Sadat Associates, Inc.

Project History Dredge Management

Project Name

Preparation of Permit Application for Beneficial Use of Dredge Material at Upland Site

Client

OENJ Corporation

Project Description

In order to provide a viable alternative for ocean disposal or out-of-state landfilling for contaminated dredge spoils, SAI proposed the concept of upland beneficial reuse as part of an ongoing development project. Because the use of dredge material as structural fill had not been attempted in the region, SAI proposed a redevelopment project involving 100,000 - 150,000 cubic yards as a pilot project. SAI developed the technical, environmental and permitting strategy that led to the NJDEP=s willingness to issue permits for the project.

Approach

In the spring of 1995, SAI first proposed the concept of using contaminated dredge spoil as structural fill. The NJDEP encouraged the concept and outlined a series of permits that would be required. SAI and the client submitted a proposal for the Port Authority which would allow the stabilized dredge material to be beneficially re-used at client=s site in Elizabeth.

SAI researched various methods of stabilizing dredge material (including quick lime, portland cement, and coal ash) and explored dewatering and materials handling alternatives. SAI assisted the client in evaluating methods of dredging, dewatering stabilization, and land placement offered by various contractors.

After a contractor was selected and additional negotiations with the Port Authority, SAI prepared permit applications which were submitted to the NJDEP in late 1995/early 1996. The permits/approvals for which SAI submitted applications included: Upland Waterfront Development, Wetlands Transition Area Waiver, and Landfill Closure/Disruption Approval Amendment. In order to support the land application permit, SAI analyzed the chemistry of the dredge material before and after stabilization and compared it with NJDEP cleanup criteria and site-specific conditions. SAI also developed geotechnical specifications for beneficial use of the material.

The final plan involved dredging the material and transporting it to a dock where it was pumped from the receiving barge to the site, directly into the pug mill. Initial stabilization took place in the pug mill. The stabilized mix was then land applied and amended with additional drying agents as part of the application process. The stabilized material was used for site grading for a large commercial development being constructed at a former landfill site.