

Decontamination and Beneficial Use of Dredged Materials*

E.A. Stern¹, James Lodge², K.W. Jones³, N.L. Clesceri⁴, H. Feng⁵, and W.S. Douglas⁶

¹U.S. Environmental Protection Agency - Region 2, 290 Broadway, New York, NY 10007-1866, 212-637-3806, stern.eric@epamail.epa.gov

²US Army Corps of Engineers, New York District, 26 Federal Plaza, New York, NY 10278-0090, 212-264-4549, James.Lodge@nan02.usace.army.mil

³Brookhaven National Laboratory, Department of Environmental Science, Upton, NY 11973-5000, 631-344-4588, kwj@bnl.gov

⁴Rensselaer Polytechnic Institute, Environmental & Energy Engineering Department, Troy, NY 12180-3590, 518-276-6416, clescn@rpi.edu

⁵Montclair State University, Department of Earth and Environmental Studies, Upper Montclair, NJ 07043, 973-655-4448, fengh@mail.msu.edu

⁶New Jersey Maritime Resources, Department of Transportation, 28 West State Street, Trenton, NJ 08625-0837, 609-984-8564, scott.douglas@dot.state.nj.us

Our group is leading a large-scale demonstration of dredged material decontamination technologies for the NY/NJ Harbor. The goal of the project is to assemble a complete system for economic transformation of contaminated dredged material into an environmentally benign material used in the manufacture of a variety of beneficial use products. This requires the integration of scientific, engineering, business, and policy issues on matters that include basic knowledge of sediment properties, contaminant distribution visualization, sediment toxicity, dredging and dewatering techniques, decontamination technologies, and product manufacturing technologies and marketing. A summary of the present status of the system demonstrations that includes the use of both existing and new manufacturing facilities will be given. These decontamination systems should serve as a model for use in dredged material management plans of regions other than NY/NJ Harbor, such as Long Island Sound, where new approaches to the handling of contaminated sediments are desirable.

*Work supported through the Water Resources Development Acts of 1990 (Section 412), 1992 (Section 405C), and 1996 (Section 226); the U. S. Department of Energy under Contract No. DE-AC02-98CH10886; and through Interagency Agreement DW89941761-01-1 between the U. S. EPA and the U. S. DOE.