



Innovative Treatment Technology Developer's Guide to Support Services (Fourth Edition)





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NOTICE

This material has been funded wholly or in part by the U.S. Environmental Protection Agency (EPA) under Contract Number 68-W-99-003. This guide is intended for use as a source of information for technology developers seeking assistance. Inclusion in this guide or the mention of trade names, commercial firms, or ventures does not constitute an endorsement by EPA. In addition to consulting the resources identified in this guide, developers of innovative hazardous waste treatment technologies are encouraged to contact local programs, facilities, and universities that are not listed. To obtain additional copies of this guide, fill out the request form on page iv.

This guide is available electronically at <http://www.clu-in.org>, where it may be updated. Refer to the electronic version for new resources and updated information.

FOREWORD

The U.S. Environmental Protection Agency (EPA) recognizes the challenges that developers and vendors of hazardous waste treatment technologies face. The Technology Innovation Office (TIO) of EPA's Office of Solid Waste and Emergency Response (OSWER) is charged with promoting the use of innovative technologies for characterizing and remediating contaminated sites. One of TIO's goals is to remove barriers to innovation and to the commercialization of innovative technologies. Another goal is to provide information about commercialization assistance programs and resources available to technology developers. This guide provides information about sources of assistance and support for efforts to bring technologies from the proof-of-concept stage to the commercialization stage.

This information is intended to be useful both to established developers of treatment technologies and to those newly entering the field. Your comments and suggestions for future editions are welcome. The electronic version and suggestion page can be found at <http://www.clu-in.org>. Also, you can use the form on page iv to make such suggestions or to order additional copies of the guide.

**INNOVATIVE TREATMENT TECHNOLOGY
DEVELOPER'S GUIDE TO SUPPORT SERVICES
EPA 542-B-99-008**

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I. INTRODUCTION - FOLLOWING THE TECHNOLOGY DEVELOPMENT PROCESS

This guide is intended to assist developers of innovative hazardous waste treatment technologies by identifying sources of assistance as they progress through the development, demonstration, and commercialization process. Mirroring the stages of that process and identifying resources appropriate to each stage, the guide will help developers to sort through the maze of resources available to find those that meets their needs. This guide identifies four broad categories of assistance available to technology developers: (1) Financial and Market Research Assistance; (2) Technology Testing, Demonstration, Evaluation, and Transfer Assistance; (3) Business Development Assistance; and (4) Administrative and Financial Management Assistance. These four categories correspond to the four steps of the technology development process bulleted below.

Technology developers can use the guide to find answers to the following questions:

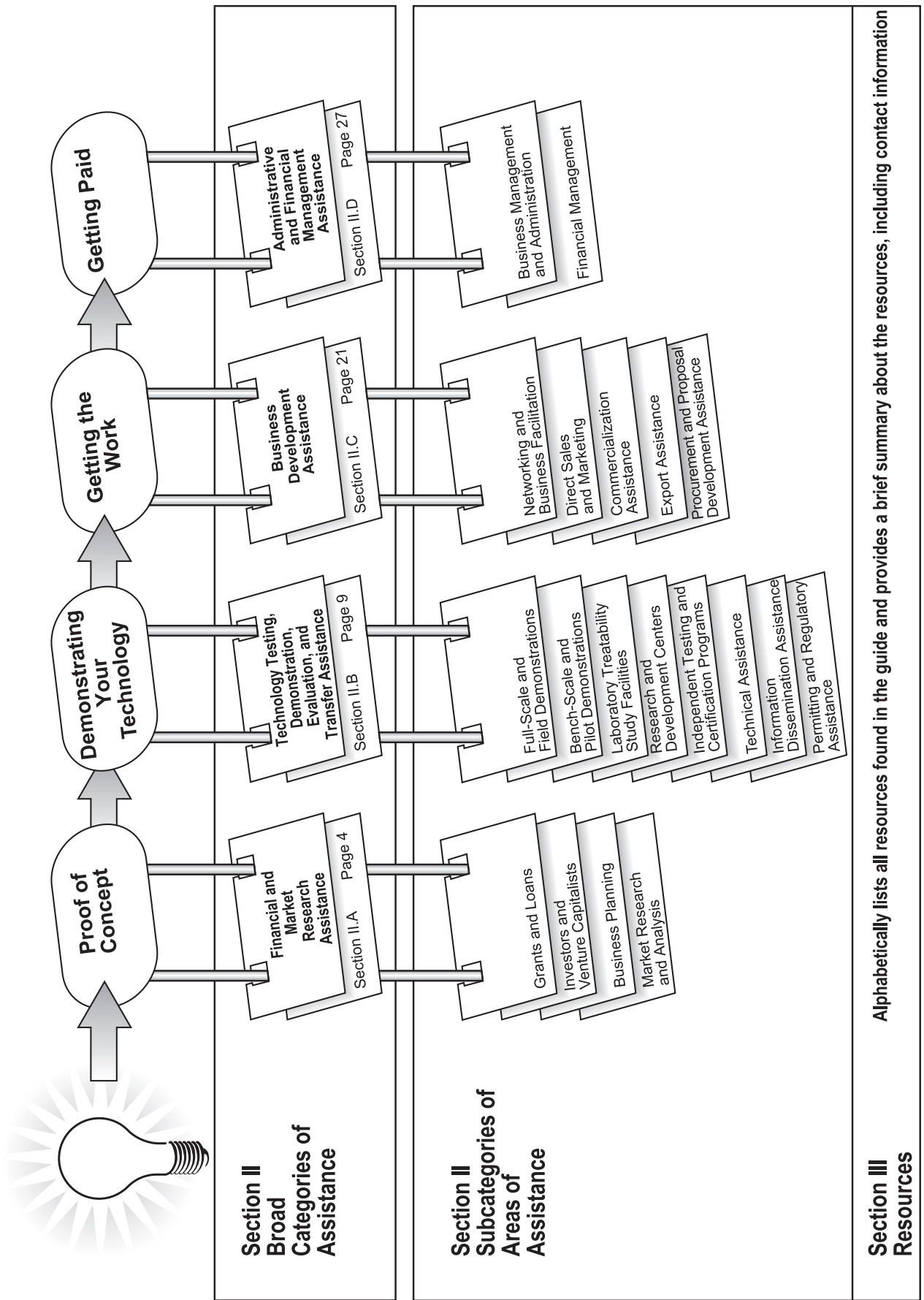
- **Proof of Concept** - Where can I find financial assistance for developing and commercializing the technology? Who can help me identify appropriate markets for my technology?
- **Developing, Testing, and Demonstrating Your Technology** - How do I get my technology accepted by the marketplace, and (once it has been accepted) how do I let people know about my technology and what it can do?
- **Getting the Work** - How do I find business opportunities so that I can sell my technology?
- **Getting Paid** - How do I run my business to ensure I get paid and make money?

Chapter II identifies available resources and groups them into the categories of assistance. Chapter II also presents subcategories of assistance and possible ways the resources may help a technology developer. Chapter III alphabetically lists resources identified in Chapter II and provides a brief description of each resource along with contact information.

Figure 1 on the following page graphically presents the organization of this guide. Figure 1 illustrates the flow of the technology development process, the broad categories of assistance that correspond to each step of the technology development process, and lists the specific subcategories of resources available in this guide.

Table 1, found on page 30, is a large matrix of all the resources listed in this guide, cross-referenced to the types of services they provide at various stages of the technology development process.

Figure 1. Types of Assistance Available to Support the Technology Development Process



II. BROAD CATEGORIES OF ASSISTANCE

This guide contains information about support services that are available to assist vendors and other organizations involved in the development of environmental investigation technologies, treatment technologies, and other technologies used in environmental remediation.

This chapter provides you with an orientation to the resources in the guide by grouping the services into broad categories of assistance. These categories are presented sequentially by the phase of the development process in which the technology being developed currently is classified.

A brief introduction to each broad category of assistance helps lead you to the resources of interest. Each introduction also provides a list of questions that the resources in that category can help you answer.

