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ABSTR.

EVALUATION OF TREATMENT, DISPOSAL, AND MANAGERIAL OPTIONS FOR DREDGED SEDIMENTS FROM NEWARK BAY, ARTHUR KILL, AND NEWTOWN CREEK OF NEW YORK/NEW JERSEY HARBOR AND PROPOSED DESIGN

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ABSTRACT

The bay areas surrounding New York/New Jersey Harbor are naturally shallow, acting as catchments for river-transported sediments and solids from surface point and nonpoint sources. Dredging is required to maintain navigability for large cargo ships. Annually more than 5 million yd^3 of sediments has been dredged to maintain harbors and waterways for New York and New Jersey Harbor. Currently about 80% of dredge sediments are considered "clean" and ocean disposed at designated *Mud Dump site*, located approximately 6 nautical miles south of Rockaways.

In order to be disposed at the *Mud Dump site*, Marine Protection, Research and Sanctuaries Act of 1972 (MPRSA) requires to evaluate environmental impact using criteria developed by USEPA and published through 40 CFR Parts 220 to 228. Based on the results of the evaluation, the sediments are assigned one of three categories which defines their potential disposal method - Category I sediments (acceptable for ocean disposal), Category II sediments (acceptable for ocean disposal with specific mitigation) and Category III sediments (not permitted for ocean dumping).

A growing public concern over the impacts of contaminated sediments, in addition to a more stringent set of criteria having been established, is expected to significantly increase the volume of sediments requiring special handling or disposal, due to the inability to dispose of Category III sediments at the *Mud Dump Site*.

Hence, the objective of this project is to study the contaminant characteristic of sediments in Newark Bay, Arthur Kill and Newtown Creek area and identify and evaluate alternative methods for managing or decontaminating sediments that are practical, cost-effective and protective of human health and the environment.

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