

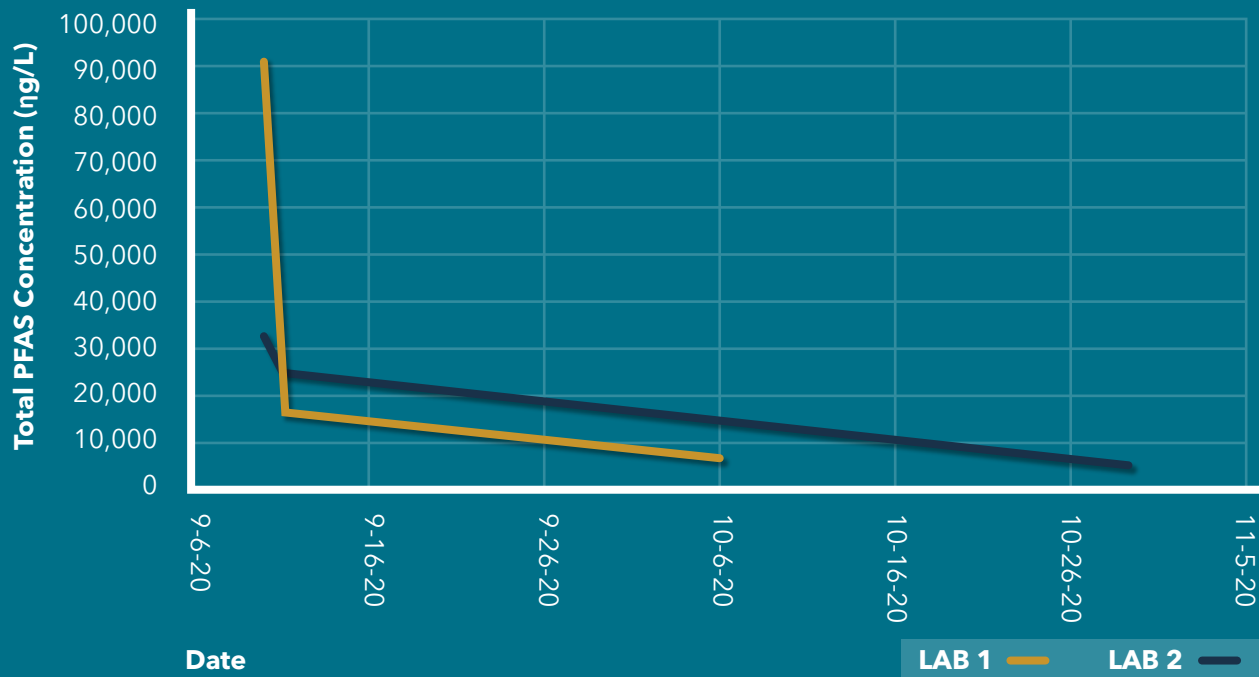
DECEMBER 15, 2020

Fishbeck was asked to provide an independent engineering assessment of the Molecular Binding/Bonding Technology (MBT™) treatment protocol developed by Yost Brothers LLC of Anacortes, Washington. Field testing of this protocol was performed at the Job Site Services, Inc. facility in Freeland, Michigan. During this testing, PFAS containing soils collected from a confidential site in West Michigan were subjected to the protocol.

Following treatment with MBT, split samples of the treated soil were collected and submitted to two independent laboratories for toxicity characteristic leaching procedure extraction and analysis. These data indicated an overall decrease in detected total PFAS compounds of 84% (Lab 1) and 25% (Lab 2) compared to a TCLP extract of the untreated soil matrix. A second TCLP analysis of the same MBT treated soil was requested and performed by the same independent laboratories approximately 1 month (Lab 1) and 1.5 months (Lab 2) after treatment. These data indicated that the MBT binding activity improved over time. The PFAS concentrations in the second extraction procedure were 92% (Lab 1) and 84% (Lab 2) of those recovered from the untreated soil matrix. The combined PFOS and PFOA concentrations decreased 88% (Lab 1) and 35% (Lab 2) compared to the untreated soil extraction after the first extraction, and 92% (Lab 1) and 86% (Lab 2) after the second extraction.

Based on a review of the testing data, Fishbeck has concluded that the MBT treatment protocol is effective in stabilizing and sequestering PFAS in impacted soils.

MBT Treatment – TCLP Extraction



The MBT™ treatment technologies owned by HMR Solutions, Inc. of Lakewood, New Jersey are patents-pending in the US and abroad.



800.456.3824
fishbeck.com