The resources are organized further according to the more specific subcategories of support that are offered under each of the broad categories of assistance. A description of each of the subcategories of support is provided, followed by the names and page in Chapter III of the specific resources that offer that type of support. You should note that any resource might be listed under more than one category and/or subcategory, as many of the resources can provide assistance during more than one phase of the technology development process.



II.A Financial and Market Research Assistance

A barrier to the development of new and innovative technologies, especially for small and medium-size businesses, is funding. Further, when a company or consortium is able to invest considerable funds in research, development, testing, or some other element that will lead to the commercialization of a technology, outside resources often are needed to provide protection against and help minimize the inherent risk associated with new business ventures. As a technology developer moves through the stages of growth, capital needs rise substantially, but availability of capital may not increase. Therefore other sources of funding may be required.

This section provides information about resources that support the financial assistance needs of the technology vendor, large or small. The resources can help identify seed money that can assist a small company in getting a new idea off the ground. Some of the resources in this category may prove helpful as well to an entrepreneur who needs an investor or venture capital partner.

The resources listed in the **Financial and Market Research Assistance** category will help vendors answer one or more of the following questions:

- Are grants or loans available for technology research, development, or testing?
- Which organizations provide financial assistance for technology research and development?
- What are the requirements for obtaining financial assistance? Are there cost-sharing requirements, or does it matter how big my company is?
- Are there programs in my state that provide financial assistance to technology developers?
- Are there any business development resources (such as facilities or services) in my area?
- Are there organizations that wish to invest venture capital in start-up or growth companies?
- Is there information about technology markets?
- How do I assess the potential need “out there” for my technology?

Resources of this type help companies find funding for various aspects of technology development and commercialization. Grants generally are provided by federal or state government agencies, or by private, nonprofit or not-for-profit foundations or associations. They usually are targeted to small or disadvantaged companies, but larger companies may qualify in some cases. Grants and grant assistance often are focused on research that may help get a new technology off the drawing board or support the evaluation of an emerging technology that is not quite field-ready. Loans are more widely accessible than grants, but their terms require repayment of the funds. Some lending institutions or support agencies, especially those operated by the federal government, offer very favorable terms that make a loan attractive to a potential borrower, for example, in a developing country. Private banks also may provide business loans for domestic and international activities.

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Some resources in this guide will help users find organizations or institutions that invest in or provide capital for start-up and early-stage businesses. Many funds are interested in new technologies and consider investments in the development and commercialization of environmental technologies. Some services and on-line resources lead users to interested investors and venture capital funds, helping entrepreneurs find money to finance their businesses and develop their ideas.

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The development of a sound business plan is crucial to the success of any company, whether it is a completely new enterprise or an established company that is expanding into new or different markets. Business plans also require periodic refinement to adapt them to changing market conditions. Business planning is important to the future of a company. Resources that support business planning provide assistance in setting up and maintaining all aspects of a business. On-line resources also can be accessed at less cost than other resources to obtain information about business planning.

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Market research and analysis evolve constantly, because market information of the greatest value tends to have a short life span. To access a marketplace or position themselves for a particular project or contract, companies need accurate information and adequate lead time. Government organizations often conduct market analysis and provide the resultant information in reports that more and more frequently are available on-line, as well as in hard-copy versions. Such information usually is available at little or no cost. Other market analysis research is available from private-sector organizations that maintain voluminous and up-to-date demographic and other information about companies and their activities. Such services and the information they provide generally are available at a cost.

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II.B Technology Testing, Demonstration, Evaluation, and Transfer Assistance

These primarily technical support resources help move technologies from the concept stage to the marketplace. Some of these resources also provide continual support for the provision of information to people who buy technologies for application. All technology developers can benefit from state or federal programs and private-sector services that support testing, demonstration, evaluation, verification, and (in some cases) certification of their products and methods. Such services may provide testing locations that otherwise might be difficult to find. They may offer a process by which the application of new technology is reviewed objectively and the results published. The developer then can use those results to encourage future applications. Technology transfer resources help to disseminate information about a technology, sometimes at minimal cost to the developer. The resources can help further the development of a technology through research and help bring a developed technology to the commercially applicable stage.

The resources listed in the **Technology Testing, Demonstration, Evaluation, and Transfer Assistance** category will help vendors answer one or more of the following questions:

- Are there independent testing facilities or organizations that can evaluate my technology?
- Can I obtain assistance in conducting treatability testing at the laboratory scale, bench scale, or pilot scale?
- What programs are there for field-testing my technology at actual sites, and how do I gain access to them?
- Who can I contact to obtain technical information or reports about sites?
- Is information available about the results of university- or government-funded research programs?
- Can I obtain technical assistance from university or government experts to support research and development efforts for my technology?
- How can I distribute validated performance data to potential customers for my technology?

Full-Scale and Field Demonstrations

Full-scale and field demonstration programs, usually implemented by federal or state government agencies, provide excellent opportunities for companies to obtain valuable, practical application information and cost and performance data for new technologies that are field-ready. The guide highlights a number of well-established programs that provide the means of conducting full-scale demonstrations and evaluating technologies, as well as information about how each program works, what kinds of technologies the programs demonstrate, and requirements for participation. The resources also present information about programs that can provide locations for such demonstrations.

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Bench-Scale and Pilot Demonstrations

Bench-scale and pilot demonstration programs are similar to programs that demonstrate technologies on a full scale; however, the programs are more suitable for emerging technologies that are not field-ready and that require additional testing in a smaller, more controlled environment to help bring them to the next level of development and commercialization. The resources provide specific information about such programs and how they work.

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Laboratory Treatability Study Facilities

In many cleanup programs in the U.S. and elsewhere, site-specific treatability studies are required to ensure that a selected technology — or a technology being considered for application — is feasible and suitable for the contaminants, geophysical conditions, or other characteristics that are factors in the cleanup. Companies that conduct treatability studies that meet the requirements of the cleanup decision makers may need access to a facility appropriate for the testing. The guide identifies technology incubators that provide laboratory space and equipment and analytical services and offer permitted facilities for conducting treatability studies, as well.

In addition to information about facilities and services, developers benefit from information about testing procedures applicable to their technologies. EPA's Office of Research and Development (ORD) has developed generic treatability study guidance and is developing treatability study protocols for individual technologies. For information about the availability of the protocols, contact David Reisman at the U.S. EPA National Risk Management Research Laboratory, (513) 569-7588.

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Research and Development Centers

Programs and organizations that conduct research in hazardous substances and hazardous waste promote technology conceptualization and the development of new technologies. Such centers generate and maintain information that helps scientists and engineers better understand the most persistent and troublesome problems in a given field. Through their research, they explore ways to solve those problems. Some programs are designed specifically to assist in the development of cleanup technologies.

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Waterways Experiment Station Hazardous Waste Research Center	95
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Independent Testing and Certification Programs

Some demonstration programs, and a number of other programs operated at the federal and state government levels, are conducted to verify that a technology performs as its developers claim and, in some cases, certify the feasibility and performance of a technology. EPA generally does not certify cleanup technologies, but it does administer a program that seeks to verify technologies. Other state and federal agencies offer programs that include certification.

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Office of Environmental Restoration and Waste Management, U.S. Department of Energy	71
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The resources below are able to provide answers to technical questions and problems which may arise in the technology development and commercialization process.

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New Jersey Commission on Science and Technology	68
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Office of Environmental Restoration and Waste Management, U.S. Department of Energy	71
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Sandia National Laboratories	76
Small Business Development Center Program, U.S. Small Business Administration	78
Southern Technology Applications Center (STAC)	81
Superfund Innovative Technology Evaluation (SITE) Program, U.S. EPA	83
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Toxic Substances Control Act (TSCA) Assistance Information Service, U.S. EPA	86
U.S. EPA National Exposure Research Laboratory - Environmental Sciences Division (NERL-ESD)	89
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Information dissemination is a form of technical and technology information transfer that helps distribute information about technologies and methods to the people who make decisions about their use. Some regularly updated electronic resources or publications maintained by EPA or other government agencies provide a means for a vendor to distribute information about its technology widely at very little cost. Other sources, on the Internet or elsewhere, are accessed for a fee. Government and private-sector organizations routinely distribute technical and technology information domestically and internationally during conferences, training courses, symposia, and other events attended by potential users of technologies. Resources listed in this category provide information about those organizations and their services, as well as obtaining information about events related to technology.

