

Saving Time and Money:



The Brownfields and Land Revitalization Technology Support Center



About the BTSC

The Brownfields and Land Revitalization Technology Support Center (BTSC, formerly the Brownfields Technology Support Center) provides technical support to federal, state, local, and tribal officials for questions related to the use of innovative technologies and strategies for site assessment and cleanup. Since beginning operations in the Fall of 1998, the BTSC has responded to nearly 100 requests for site-specific support at Brownfields sites and, more recently, Superfund sites. The types of services provided by the BTSC include:

- Providing project strategy consultation and facilitating systematic project planning
- Reviewing documents, including requests for proposals, work plans, field sampling plans, and other project documents
- Providing information about the use of innovative and field-based technologies for site investigation and cleanup

Innovative technologies and strategies, such as the Triad Approach, are used to streamline redevelopment by lowering investigation and cleanup costs and decreasing project time frames. The Triad Approach is a systematic approach synthesizing practitioner experience, lessons learned, and technology advancement into a next-generation framework of cost-effective management of contaminated sites.

BTSC Partners

The BTSC is a cooperative effort to provide technical support to federal, state, local, and tribal officials for matters related to the use of technologies for site assessment and cleanup. Partners in the BTSC include the U.S. Environmental Protection Agency (EPA) Office of Solid Waste and Emergency Response (OSWER) and Office of Research and Development (ORD); the U.S. Army Corps of Engineers; and Argonne National Laboratory. As a BTSC partner, EPA's Brownfields Program helps to identify support needed by EPA's Brownfields Program participants.

EPA Contact:

**EPA Office of Superfund Remediation
and Technology Innovation**

Phone: (703) 603-9904

E-mail: pachon.carlos@epa.gov

Are traditional site assessment and cleanup approaches too time-consuming and expensive to support the redevelopment of your site? Are you:

- Seeking strategic-level project guidance?
- Looking for review support of project documents, such as requests for proposals, work plans, field sampling plans, or quality assurance project plans?
- Considering the potential for incorporating one or more elements of the Triad Approach?
- Looking for information on field-based technologies for site assessment and cleanup?
- Looking to incorporate dynamic work strategies and decision support tools during site assessment?
- Evaluating remedial technologies and their advantages and limitations in light of site-specific features and needs?
- Seeking guidance on site reuse, sustainability, or incorporating green remediation elements into site restoration?
- Seeking information to provide to technical and nontechnical stakeholders?

The BTSC May Be Able to Help You!

www.brownfieldstsc.org

Contact us toll-free: (877) 838-7220

Requesting Support from the BTSC

Federal, state, and local government personnel, EPA personnel, Brownfields grantees, and tribes may request site-specific support for Brownfields sites from the BTSC at no cost. In addition, while EPA's Brownfields Program supports Brownfields program participants, the BTSC also provides site technical and information support for Superfund, RCRA, and UST site investigation and cleanup through EPA's Technology Innovation and Field Services Division (TIFSD). Support may be requested online, through EPA's regional offices, or via the toll-free telephone number listed above.

www.brownfieldstsc.org

Direct Support Available from the BTSC

Strategy and Planning Support

Planning support includes strategic consultation and planning for the use of innovative technologies and strategies, such as the Triad Approach, at a specific Brownfields or Land Revitalization site. Support includes evaluating available documents to assess how to incorporate the elements and best management practices (BMPs) of Triad, such as real-time measurement technologies, and can include activities related to planning for procurement under a Triad Approach or use of decision support tools such as **Field Environmental Decision Support (FIELDS)**, **Spatial Analysis Decision Assistance (SADA)**, **Visual Sampling Plan (VSP)**, or **Scribe**.

Document Reviews

Document reviews include technical reviews of requests for proposals (RFP), sampling and analysis plans (SAP), quality assurance project plans (QAPP), feasibility studies, engineering designs, or work plans. The BTSC evaluates the documents with regard to technology options, implementation processes, use of the Triad Approach, and other appropriate elements.

Technology Scoping for Site Assessment or Investigation Technologies and for Cleanup Technologies

Technology scoping includes preparing lists of potentially applicable technologies along with brief analyses of their advantages and disadvantages under specific conditions at a site and in light of the specific features and needs of a site. This function is not a formal review or approval process, but can provide decision makers with preliminary information in support of decisions or approvals.

Technology Descriptions

Technology descriptions include brief (several pages) “layman’s” guides describing a specific technology or technique. The guides can assist decision makers in fully understanding the principles of the technology (along with its cost and the time necessary to implement it) and assist them in communicating the appropriateness of a technology to constituents and stakeholders.

Review of Literature and Electronic Resources

Literature and resource reviews include available information resources for technologies or classes of technologies relevant to specific decisions at a site. The purpose of the reviews is to allow stakeholders an opportunity to broaden their understanding of the technology options available for use at their sites.

Demonstration Planning Support

Drawing upon the expertise of the EPA Superfund Innovative Technologies Evaluation (SITE) program, the BTSC provides planning assistance and technical review capabilities to localities that are seeking to arrange demonstrations and evaluations of innovative sampling, analytical, or treatment technologies.

