

Summary of Research and Demonstrations under SERDP & ESTCP Addressing Treatment of Soils and Groundwater Contaminated with Per- and Polyfluorinated Alkyl Substances (PFASs) and Development of Fluorine Free AFFF

Treatment of Soils and Groundwater Contaminated with PFASs

Treatment of soils and groundwater contaminated with PFASs is under development under both SERDP and ESTCP. To date, \$10.5M has been allocated for these efforts (FY14 through FY19), and additional funding will be distributed once FY18 projects are selected.

Under SERDP, three solicitations have been released addressing treatment of PFAS contamination in groundwater. In 2014, SERDP solicited proposals to develop technologies for in situ treatment of groundwater contaminated with PFASs. A total of five projects were selected to develop technologies such as in situ chemical oxidation, sequestration, reductive defluorination, bioaugmentation, and electrocatalytic approaches. These projects are nearing completion.

A follow on solicitation was released for FY18 funding to improve our understanding of PFAS source zones and to develop additional in situ and ex situ technologies. Final selection of these projects will occur in July 2017, with project initiation early in 2018.

In FY17, a solicitation was released seeking proposals to address issues of mixed contaminants in groundwater, since this situation often complicates treatment approaches. A number of projects were selected, six of which address issues of groundwater contaminated with a mixture of PFASs and chlorinated solvents. A list of the selected projects are provided on the FY17 new start project announcement page. These projects have been approved by the SERDP Scientific Advisory Board and are in the contracting process.

In addition to the research efforts under SERDP, a demonstration project has been initiated under ESTCP that will assess persulfate oxidation and ex situ activated carbon sorption for treatment of PFAS contaminated groundwater. This project was selected for funding in FY17 and will be initiated soon.

Development of Fluorine-Free AFFF

In FY17, SERDP released a solicitation to develop a fluorine-free surfactant formulation for use in Aqueous Film Forming Foam (AFFF) fire-suppression operations. Three projects were selected for funding including a proof of concept project led by Naval Air Warfare Center Weapons Division (\$200K for one year), and two multi-year projects led by the Naval Research Laboratory (\$1.8M over four years) and by National Foam (\$0.532M over three years). These projects will be initiated over the next few months.