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National Technology Transfer Center	67
Naval Environmental Leadership Program (NELP)	68
New Jersey Institute of Technology - Otto H. York Center for Environmental Engineering and Science	69
Office of Science and Technology, U.S. Department of Energy	72
Remediation Information Management System (RIMS)	75
Remediation Technologies Development Forum	75
Research Triangle Institute	76
Small Business and Contracting Opportunities, U.S. Department of Defense	78
South and Southwest Hazardous Substance Research Center	81
State Science and Technology Institute (SSTD)	82
Superfund Innovative Technology Evaluation (SITE) Program, U.S. EPA	83
Superfund Technical Liaison Program, U.S. EPA	84
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Technology Transfer Society	85
U.S. EPA National Risk Management Research Laboratory (NRMRL)	90
University of California, Los Angeles, CA	91
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Permitting and Regulatory Assistance

As important as demonstrating that a technology works is ensuring that the development, testing, and use of the technology is carried out in accordance with applicable laws and regulations. Permits may be required, but in some cases can be waived. Technologies must be capable of meeting cleanup standards and must be implemented in a manner that ensures the health and safety of workers on the site and nearby populations. Waste derived from the use of the technology must be handled properly. Those considerations are just a few of the issues that the permitting and regulatory assistance resources listed in this category cover.

Since federal and state regulatory programs are dynamic, and because requirements differ from state to state, it is not possible to provide definitive guidance in this guide. Interested parties should contact appropriate EPA regional or state regulatory personnel for up-to-date information about regulatory requirements.

EPA has issued a number of regulatory provisions intended to provide relief from permitting and testing requirements for technology developers. Since the extent to which states have adopted those provisions varies, developers should contact authorities in their EPA regions or states to verify the applicability of regulatory provisions in a particular jurisdiction.

Contact the regions below to find information about research, development and demonstration (RD&D) permitting and the Treatability Studies Sample Exclusion rule in a specific state.

EPA REGIONAL CONTACTS

Region 1	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	(617) 918-1111
Region 2	New Jersey, New York, Puerto Rico, U.S. Virgin Islands	(212) 637-3000
Region 3	Delaware, Maryland, Pennsylvania, Virginia, West Virginia, District of Columbia	(215) 814-5000
Region 4	Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee	(404) 562-9900
Region 5	Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin	(312) 353-2000
Region 6	Arkansas, Louisiana, New Mexico, Oklahoma, Texas	(214) 655-2200
Region 7	Iowa, Kansas, Missouri, Nebraska	(913) 551-7003
Region 8	Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming	(303) 312-6312
Region 9	Arizona, California, Hawaii, Nevada, American Samoa, Guam	(415) 744-1305
Region 10	Alaska, Idaho, Oregon, Washington	(206) 553-1200

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California Remedial Technology Assessment Program	46
Center for Environmental Industry and Technology	47
Environment in Asia, Asia Environmental Trading, Ltd.	49
EPA Hazardous Waste Clean-up Information (CLU-IN) Web Site	52
EPA-WASTE Listserve: All Hazardous and Solid Waste and Comprehensive Environmental Response, Compensation, and Liability Act Federal Registers .	52
Innovative Treatment Remediation Demonstration Program	59
Interstate Technology and Regulatory Cooperation (ITRC) Working Group ..	61
National Environmental Technology Test Sites (NETTS) Program	66
Resource Conservation Act (RCRA), Superfund, and Emergency Planning and Community Right-to-Know Act (EPCRA) Hotline	76
Southern Technology Applications Center (STAC)	81
Superfund Innovative Technology Evaluation (SITE) Program, U.S. EPA	83
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Toxic Substances Control Act (TSCA) Assistance Information Service, U.S. EPA	86
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II.C Business Development Assistance

Business development assistance includes support services that can help companies identify, pursue, position for, and win work for the services a company provides or for sales of a firm's products. Larger companies tend to have and use internal resources for developing business; however, external resources—especially in the form of easily accessible information about market trends, contract opportunities, and similar information—are crucial to companies, regardless of size. Smaller companies, or even larger firms that do not have internal resources available at a given time, may decide to access or hire external services to support marketing or proposal efforts or to facilitate business in a new or remote market—for example, in the international arena. Such resources consist of services and information that are offered for a fee and those that can be obtained at no cost. Included among them are databases and on-line networks, market reports, and information about the procurement process. The resources are available from government, private-sector, domestic, and international sources.

The resources listed in the **Business Development Assistance** category will help vendors answer one or more of the following questions:

- Are there opportunities for partnerships or collaboration with federal laboratories, academic institutions, or other parties interested in the development and use of environmental technologies?
- Is planning assistance available for matching my technology with an actual site?
- How can I obtain financing for exporting environmental technologies?
- Are there any trade development programs for foreign markets?

Numerous organizations can help a technology company become involved in business or technical networks that focus on certain issues, such as the environment or a particular industry, or those that are broadly based, representing business interests in general. Such organizations may operate under the auspices of federal or state governments. Trade and industrial associations, chambers of commerce, and other private-sector organizations also provide links among their clients or members and others who have mutual interests.

Developers also can access information about innovative treatment technologies and make information about their technologies available to potential users of remediation technologies through various federal databases and bulletin boards.

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Air Force Small Business Environmental Database (AFSBED)	44
Environment in Asia, Asia Environmental Trading, Ltd.	49
Environmental Business Council Resources	49
Environmental Capital Network	49
Environmental Technology Networks,	
U.S. Agency for International Development Global Technology Network ...	51
EPA Hazardous Waste Clean-up Information (CLU-IN) Web Site	52
Federal Technology Transfer Act Program, U.S. EPA	53
Foresight Science and Technology, Inc.	54
Illinois Pollution Prevention and Technical Assistance Program	58
International Buyer Program, U.S. Department of Commerce	59
International Venture Capital Institute	60
Michael D. Dingman Center for Entrepreneurship, University of Maryland	63
National Defense Center for Environmental Excellence	64
Office of International Trade, U.S. Small Business Administration	72
Savannah River Research Campus	77
Service Corps of Retired Executives (SCORE)	77
Small Business Development Center Program,	
U.S. Small Business Administration	78
Southern Technology Applications Center (STAC)	81
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Technology Transfer Society	85
Tennessee Technology Foundation	86
UNISPHERE	87

Organizations that provide direct sales and marketing services expand the work force of a small company for a specific period of time or for a specific purpose. Such resources are involved directly in representing a company and promoting the sales of its product, as well as identifying and encouraging interest. Some organizations are essentially deal brokers that help bring buyer and seller together and negotiate the terms and conditions of sales. Direct marketing also may take the form of advertising in various media, including the Internet.

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Air Force Center for Environmental Excellence (AFCEE)	
Business Opportunities	44
Air Force Small Business Environmental Database (AFSBED)	44
Business Assistance Center, U.S. EPA Region 3	45
Business Communications Center, U.S. Department of Energy	45
Center for Environmental Industry and Technology	47
Commerce Business Daily (CBD), U.S. Department of Commerce	48
Doing Business with EPA, U.S. EPA Office of Acquisition Management	48
Envirobiz Market Research	48
Environmental Export Council	50
EPA Hazardous Waste Clean-up Information (CLU-IN) Web Site	52
Foresight Science and Technology, Inc.	54
GNET Contracting Opportunities	54
Ground-Water Remediation Technologies and Analysis Center	56
International Buyer Program, U.S. Department of Commerce	59
MBI International's Center for Biotechnology Entrepreneurship	62
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Service Corps of Retired Executives (SCORE)	77
Small Business Development Center Program,	
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Small Business Guide to Federal R&D Funding Opportunities	79
Small Business Innovative Research (SBIR) Program	79
Southern Technology Applications Center (STAC)	81
State Sources of Commercialization Assistance	82
U.S. Army Corps of Engineers (USACE)	
Environmental Programs Contracting Opportunities	87
U.S. Small Business Administration	91

Commercialization support is focused on bringing new products and technologies to market. Such resources provide a combination of market research, business facilitation and development, and technology transfer. They may be able to identify specific demand for a technology or link a vendor to available funding. Such resources generally are specialized consulting services, but on-line and other resources also are available.