Recommendation of innovative investigation and cleanup approaches

- Evaluation of renewable energy potential, technologies, financing, and partnerships
- Assessment of environmental footprints
- Integration of site reuse into remediation strategies
- Facilitating consideration and use of Green Remediation into remedial design and implementation
- Facilitation of Systematic Project Planning
- Review or development of:
 - Conceptual Site Models (CSM)
 - Dynamic Work Strategies (DWS)
- Review of remedial designs
- Incorporation of Sustainable Reuse and Ecological Revitalization best management practices

Information Resources Available from the BTSC

The BTSC has many resources available on the Web site www.brownfieldstsc.org. The BTSC has prepared the following information resources to assist Brownfields and Land Revitalization decision makers identify and select innovative site characterization and cleanup technologies for redevelopment.

Search Sites

Information on BTSC projects at Brownfields and other Land Revitalization sites is available within this section of the BTSC Web site.

News and Events

This section of the BTSC Web site contains pertinent Brownfields and other Land Revitalization information from EPA and upcoming related events.

Procurement Corner

Procurement Corner provides information about the procurement of innovative technologies and strategies. Procurement Corner includes resources that discuss the methods and strategies that have been successfully used to procure services under a Triad Approach-based project as well as procurement in support of innovative technologies and strategies. Specific examples of procurement-related materials relevant to the implementation of Triad BMPs are included from federally-funded and federally-managed projects, as well as projects managed by states, local governments, and private site owners.

Resources

The BTSC provides links to a variety of publications, online resources, and other related Web sites. Some recent resources that have been developed by the BTSC include:

Road Map to Understanding Innovative Technology Options for Brownfields Investigation and Cleanup, Fourth Edition (EPA 542-B-05-001)

EPA produced the fourth edition of this publication to assist a broad audience of Brownfields stakeholders in identifying and selecting innovative site characterization and cleanup technologies during the redevelopment process. An interactive online version of the Road Map is available at www.brownfieldstsc.org/roadmap/home.cfm.

Brownfields Technology Primer: Vapor Intrusion Considerations for Redevelopment (EPA 542-R-08-001)

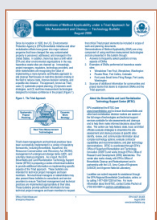
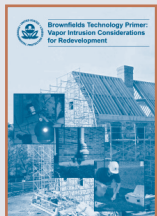
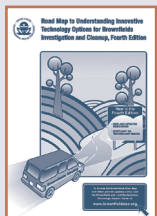
This primer provides an overview of vapor intrusion and how it can affect redevelopment.

Green Remediation: Incorporating Sustainable Environmental Practices into Remediation of Contaminated Sites (EPA 542-R-08-002)

This primer presents an overview of techniques and technologies used to incorporate sustainable practices into site remediation.

Demonstrations of Method Applicability under a Triad Approach for Site Assessment and Cleanup — Technology Bulletin (EPA 542-F-08-006)

This bulletin provides an overview of key aspects of Demonstrations of Method Applicability when using the Triad Approach for site assessment and cleanup.



All information resources available from the BTSC, as well as access to direct support, are available online at WWW.brownfieldstsc.org

BTSC publications are available at www.brownfieldstsc.org/publications.cfm.

Printed or hard copy versions of the publications are available through EPA's National Service Center for Environmental Publications (NSCEP). Documents may be ordered from NSCEP online, by telephone, or by facsimile. Please include the EPA document numbers of all publications ordered.

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www.epa.gov/ncepihom

Current BTSC Focus Areas



Green Remediation

The practice of considering all environmental effects of remedy implementation and incorporating options to minimize the environmental footprints of cleanup actions. Through green remediation, site-specific conservation benefits are compared for different cleanup strategies and the environmental trade-offs of those strategies are weighed.

Vapor Intrusion

The migration of volatile chemical vapors from the subsurface to overlying buildings. Vapor intrusion occurs when dissolved contamination in groundwater volatilizes, migrates as vapor into overlying vadose zone, enters structures through floor and wall cracks, becomes trapped inside enclosed space, and exposes occupants to indoor air contamination.

Reuse / Revitalization

Restoring contaminated and potentially contaminated sites to productive use. Reuse and revitalization aims to follow a process in which comprehensive planning leads to project success and effectively integrated solutions ensure sustainability.

Triad Approach / Best Management Practices

An approach used to manage project and site decision uncertainty that results in increased confidence that decisions about contaminant presence, location, fate, exposure, and risk reduction choices and design are made correctly and cost-effectively. The Triad best management practices (BMPs) include systematic project planning, dynamic work strategies, and real-time measurement technologies.

Training

Through EPA's Technology Innovation and Field Services Division, the BTSC provides training related to the investigation and cleanup of hazardous waste sites to the federal government, tribal governments, states and territories, local governments, academia, and the private sector (hazardous waste consultants). Courses are delivered through classroom training, Internet seminars, and self-directed learning.

Accomplishments

- Responded to nearly 200 requests for information and site technical support in 30 states, from New Jersey to California
- Provided direct site support to more than 70 sites
- Created technology bulletins, primers, and other publications such as the Brownfields Road Map that have become valuable resources
- Helped to train and educate hundreds of stakeholders
- Worked with towns, cities, states, EPA regions, and Tribes in developing cleanup solutions
- Advanced the state of the practice technologies and techniques to build capacity for the timely and cost effective cleanup and reuse of Brownfields sites, including use of green remediation strategies