



STFATE Application for Starved Rock Mechanical Side-Casting Operation for CEMVR

ERDC Dredging Operations Technical Support Program (DOTS)

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

Response Summary:

Reviewed SSTFATE data files and proposed new work operation. Participated in three conference calls to define STFATE input. Provided volumetric fraction calculator. Provided on-line training on use of STFATE model. Provided guidance on modifying the modeling grid and grid spacing to address dredge bucket releases as opposed to barge discharges. Examined interactions between discharges to determine whether subsequent discharges would affect mixing zone requirements.

Period of Performance:

Start date: 21 July 2022 Completion Date: 1 August 2022

Benefits of the Response to the USACE Dredging/Navigation Program:

The modeling and analysis provided the technical documentation to demonstrate water column compliance with CWA 404(b)(1) requirements and supporting information for a 401 water quality certification.

Deliverable:

Provided guidance on applying STFATE to the construction project at Starved Rock on the Mississippi. Provided instruction on the use of the DOS-based version of STFATE. Provided guidance documents to support future use of SSTFATE for pipeline discharges on the Illinois River.



Providing environmental and engineering technical support to the U.S. Army Corps of Engineers Operations and Maintenance navigation and dredging missions

Paul R. Schroeder, PhD, PE
Environmental Laboratory • Paul.R.Schroeder@usace.army.mil

DOTS ID: DOTS-22-R28