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Environment in Asia, Asia Environmental Trading, Ltd.	49
Environmental Business Council Resources.....	49
Enviro-Tech Center.....	51
EPA Hazardous Waste Clean-up Information (CLU-IN) Web Site	52
EPA REmediation And CHaracterization Innovative Technologies (EPA REACH IT).....	52
Federal Technology Transfer Act Program, U.S. EPA	53
Foresight Science and Technology, Inc.	54
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IIT Research Institute (IITRI), Chicago, IL	57
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Sandia National Laboratories.....	76
Small Business Development Center Program, U.S. Small Business Administration	78
Small Business Guide to Federal R&D Funding Opportunities	79
Southern Technology Applications Center (STAC).....	81
State Science and Technology Institute (SSTI)	82
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Tennessee Technology Foundation	86
Trade Information Center, U.S. Department of Commerce	87
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Virginia's Center for Innovative Technology	94

For companies that wish to export their technologies to other countries, a variety of resources provide support to help determine the demand for particular products and make contact with potential foreign buyers, find or provide funding or a vehicle for a company (or its target clients), or conduct negotiations with the importer or government authorities of the importing country. Such resources are found in both the government and the private sector. On-line resources can help a company learn about the many issues to be considered when exporting a technology.

Additional information and resources are available in “Financing Environmental Exports - A Guide to the Fundamentals and Sources,” a report published by the International Trade Administration of the Department of Commerce. This report is available on-line at <http://infoserv2.ita.doc.gov/ete> by clicking on “Market Plans.”

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Business Assistance Center, U.S. EPA Region 3	45
California Environmental Technology Export Program	46
Center for Environmental Industry and Technology	47
Environment in Asia, Asia Environmental Trading, Ltd.	49
Environmental Export Council	50
Environmental Technology Networks, U.S. Agency for International Development Global Technology Network	51
Export-Import Bank of the United States	53
International Buyer Program, U.S. Department of Commerce	59
International Trade Administration (ITA), U.S. Department of Commerce	60
Market Access and Compliance (MAC) On-Line, U.S. Department of Commerce	61
National Business Incubation Association	63
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Office of International Trade, U.S. Small Business Administration	72
Overseas Private Investment Corporation	74
Trade Information Center, U.S. Department of Commerce	87
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U.S. Small Business Administration	91

Procurement and Proposal Development Assistance

A company that wishes to bid on a government or private-sector contract may need assistance to ensure that it understands and properly follows the applicable procurement process and requirements (such as the Federal Acquisition Regulation or its agency equivalent). Some companies also hire external services to help them prepare proposals that give them the best chance to win a contract. The resources listed in this category will help the user find such assistance, including many electronic services offered by government organizations.

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Business Communications Center, U.S. Department of Energy	45
Commerce Business Daily (CBD), U.S. Department of Commerce	48
Doing Business with EPA, U.S. EPA Office of Acquisition Management	48
National Business Incubation Association	63
Office of Environmental Technologies Exports, U.S. Department of Commerce	71
Small Business and Contracting Opportunities, U.S. Department of Defense	78
Small Business Development Center Program, U.S. Small Business Administration	78
Small Business Technology Transfer Program, U.S. Department of Energy	79
Solution Quest	80
Tennessee Technology Foundation	86
U.S. Army Corps of Engineers (USACE) Environmental Programs Contracting Opportunities	87



II.D Administrative and Financial Management Assistance

Administrative and financial management assistance is crucial to the successful operation of a company because it (1) focuses on aspects of the business that keep operations running smoothly; (2) addresses functions that ensure that products are delivered on time and according to terms; and (3) involves properly accounting for costs, preparing quotes that will lead to a profit, and getting paid on time. Start-up companies or companies entering a new market can benefit especially from use of such resources. They may help a new firm identify the administrative and logistical considerations to be addressed early. They involve real estate, taxation, and other services that many companies are not equipped to handle internally.

The resources listed in the **Administrative and Financial Management Assistance** category will help vendors answer one or more of the following questions:

- Are there organizations that provide office space or administrative support for technology developers?
- Are there organizations that provide facility space, services, or equipment for technology research and development?
- How can a small company get temporary support during busy periods?

Companies may consider using external resources for help in managing and administering a business; however, information and services are available to support internal completion of those crucial operational functions. Such resources are Internet sites or publications that provide information about sound management practices and administrative requirements for any business. Some services provide management, or more commonly, administrative support on a long- or short-term basis to supplement the limited personnel of a small company or fill labor gaps for large companies during crunch times. Use of temporary support from such services can help a company find and train personnel who can become full-time employees as the company grows and prospers.

Several of the resources below are also able to assist in the procurement, leasing and purchase of office space and equipment and can help companies make good decisions about facilities and equipment.

Business incubators play a significant role in helping infant businesses survive and grow. Business incubators are facilities that specialize in providing small businesses with office space and shared administrative support services, identifying sources of capital, performing market analyses, and assisting in business development. The National Business Incubation Association (NBIA) estimates that there are more than 530 incubators in North America. For more information contact:

National Business Incubation Association
20 East Circle Drive
Athens, OH 45701
(740) 593-4331
www.nbia.org

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America's Business Funding Directory	44
Environmental Business Council Resources	49
Enviro-Tech Center	51
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National Business Incubation Association	63
Olympic Venture Partners	73
Savannah River Research Campus	77
Service Corps of Retired Executives (SCORE)	77
Small Business Development Center Program, U.S. Small Business Administration	78
Solution Quest	80
U.S. Small Business Administration	91

Financial and accounting systems are becoming more and more sophisticated, and the requirements for invoicing and reporting (especially for U.S. Government jobs) more rigorous. The guide identifies resources that provide information or services in the area of financial management, which may help a company learn about financial reporting requirements and generally accepted principles of accounting, suggest electronic systems available in today's market, or lead the company to organizations that provide such support for firms of various sizes.

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America's Business Funding Directory	44
Service Corps of Retired Executives (SCORE)	77
Small Business Development Center Program, U.S. Small Business Administration	78
UNISPHERE	87

Table 1. Matrix for Technology Developer Support Services

SOURCE OF SUPPORT	Proof of Concept			Demonstrating your Technology										Getting the Work		Getting Paid		
	Financial and Market Assistance	Market Research and Analysis	Full-Scale and Field Demos	Bench-Scale and Pilot Demos	Laboratory Treatability Study Facilities	Research and Development Centers	Independent Testing and Certification Programs	Technology Testing, Demonstration, and Evaluation	Information Dissemination Assistance	Regulatory and Compliance Assistance	Networking and Business Facilitation	Direct Sales and Marketing	Commercialization Assistance	Export Assistance	Procurement and Proposal Development Assistance	Business Management and Administration	Financial Management	Administrative and Financial Assistance
Advanced Technology Program, U.S. Department of Commerce																	43	Page No. in Developers' Guide
Air Force Center for Environmental Excellence (AFCEE) Innovative Technology Program		◆	◆				◆										43	Financial Management
Air Force Center for Environmental Excellence (AFCEE) Business Opportunities										◆							44	Business Management and Administration
Air Force Small Business Environmental Database (AFSBED)																	44	Business Management and Administration
America's Business Funding Directory																◆	44	Business Management and Administration
Angel Capital Electronic Network (ACE-Net)																	44	Business Management and Administration
Argonne National Laboratory, Argonne, IL		◆	◆	◆													45	Business Management and Administration
Business Assistance Center U.S. EPA Region 3									◆								45	Business Management and Administration
Business Communications Center, U.S. Department of Energy																◆	45	Business Management and Administration
California Environmental Technology Certification Program California EPA																	46	Business Management and Administration
California Environmental Technology Export Program																◆	46	Business Management and Administration

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Table 1. Matrix for Technology Developer Support Services (Continued)

