fillets for the assessment of mercury (Hg) concentrations. The development of non-lethal techniques to predict Hg concentrations in muscle tissue offers researchers the capability to estimate Hg concentrations in fish without sacrificing individuals. Two non-lethal sampling techniques, scales and caudal fin clips, were evaluated as possible surrogates for the prediction of mercury concentrations in the tissues of 61 largemouth bass (*Micropterus salmoides*) from 26 freshwater sites in Rhode Island, USA. A linear relationship of total Hg concentrations between fin clips and muscle tissue showed an r^2 of 0.82 as compared to an r^2 of 0.89 for Hg concentrations between scales and muscle tissue. The fin clip method of estimating Hg in tissues was more variable than the scale method, the Hg concentration in fin clip samples (mean = 0.196 µg/g (dry)) was more than a factor of ten greater than in the scale samples (mean = 0.012 µg/g (dry)). Therefore, the fin clip method may be more appropriate than the scale method where Hg concentrations in largemouth bass tissues are low, or for other fish species which may have low Hg concentrations.