

SECTION ONE

INTRODUCTION

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This document represents the data report for the Bench-Scale Treatability Study conducted by MARCOR Environmental Services, Inc. (MARCOR) for the Brookhaven-Rensselaer Environmental Partnership/Multi-State Alliance (BREP/MSA) project entitled Decontamination of Dredged Estuarine Sediments from the New York/New Jersey Harbor. The study was conducted in accordance with the Brookhaven Statement of Work (SOW), No. SED-1 dated January 5, 1995, the Work Plan prepared by MARCOR (October, 1995) describing the specific activities and general QA/QC procedures related to the laboratory treatment of contaminated sediments, and the Quality Assurance Project Plan (QAPP) prepared by BREP (June, 1995).

1.1 PURPOSE AND OBJECTIVES

The purpose of the study was to evaluate the ability of proprietary treatment technologies to decontaminate dredged sediment from the NY/NJ Harbor. MARCOR was one of seven private companies selected to conduct bench-scale treatment using a proprietary treatment technology. MARCOR used a chemical-stabilization technology known as Advanced Chemical Treatment (ACT) designed to treat organic and inorganic contamination in a single application process.

The objective of the study was to show that dredged sediments containing both organic and inorganic contaminants could be treated to render contaminant levels in the sediments suitable for ocean disposal, upland disposal, or, preferably, beneficial reuse.

1.2 OTHER RELEVANT DATA/INFORMATION

While this report focuses on the results of the study conducted on the NY/NJ harbor sediments, it is important to note that other relevant sources of data/information are available for use in evaluating

the success of the technology. MARCOR's technical proposal (March, 1994) provides a detailed description of the technology and provides information about other studies conducted using ACT.

In addition, MARCOR has conducted several control studies to demonstrate ACT's ability to effectively treat different types of organic contaminant including polyaromatic hydrocarbons (PAHs) and dioxin/furans. A summary of these control studies are provided in Appendix A.

1.3 DATA REPORT FORMAT

Following this introduction, Section 2 describes the bench-scale study methods, procedures and analytical parameters employed. The results of laboratory analyses are discussed in Section 3. Section 4 provides information regarding scale up to pilot scale operations. And finally, Section 5 presents a discussion of the potential for production and full scale operations.