

DECONTAMINATION OF DREDGED MATERIAL  
FROM THE PORT OF NEW YORK/NEW JERSEY\*

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Shipping activities in the Port of NY/NJ are currently threatened by restrictions on dredging of navigational channels and private berthing areas because of concerns about the environmental effects caused by ocean disposal of these materials. Current proposals for solutions to the problem include continued ocean disposal of uncontaminated materials, use of confined disposal facilities, borrow pits, upland disposal, and decontamination for contaminated materials. A complete solution to the dredging problem will no doubt include a combination of many or all of these alternatives. Achievement of an operating dredged material management system is complex and involves many political, as well as technical, issues. Decontamination of dredged material is attractive since it can be realized on a shorter time scale than some of the other alternatives. It can reduce the magnitude of the contamination and may provide a treated product with a beneficial reuse thus simplifying disposal and possibly reducing the overall cost of treatment

We describe here initial progress on a project that is aimed at developing conceptual plans for producing a complete "treatment train" for dredged material. The work is divided into several phases: 1) treatability studies of commercial and non-proprietary technologies at volumes of 19 R (bench-scale) and 19 m<sup>3</sup> (pilot-scale), 2) specification of a treatment train, and 3) potential implementation of a large-scale facility which can process 76,000 to 382,000 m<sup>3</sup> of dredged material per year.

The technologies investigated include several types of thermal destruction, solidification/stabilization, sediment washing, and chemical treatment and extraction methods. The treatability tests of 19-R volumes have now been completed. It was found that the native sediments passed toxic characteristic leaching procedure tests (TCLP) and hence were acceptable for upland disposal. However, they did not pass biotoxicity testing and hence were not suitable for ocean disposal. These results tend to discourage use of treatments which do not substantially reduce the magnitude of the contaminants present. Work on the processing of sediments at the 19-m<sup>3</sup> scale will begin during the Spring of 1996 and is expected to be complete by September 1996. Analytical results describing the efficacy of the processing procedures will be presented.

The development of an overall conceptual plan for implementing a large-scale treatment facility is now in progress. The goal is to achieve operational status for the facility by the end of 1999 or sooner. This is a difficult, but not impossible, time schedule from the technical side assuming that funding is available. However, problems in obtaining all the relative permits and siting the facility may be more difficult and necessitate a longer time frame for the proposed project. A discussion of the status of the conceptual plan will be given that includes all aspects of the project including technical, environmental, and economic issues.

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