

Port of Cleveland - Dredging Solutions

Environmental - Project Overview

Background

The Port Authority of Cleveland sits along Lake Erie of the Great Lakes in Cuyahoga County, Ohio. It is one of the largest ports on the Great Lakes and moves roughly 13 million tons of cargo each year. As one of the largest ports on the Great Lakes, Port Authority of Cleveland is dedicated to environmental sustainability – which includes dredging. In order to properly maintain the 5.9-mile stretch of waterways along the port and keep the depth of the channel adequate for commercial shipping, sediments are dredged annually.

The Challenge

After delays during the Summer of 2018, Independence Excavating, an industry leader in environmental construction, was tasked with handling the dredged sediments and impoundment construction for the Confined Disposal Facility (CDF) in the Fall of 2018. This task included drying out dredged sediments, as well as creating large holding cells for previous and future dredged materials. What made this project more challenging was the shortened timeframe from October – December, a very cold and very wet season in northern Ohio. A material was needed that could accelerate drying even in the cold, wet months.

Solution

The contractor needed a reagent that would dry the sediments quickly to keep the project on schedule. The product also had to perform flawlessly in cold and wet climate conditions.

The contractor chose Quicklime due to its superior drying capabilities & fast reaction time. Quicklime has been a reliable product for environmental construction applications because of its ability to quickly dry over saturated sediments as well as increase strength & improve workability.

Implementation

Quicklime was delivered by Pneumatic trucks and placed into spreader trucks for application. The approximate application rate was 4% by dry weight of the sediment and soil. Because of the size of this project, Quicklime was also stored on-site in a portable silo to ensure continuity of supply.

Results

Quicklime aided in the successful on-time completion of this project during a very cold and wet time of the year. Because of Mintek Resources' ability to supply Quicklime on a continuous basis to the jobsite, the Port Authority of Cleveland was satisfied with the contractors ability to complete the project on time. The large cell walls were able to be built up to the needed height with the dried material and is now ready to be filled with future dredged sediments.



Tractor trailer with spreader being used spread Quicklime