SOURCE OF SUPPORT	Proof of Concept			Demonstrating your Technology							Getting the Work		Getting Paid						
	Grants and Loans	Investors and Venture Capitalists	Business Planning	Financial and Market Research Assistance	Full-Scale and Field Demos	Bench-Scale and Pilot Demos	Laboratory Treability Study Facilities	Research and Development Centers	Independent Testing and Certification Programs	Technology Testing, Demonstration, and Evaluation	Transference Assistance	Regulatory Assistance	Networking and Business Facilitation	Direct Sales and Marketing	Commercialization Assistance	Export Assistance	Procurement and Proposal Development Assistance	Business Management and Administration	Business Management and Administration
California Remedial Technology Assessment Program	◆			◆						◆									46
Capital Network		◆																	47
Carnegie Mellon University, Pittsburgh, PA					◆		◆												47
Center for Environmental Industry and Technology		◆			◆								◆						47
Commerce Business Daily (CBD), U.S. Department of Commerce												◆							48
DataMerge Venture Capital Database	◆																		48
Doing Business with EPA, U.S. EPA Office of Acquisition Management																			48
Envirobiz Market Research																			48
Environment in Asia, Asia Environmental Trading, Ltd.																			49
Environmental Business Council Resources																		◆	49
Environmental Capital Network		◆																	49

Table 1. Matrix for Technology Developer Support Services (Continued)

SOURCE OF SUPPORT	Proof of Concept			Demonstrating your Technology							Getting the Work			Getting Paid					
	Grants and Loans	Investors and Venture Capitalists	Business Planning	Market Research and Analysis	Full-Scale and Field Demos	Bench-Scale and Pilot Demos	Laboratory Treability Study Facilities	Research and Development Centers	Independent Testing and Certification Programs	Technical Assistance	Information Dissemination Assistance	Regulatory Assistance	Networking and Business Facilitation	Direct Sales and Marketing	Commercialization Assistance	Export Assistance	Procurement and Proposal Development Assistance	Business Management and Administration	Financial Management
Foresight Science and Technology, Inc.	◆			◆								◆	◆						54
Globaltechs			◆			◆													54
GNET Contracting Opportunities			◆			◆							◆						54
Great Lakes and Mid-Atlantic Hazardous Substances Research Center						◆		◆											55
Great Plains-Rocky Mountain Hazardous Substance Research Center						◆		◆											55
Ground Water Remediation Field Laboratory, Dover Air Force Base, DE					◆														56
Ground-Water Remediation Technologies Analysis Center (GWR/TAC)					◆														56
Gulf Coast Hazardous Substance Research Center										◆									56
Hazen Research, Inc.						◆													57
Idaho National Engineering Laboratory, Idaho Falls, ID					◆														57
IIT Research Institute (IITRI), Chicago, IL		◆																	57

Table 1. Matrix for Technology Developer Support Services (Continued)

SOURCE OF SUPPORT	Proof of Concept			Demonstrating your Technology							Getting the Work			Getting Paid								
	Grants and Loans	Investors and Venture Capitalists	Business Planning	Market Research and Analysis	Full-Scale and Field Demos	Bench-Scale and Pilot Demos	Laboratory Feasibility Study Facilities	Research and Development Centers	Independent Testing and Certification Programs	Technology Testing, Demonstration, and Evaluation Assistance	Transferring Assistance	Information Dissemination Assistance	Regulating and Regulatory Assistance	Networking and Business Facilitation	Direct Sales and Marketing	Commercialization Assistance	Export Assistance	Procurement and Proposal Development Assistance	Business Management and Administration	Financial Management	Page No. in Developers' Guide	
National Business Incubation Association																					63	
National Center for Ground Water Research																						63
National Center for Integrated Bioremediation Research and Development																						64
National Defense Center for Environmental Excellence																						64
National Environmental Technology Demonstration Program, U.S. Department of Defense																						65
National Environmental Technology Test Sites (NETTS) Program																						66
National Environmental Waste Technology Testing and Evaluation Center																						66
National Technology Transfer Center																						67
Naval Construction Battalion Center, Port Hueneme, CA																						68
Naval Environmental Leadership Program (NELP)																						68
New Jersey Commission on Science and Technology																						68

Table 1. Matrix for Technology Developer Support Services (Continued)

SOURCE OF SUPPORT	Proof of Concept			Demonstrating your Technology							Getting the Work		Getting Paid				
	Financial and Market Assistance	Full-Scale and Field Demos	Bench-Scale and Pilot Demos	Laboratory Treability Study Facilities	Research and Development Centers	Independent Testing and Certification Programs	Technology Testing, Demonstration, and Evaluation	Transference Assistance	Regulatory Assistance	Networking and Business Facilitation	Direct Sales and Marketing	Commercialization Assistance	Export Assistance	Procurement and Proposal Development Assistance	Business Management and Administration	Business Management and Administration	Administrative and Financial Assistance
Program Research and Development Announcements (PRDA) and Research Opportunity Announcements (ROA), U.S. Department of Energy	◆	◆	◆	◆													74
Remediation Information Management System (RIMS)				◆													75
Remediation Technologies Development Forum		◆	◆	◆													75
Research Triangle Institute				◆													76
Resource Conservation and Recovery Act, Superfund, and Emergency Planning and Community Right-to-Know Act Hotline							◆										76
Sandia National Laboratories				◆													76
Savannah River Research Campus															◆		77
Service Corps of Retired Executives (SCORE)															◆	◆	77
Small Business and Contracting Opportunities, U.S. Department of Defense																◆	78
Small Business Development Center Program, U.S. Small Business Administration																◆	78
Small Business Guide to Federal R&D Funding Opportunities																	79

Table 1. Matrix for Technology Developer Support Services (Continued)

SOURCE OF SUPPORT	Proof of Concept			Demonstrating your Technology							Getting the Work			Getting Paid					
	Grants and Loans	Investors and Venture Capitalists	Business Planning	Market Research and Analysis	Full-Scale and Field Demos	Bench-Scale and Pilot Demos	Laboratory Treability Study Facilities	Research and Development Centers	Independent Testing and Certification Programs	Technology Testing, Demonstration, and Evaluation	Transference Assistance	Regulatory Assistance	Networking and Business Facilitation	Direct Sales and Marketing	Commercialization Assistance	Export Assistance	Procurement and Proposal Development Assistance	Business Management and Administration	Financial Management
Sustainable Business Network	◆																		84
TechCon			◆						◆					◆					85
TechKnow							◆												85
Technology Transfer Society																			85
Tennessee Technology Foundation																◆			86
Toxic Substances Control Act (TSCA) Assistance Information Service, U.S. EPA																			86
Trade Information Center, U.S. Department of Commerce																			87
UNISPHERE																			87
U.S. Army Corps of Engineers (USACE) Environmental Programs Contracting Opportunities																			87
U.S. Business Advisor: Laws and Regulations																			88
U.S. EPA Laws and Regulations																			88

Table 1. Matrix for Technology Developer Support Services (Continued)

SOURCE OF SUPPORT	Getting the Work				Getting Paid				
	Proof of Concept				Demonstrating your Technology				
	Grants and Loans	Investors and Venture Capitalists	Business Planning	Market Research and Analysis	Financial and Market Research Assistance	Technology Testing, Demonstration, and Evaluation Assistance	Transference Assistance	Business Development Assistance	Administrative and Financial Assistance
Volunteer Army Ammunition Plant, Chattanooga, TN				◆					94
Waterways Experiment Station Hazardous Waste Research Center					◆	◆	◆		95
Western New York Technology Development Center	◆				◆	◆	◆		95
Western Region Hazardous Substance Research Center									96

III. DETAILED DESCRIPTION OF RESOURCES

Chapters I and II introduced the purpose of this guide as it related to the stages of technology development and commercialization. Each stage of this process was identified and the appropriate resources available to help with the various parts of the entire commercialization process were identified. Chapter II oriented the user to the resources found in the guide by grouping the resources into categories of assistance organized sequentially by phase of the technology development process. Chapter II also listed possible ways the resources may assist a technology developer.

Chapter III is the last section of this guide and provides brief descriptions about the services provided by each of the resources identified to help a technology developer bring an innovative technology to the market. Phone, address, and e-mail contact information are presented, and when available, Web sites. To facilitate locating additional information, resources are listed in alphabetical order, as they were in the matrix presented at the end of Chapter II.

