



Superfund Research Program Small Business Grants

The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs at the National Institute of Environmental Health Sciences (NIEHS) help small businesses develop innovative applications to translate and communicate environmental health research to improve public health. The highly competitive SBIR program encourages domestic small businesses to engage in federal research and development that has the potential for commercialization. Building on the SBIR program, the STTR program includes a requirement for small businesses to formally collaborate with a research institution to bridge the gap between performance of basic science and commercialization of resulting innovations.

Commercialization of Research for Use at Superfund Sites

The NIEHS Superfund Research Program (SRP) funds a wide range of research to address public health concerns arising from hazardous substances in the environment. Through its SBIR/STTR program, SRP supports the commercialization of innovative remediation and detection technologies, products, and devices that can be used at Superfund or other contaminated sites. SRP grantees apply novel biotechnology and bioengineering approaches with a special emphasis on advancing sustainable hazardous substance detection technologies and remediation approaches that improve energy efficiency and reduce waste generation.

Some SRP SBIR/STTR Successes



Airlift Environmental, LLC, along with the University of Nebraska-Lincoln, developed oxidant-paraffin candles to remove chlorinated solvents and petroleum products from contaminated aquifers. Above, graduate student Mark Christenson shows how paraffin-based permanganate candles are prepped for lowering down a borehole at the Cozad, Neb., landfill site where groundwater is contaminated with trichloroethylene (TCE).

(Photo courtesy of Steve Comfort)



The CHA Corporation in McClellan, Calif. (R44ES011905) developed a system using microwaves to reactivate granular activated carbon that is used to remove volatile organic compounds (VOCs) at hazardous waste sites. The process reduces the cost and waste streams associated with using granular activated carbon for remediation. With SRP SBIR funding, the company conducted extensive design, laboratory, and scale-up experiments as well as field tests of their mobile microwave carbon reactivator, shown above, at McClellan Air Force Base in California.

(Photo courtesy of CHA Corporation)



Abandoned mines, shown above, pose dangers to organisms in surrounding environments and may lead to acid rock drainage, polluting waterways. Blue Planet Strategies in Madison, Wis. (R43ES020096) developed a method to profitably recover copper and other metals from acid rock drainage, which can create an economic driver for environmental cleanup and help stop the discharge of metal contaminants.

(Photo courtesy of Brenda Jones, U.S. Environmental Protection Agency)



Phytoremediation is a cost-effective process where plants remove, detoxify, or stabilize toxic substances. Edenspace Systems Corporation of Manhattan, Kan. (R43ES017572) discovered a viable, low-cost alternative for remediation of mercury at contaminated sites with rabbit-foot grass. This remediation approach is easier and less costly than other physical and chemical remediation methods to remove mercury from soil.

(Photo courtesy of Edenspace Systems Corporation)

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Legislative Authority:

Section 311(a) of the Superfund Amendments and Reauthorization Act (SARA) of 1986.

If you are interested in applying for an SBIR/STTR grant, contact Heather Henry.

Recently Funded SBIR/STTR Projects

Agiltron Inc.

Portable SERS Detector for Simultaneous Detection of Trace-level Polycyclic Aromatic Hydrocarbons on Superfund Sites

Program Director: Wayne Weimer
wweimer@agiltron.com
Grant Number: R43ES022884
1.usa.gov/1QkDZ6u

Cambrian Innovation Inc.

BTEX Contaminated Groundwater Remediation by Bio-electrochemical Systems

Program Director: Zhen Huang
zhuang@cambrianinnovation.com
Grant Number: R43ES024664
1.usa.gov/1GT5kfa

Edenspace Systems Corporation

Endophyte Assisted Phytoremediation of Arsenic

Program Director: Michael Blaylock
blaylock@edenspace.com
Grant Number: R43ES025483
1.usa.gov/1FmLBiz

Edenspace Systems Corporation

Enhanced Endophyte: Poplar System for Remediation of Organic Contaminants

Program Director: Michael Blaylock
blaylock@edenspace.com
Grant Number: R44ES020099
1.usa.gov/1AGtdWk

Entanglement Technologies Inc.

Rapid Real-time High-sensitivity Trichloroethylene Vapor Analyzer

Program Director: Bruce Richman
brichman@entanglementtech.com
Grant Number: R43ES022538
1.usa.gov/1KJZa3l

Lynntech Inc.

Enhanced Non-fouling Membranes for Water Purification and Recycling

Program Director: David Battaglia
david.battaglia@lynntech.com
Grant Number: R43ES024625
1.usa.gov/1Kz5kjl

Lynntech Inc.

Field Deployable Vapor Intrusion Monitor

Program Director: Bikas Vaidya
bikas.vaidya@lynntech.com
Grant Number: R44ES021625
1.usa.gov/1AJEsNF

Lynntech Inc.

Rapid Detection of Arsenic in Water

Program Director: Bikas Vaidya
bikas.vaidya@lynntech.com
Grant Number: R43ES025466
1.usa.gov/1KlAXnJ

Microvi Biotechnologies Inc.

Development of a High Performance Bioprocess for Eliminating 1,4-Dioxane in Water

Program Director: Joseph Salanitro
jsalanitro@microvibiotech.com
Grant Number: R44ES022123
1.usa.gov/1LY75Hi

Morphix Technologies Inc.

Lead Detection in Soil and Sediment

Program Director: Edward Locke
elocke@morphtec.com
Grant Number: R43ES024618
1.usa.gov/1dapsxv

Picoyune

Gold Nanoparticle-based Mercury Analyzer for On-site Measurement of Soil and Sediment

Program Director: Jay James
jayjames@picoyune.com
Grant Number: R43ES023729
1.usa.gov/1M0H3TZ

Pollution Control Technologies LLC

On-site Mercury Remediation via Activated Fly Ash

Program Director: Kaspars Krutkramelis
pollution.control.tech@gmail.com
Grant Number: R43ES024620
1.usa.gov/1dapAwJ

TDA Research Inc.

Perchlorate Sensing Platform for In-field Groundwater Monitoring

Program Director: Robert Bolskar
bolskar@tda.com
Grant Number: R43ES024636
1.usa.gov/1JmNgul

Zansors LLC

Disposable Paper-based Electrochemical Metal Ion Sensors for Water Safety Testing

Program Director: Rebecca Lai
rlai2@unl.edu
Grant Number: R41ES024626
1.usa.gov/1HlpKDE

For more information on the National Institute of Environmental Health Sciences, visit <http://www.niehs.nih.gov>.

For more information on SRP, visit <http://www.niehs.nih.gov/srp>.

To read more about the small business research projects, visit <http://go.usa.gov/KYuw>.