Address:

Advanced Technology
Program
National Institute
of Standards and
Technology
100 Bureau Drive
Mail Stop 4701
Gaithersburg, MD
20899-4701

Phone:

(800) ATP-FUND
(800) 287-3863

Fax:

(301) 926-9524

E-mail:

atp@nist.gov

Web page:

www.atp.nist.gov

ADVANCED TECHNOLOGY PROGRAM, U.S. DEPARTMENT OF COMMERCE

The U.S. Department of Commerce's Advanced Technology Program (ATP) provides technology development grants and technical assistance on a cost-sharing basis to single businesses or joint ventures conducting research and development of technologies that have significant potential to stimulate U.S. economic growth and improvement in the competitiveness of U.S. industry. The program, administered by the National Institute for Standards and Technology, strives to support high-risk technologies that have the potential capability to positively affect the Nation's economy.

ATP will fund development of laboratory prototypes and proof of technical feasibility, but not commercial prototypes or proof of commercial feasibility. Grants have been awarded in the areas of environmental technology, energy conservation, biotechnology, advanced materials, and high-performance computing, for example.

ATP awards up to \$2 million, which must be applied to R&D costs only, over three years to individual firms. Joint ventures are not subject to the \$2 million limit, but must provide more than 50 percent matching funds and can be funded for up to five years. Any eligible U.S. business, for-profit independent research organization, or industry-led joint venture may apply. Universities, government organizations, or nonprofit independent research organizations may be funded if they are part of a joint venture or subcontractors to an eligible single applicant or joint venture.

Address:

Air Force Center for
Environmental Excellence
Technology Transfer
Division (ERT)
3207 North Road
Building Suite 532
Brooks AFB, TX
78235-5357

Contact:

Jim Gonzales

Phone:

(210) 536-4324

Fax:

(210) 536-4330

Web:

www.afcee.brooks.
af.mil/er/orgert.htm

AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE INNOVATIVE TECHNOLOGY PROGRAM

The Air Force Center for Environmental Excellence (AFCEE) Innovative Technology Program was established to identify innovative technologies in the areas of site characterization, remediation, and pollution prevention. The program is based on an annual solicitation under a Broad Agency Announcement (BAA) for technology demonstration. The purpose of this effort is to field-test innovative remedial or pollution prevention and control technologies; techniques that save money and time; and those that facilitate compliance with air, soil, and water regulatory requirements.

Areas of interest include, but are not limited to, the following: remediation technologies for soil and water contaminated with fuels, chlorinated solvents, pesticides, PCBs, and heavy metals; vapor phase capture and treatment; cost-effective site characterization techniques; parts cleaning and degreasing; stripping or removal of protective coatings; and treatment of industrial process sludge.

Successful projects historically have been those that satisfied the following criteria: the technology is based upon sound scientific principles; the proposed technology has widespread applicability to Air Force operations and processes; and the proposed technology represents a cost savings when compared with other technologies currently in use.

Types of contracts available to developers include: cost plus fixed fee; cost sharing; cost reimbursement; cost plus incentive fee; and time and materials.

Web:

www.afcee.brooks.af.mil/business.htm

AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE BUSINESS OPPORTUNITIES

This Web site lists information about obtaining requests for proposals and current awarded Air Force Center for Environmental Excellence (AFCEE) contracts.

Web:

www.brooks-smallbusiness.com

AIR FORCE SMALL BUSINESS ENVIRONMENTAL DATABASE

The Air Force Small Business Environmental Database (AFSBED) is a database of all environmental firms interested in doing business with the Air Force Center for Environmental Excellence (AFCEE) and a centralized Air Force source list for environmental work. Information is available to small and minority businesses, government buyers and large prime contractors who also utilize the database on a daily basis. Lists of Small, Small Disadvantaged and Woman Owned businesses can be queried from the database for subcontracting opportunities and teaming partners. Business owners can submit their company's information to be included in the database.

Web:

www.businessfunding.net

AMERICA'S BUSINESS FUNDING DIRECTORY

America's Business Funding Directory is an Internet search engine that can help new businesses find funding. Funding sources are broken into six categories: commercial finance, investment funds, equipment leasing, government funds, real estate finance, and venture capital. Searching the Directory is free, as is a downloadable Funding Workbook designed to help business developers create a successful business plan that attracts funding sources.

Web:

<http://ace-net.sr.unh.edu/home.html>

ANGEL CAPITAL ELECTRONIC NETWORK

The Angel Capital Electronic Network (ACE-Net) is a nation-wide Internet-based listing service that provides information to angel investors on small, dynamic, growing businesses seeking \$250,000 to \$5 million in equity financing. ACE-Net, sponsored by the Office of Advocacy of the U.S. Small Business Administration, was announced by the President of the United States in October 1996.

ACE-Net seeks to lower financial barriers to developing innovative technologies by allowing angel investors to view the securities offerings of small, growing companies via the Internet. Angel investors are typically wealthy individuals with significant business experience.

For more information, view the Frequently Asked Questions section of the ACE-Net Web site.

Address:

Argonne National
Laboratory
9700 S. Cass Avenue
Argonne, IL 60439

Contact:

Greg Borland

Phone:

(630) 252-9561

Fax:

(630) 252-9767

E-mail:

gborland@anl.gov

ARGONNE NATIONAL LABORATORY, ARGONNE, IL

Argonne National Laboratory contains a full range of analytical capabilities, both for routine compliance analysis as well as unique specialty analysis. In addition, numerous off-site commercial laboratories are located in the area. Technology developers are permitted to do their own analysis using available facilities.

This site was historically used as a disposal site for liquid chemicals. A variety of solvents are still present in the soil and groundwater. Types of demonstrations appropriate for this facility include *in situ* remediation or monitoring of soil or groundwater.

Contact:

Dr. Al Montague

Phone:

(215) 814-5562 or
(800) 228-8711

Web:

www.epa.gov/region3/sbac

BUSINESS ASSISTANCE CENTER, U.S. EPA REGION 3

The objectives of EPA Region 3's Business Assistance Center are to: (1) assist small and medium size businesses in complying with environmental regulations in order to protect the environment while sustaining economic development; and (2) seek opportunities to minimize waste generation and promote Region 3's environmental technology industry. The Center will encourage and support the development, commercialization, marketing, and exporting of innovative environmental technologies developed by firms located in Region 3 (DE, MD, PA, VA, WV, DC).

Web:

[www.pr.doe.gov/
prbus.html](http://www.pr.doe.gov/prbus.html)

BUSINESS COMMUNICATIONS CENTER, U.S. DEPARTMENT OF ENERGY

The U.S. Department of Energy's (DOE) Office of Procurement and Assistance Management has established the Business Communications Center (BCC) with the primary mission of assisting companies and individuals in doing business with the DOE. The BCC's goal is eliminating many of the frustrations and inconveniences which may have been experienced by companies attempting to obtain business information from DOE.

The BCC provides a comprehensive and extensive "one-stop" electronic communications center for those wishing to do business with the DOE. A wide array of DOE-wide business related information is available.

Address:

Office of Environmental
Technology Air
Resources Board
Sacramento, CA
95812-2815

Contact:

Ms. Tam Doduc

Phone:

(916) 327-5789

Fax:

(916) 445-6024

Web:

[www.calepa.ca.gov/
programs/envirotech/
encertpg.htm](http://www.calepa.ca.gov/programs/envirotech/encertpg.htm)

CALIFORNIA ENVIRONMENTAL TECHNOLOGY CERTIFICATION PROGRAM, CALIFORNIA EPA

California EPA's (Cal/EPA) award-winning certification program is a voluntary program that provides participating technology developers, manufacturers, and vendors an independent, recognized third-party evaluation of the performance of new and mature environmental technologies. Developers and manufacturers define quantitative performance claims for their technologies and provide supporting documentation; Cal/EPA reviews that information and, where necessary, conducts additional testing to verify the claims. The technologies, equipment, and products that are proven to work as claimed receive official state certification. The certification program is voluntary and self-supporting. Companies participating in the program pay the costs of evaluating and certifying their technologies.

Address:

California Environmental
Protection Agency
Office of Pollution
Prevention and Tech-
nology Development
P.O. Box 806
Sacramento, CA
95812-0806

Contact:

Tim Ogburn

Phone:

(916) 322-5298

Fax:

(916) 327-4494

E-mail:

[togburn@commerce.
ca.gov](mailto:togburn@commerce.ca.gov)

CALIFORNIA ENVIRONMENTAL TECHNOLOGY EXPORT PROGRAM

The California Environmental Technology Export Program promotes the export of California environmental technologies internationally. The export program is a component of the California Environmental Partnership, which, under the leadership of California's Environmental Protection Agency and the Trade and Commerce Agency, promotes and assists in the development, manufacture, use, and export of environmental technologies, products, and services. The partnership links the public and private sectors to enhance environmental and economic progress.

The export program supports the export of environmental technologies by acting as a clearinghouse of environmental trade information for domestic sellers and foreign buyers, performing market studies, soliciting technical advice to identify international opportunities, participating in technical exchange programs to enhance awareness among foreign buyers, coordinating activities and communication with foreign governments to maximize trade promotion and financial assistance opportunities, and leading or partnering with other agencies on trade missions.

Address:

Department of Toxic
Substances Control
Site Mitigation Program
P.O. Box 806 T
Sacramento, CA
95812-0806

Contact:

Mark Berscheid

Phone:

(916) 322-3294

Fax:

(916) 323-3392

CALIFORNIA REMEDIAL TECHNOLOGY ASSESSMENT PROGRAM

The Remedial Technology Assessment Program (RTAP) was established to identify innovative treatment technologies and to match technologies with appropriate sites in California to perform site-specific demonstrations of the technologies.

RTAP will assist in locating sources of funding or incentives to participate in site-specific demonstration projects at California sites. The program also may issue variances instead of permits to developers as a means of expediting the application of their technologies to specific sites.

Contact:
Leonard Rosenthal

Phone:
(512) 305-0831

E-mail:
tcn@ati.utexas.edu

Web:
www.thecapitalnetwork.com/overview.html

CAPITAL NETWORK

The Capital Network is a non-profit economic development organization developed in response to a growing need to provide entrepreneurial ventures with training and access to investors. The Network offers investor-to-entrepreneur introduction services, educational programs, venture capital conferences, seminars, literature, software, and an extensive "know-how network" of experts and advisors.

The Network offers selective, confidential matching service for investors and entrepreneurs based on mutual business interests.

Address:
Carnegie Mellon
Research Institute
4400 5th Avenue
Pittsburgh, PA 15213

Contact:
Edwin Minkley

Phone:
(412) 268-3188

Fax:
(412) 268-3101

E-mail:
minkley@andrew.cmu.edu

CARNEGIE MELLON UNIVERSITY, PITTSBURGH, PA

Carnegie Mellon Research Institute is an applied research organization that develops practical applications of technologies for industry and government. The center's staff specializes in conducting research on biodegradation of solid waste and hazardous waste materials. It also conducts research in the areas of gas sensors and artificial intelligence concepts to be used as a tool in evaluating permit requests. The center is primarily funded (85 percent) through industry sponsorships. The remaining funding is obtained through government grants. In addition to providing research for a diverse group of sponsors, the center also provides specialized capabilities to smaller companies that do not have access to such capabilities in house.

Address:
EPA-New England (RAA)
JFK Federal Building
Boston, MA 02203

Contact:
Maggie Theroux or Carol
Kilbride

Phone:
(800) 575-CEIT (in New
England)

(617) 918-1613 (Maggie)

(617) 918-1831 (Carol)

E-mail:
kilbride.carol@epa.gov

CENTER FOR ENVIRONMENTAL INDUSTRY AND TECHNOLOGY

EPA-New England has established the Center for Environmental Industry and Technology (CEIT) to assist in bringing innovative ideas and technologies that would benefit both the environment and the economy to the marketplace. The CEIT, developed in coordination with representatives from industry, is promoting New England's environmental technologies and the Region's \$10 billion environmental industry. The CEIT takes a four-pronged approach to address the needs of the environmental industry by:

- Improving the ability of the industry to gain access to state and federal programs
- Increasing access to technology demonstration sites and testing evaluation; increasing access to capital
- Bringing down regulatory and institutional barriers facing the environmental industry
- Marketing environmental products and innovative technologies both here and abroad

Web:
[http://
 cbdnet.access.gpo.gov/](http://cbdnet.access.gpo.gov/)

COMMERCE BUSINESS DAILY, U.S. DEPARTMENT OF COMMERCE

The Commerce Business Daily (CBD) lists notices of proposed government procurement actions, contract awards, sales of government property, and other procurement information. A new edition of the CBD is issued every business day. Each edition contains approximately 500-1,000 notices. Each notice appears in the CBD only once. All federal procurement offices are required to announce proposed procurement actions over \$25,000 and contract awards over \$25,000, that are likely to result in the award of any subcontracts, in the CBD.

This site offers the ability to search the CBD database, browse CBD notices, and subscribe to both printed and electronic versions of the CBD. CBDNet is provided through an alliance of the U.S. Department of Commerce and the U.S. Government Printing Office.

CBD notices that pertain to hazardous waste, solid waste, underground storage tank remediation, and other environmental topics, as well as summaries from previous weeks are available for viewing and downloading from the Hazardous Waste Clean-up Information Web site at <http://clu-in.org>.

Web:
[www.datamerge.com/
 indexcentral.html](http://www.datamerge.com/indexcentral.html)

DATAMERGE VENTURE CAPITAL DATABASE

DataMerge provides financing sources and financing "how to" programs to more than 21,000 business owners, commercial real estate finance professionals and finance consultants internationally. DataMerge aims to help people secure funding using time-efficient, easy-to-master methods.

Web:
www.epa.gov/oam

DOING BUSINESS WITH EPA, U.S. EPA OFFICE OF ACQUISITION MANAGEMENT

This Web site provides information about business opportunities with the EPA in the form of Commerce Business Daily notices and/or downloadable solicitations. Also available on this site are EPA's acquisition forecasts for the current and the next fiscal years, information on EPA's procurement policies, a list of EPA's current contracts, and the Federal Acquisition Virtual Library, which provides links to numerous other federal acquisition resources on the Web.

Address:
 7301 Ohms Lane Suite
 460 Minneapolis, MN
 55439

Phone:
 (612) 831-2473

Fax:
 (612) 831-6550

Web:
[www.envirobiz.
 com/buttons/remhome.htm](http://www.envirobiz.com/buttons/remhome.htm)

ENVIROBIZ MARKET RESEARCH

Envirobiz is the on-line Web service of Environment Information, Ltd. (EI), a consulting service specializing in providing research on the markets for environmental services and technologies. EI's services are provided through either custom or subscription-based research services. EI also provides situation-specific analysis for individual clients.

Web:
www.asianenviro.com

ENVIRONMENT IN ASIA, ASIA ENVIRONMENTAL TRADING LTD.

The Environment in Asia Web site is produced and funded by Asia Environmental Trading, Ltd., a consulting and information services company dedicated to environmental issues and markets in Asia. It is a free service to give viewers around the world a by-country and regional introduction to the real issues and latest developments. It also acts as a networking center by offering contact details of relevant organizations (e.g., Environment Ministries around Asia) and links to related Web sites. The content of this site is geared towards the “business of the environment” and “environmental issues in business” around Asia.

This site features a country-by-country introduction to the region’s emerging and developed markets: air, water, solid waste and environmental services.

Web:
<http://clu-in.org>

ENVIRONMENTAL BUSINESS COUNCIL RESOURCES

Environmental business council is a general term used to describe a variety of specific organizations that aim to advance the awareness, competitiveness and growth of the environmental industry. In order to advance their goals, environmental business councils support the development and transfer of innovative environmental technology through such activities as barrier reduction, economic development, and marketing at local, regional, and/or national levels. An on-line directory of environmental business councils is available at <http://clu-in.org> by clicking on Search and typing “EBC.” This on-line directory provides contact information, council function (such as research and development, barrier reduction, market development), and type of assistance they may provide relative to the phases of the technology development process.

Address:
**The Environmental
Capital Network**
416 Longshore Drive
Ann Arbor, MI 48105

Contact:
Keith Raab

Phone:
(734) 996-8387

Fax:
(734) 996-8732

E-mail:
kraab@recycle.com

Web:
[http://bizserve.com/
Environmental.Capital.
Network/](http://bizserve.com/Environmental.Capital.Network/)

ENVIRONMENTAL CAPITAL NETWORK

The Environmental Capital Network (ECN) brings together environmental companies and investors, and offers services to both. ECN provides individual, professional, corporate and institutional investors with access to early stage and expansion companies commercializing environmental and “green” technologies, products and services, and also assists such companies in more efficiently and effectively raising capital. Also, ECN organizes a series of investors’ conferences and forums to introduce investors to early and expansion stage companies, and to each other. ECN works with investors and companies in a wide range of energy, industrial process, and other environmental sectors.

Address:

International Trade Center
1300 Pennsylvania
Avenue, N.W.
Suite 200
Washington, DC 20004-
3016

Contact:

John Mizroch

Phone:

(202) 312-2917

Fax:

(202) 312-2925

E-Mail:

mizrochj@ctc.com

Web:

www.eec.org

ENVIRONMENTAL EXPORT COUNCIL

The Environmental Export Council (EEC) is a consortium of approximately 120 of America's leading environmental business and technology firms, national laboratories, universities, and trade associations. EEC was created to provide leadership to the U.S. environmental industry in order to realize the extraordinary potential to grow and compete effectively in the burgeoning global marketplace.

The Environmental Exchange Program provides U.S. environmental companies with the opportunity to showcase their products, technologies, and services while assisting Asian environmental professionals and organizations to address critical areas of environmental need such as the introduction of clean technologies and pollution prevention, solid and hazardous waste management, reduction of air emissions, water and wastewater treatment, and medical waste management.

The Latin America Environment and Energy Market Development Project is dedicated to building a critical mass of internationally-aware and successful companies in the environmental and energy sectors, through experience and exposure to markets in Latin America and the Caribbean region. The program, which is funded under the U.S. Department of Commerce Market Development Cooperator Program, involves innovative cooperative activities between government and the private sector designed to take advantage of key business opportunities in Latin America by leveraging the strengths of the U.S. environmental and energy sectors.

Address:

901 North Stuart Street
Suite 303
Arlington, VA 22203

Contact:

Jeff Marqusee

Phone:

(703) 696-2120

Fax:

(703) 696-2114

Web:

www.estcp.org

ENVIRONMENTAL SECURITY TECHNOLOGY CERTIFICATION PROGRAM, U.S. DEPARTMENT OF DEFENSE

The Environmental Security Technology Certification Program's (ESTCP) goal is to demonstrate and validate promising, innovative technologies that target the Department of Defense's (DoD) most urgent environmental needs. These technologies provide a return on investment through cost savings and improved efficiency. ESTCP's strategy is to select lab-proven technologies with broad DoD and market application. These projects are moved aggressively to the field for rigorous trials that document their cost, performance, and market potential.

Successful demonstration leads to acceptance of innovative technologies by DoD end-users and the regulatory community. To ensure that the demonstrated technologies have a real impact, ESTCP incorporates these players in the development and execution of each technology. ESTCP demonstrations:

- Address real DoD environmental needs.
- Significantly reduce costs and risks and expedite implementation.
- Document and validate the cost and performance of new technologies for DoD end-users and the regulatory community.

Address:

Enviro-Tech Center
3137 North Inner Street
Otis Air National Guard
Base, MA 02542

Contact:

Kristin Smith

Phone:

(508) 563-3648

Fax:

(508) 563-3628

E-mail:

Kristin@envirotechcenter.
org

Web:

www.
envirotechcenter.org

ENVIRO-TECH CENTER, OTIS AIR NATIONAL GUARD BASE, MA

The Environmental Technology (Enviro-Tech) Center is an independent non-profit corporation located at the Massachusetts Military Reservation (MMR), focused on demonstration and commercialization of emerging environmental technologies. MMR will have close to a half a dozen of the largest groundwater extraction and treatment systems in the U.S. operating after the year 2000. Technologies which increase the effectiveness and decrease the operating costs of these systems are one of the focus areas of the Center.

Phone:

(800) 872-4348

Web:

www.usgtn.org/pages/
energy.html

ENVIRONMENTAL TECHNOLOGY NETWORKS, U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT GLOBAL TECHNOLOGY NETWORK

The Global Technology Network (GTN) assists U.S. businesses in gaining access to Latin American, Asian, African and other international environmental markets by providing current trade and business leads, and market information through the Environmental Technology Networks for Asia and the Americas (ETNA) and the GTN - Africa service. ETNA assists the U.S. business community in gaining access to global environmental and energy markets by providing trade leads and market information.

Business opportunities for U.S. companies are identified by in-country public and private sector partners. GTN, through its extensive environmental database, matches the developing country's needs with U.S. companies that have appropriate technologies, products, and expertise. The leads are sent by fax or e-mail to U.S. companies registered in the GTN system. Any U.S.-based environmental firm is eligible to receive trade leads – to register call or download a registration form from the Web site.

Contact:

Penelope Hansen

Phone:

(202) 564-3212

E-mail:

hansen.penelope@epa.gov

Web:

www.epa.gov/etv/

ENVIRONMENTAL TECHNOLOGY VERIFICATION PROGRAM

The Environmental Technology Verification (ETV) Program verifies the performance of innovative technical solutions to problems that threaten human health or the environment. ETV was created to substantially accelerate the entrance of new site characterization and monitoring technologies into the domestic and international marketplace. ETV verifies commercial-ready, private sector characterization and monitoring technologies through twelve pilot programs. The ETV Web site contains a list of technologies verified and complete information on the ETV pilots.

Web:
<http://clu-in.org>

EPA HAZARDOUS WASTE CLEAN-UP INFORMATION WEB SITE

The Hazardous Waste Clean-up Information (CLU-IN) Web site provides information about innovative treatment technologies to the hazardous waste remediation community. It describes programs, organizations, publications and other tools for federal and state personnel, consulting engineers, technology developers and vendors, remediation contractors, researchers, community groups, and individual citizens. The site is managed by the EPA Technology Innovation Office, but is intended as a forum for all waste remediation stakeholders.

Phone:
 (800) 245-4504 (helpline)

EPA REMEDIATION AND CHARACTERIZATION INNOVATIVE TECHNOLOGIES

Web:
www.epareachit.org

EPA REmediation And CHaracterization Innovative Technologies (EPA REACH IT) is a new system managed by the EPA Technology Innovation Office that lets environmental professionals use the power of the Internet to search, view, download and print information. More than 750 service providers offering 1,300 innovative remediation and 150 characterization technologies are currently in the system. Through EPA REACH IT, you can use the Internet to share information about the capabilities of your technology with a virtually unlimited audience. Since EPA REACH IT is free to both technology providers and users of innovative technologies, it is a cost-effective way to market your innovative treatment, field analytical, or characterization technologies to decision makers who are directly involved in selecting technologies for use at hazardous waste sites. Technology developers need only to complete the Vendor Information Form (VIF) on-line at <http://www.epareachit.org>. Once your data is submitted, EPA will perform a technical review before the data is entered into the system. EPA reaches cleanup personnel and investors throughout the United States and abroad by advertising EPA REACH IT in trade journals, at conferences, and through direct mailings to an extensive list of potential users.

Web:
www.epa.gov/epaoswer/hotline/listsrv.htm

EPA-WASTE LISTSERVE: ALL HAZARDOUS AND SOLID WASTE AND COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT FEDERAL REGISTERS

EPA maintains several free electronic mailing lists of interest to Hotline customers, including lists for Federal Registers, EPA press releases, and a Hotline mailing list. Subscribers to the lists receive e-mailed copies of Federal Registers, press releases, or Hotline updates and monthly reports as they are released. Archives of the Federal Registers and press releases are maintained on the EPA World Wide Web server.

To subscribe to the EPA-WASTE listserv, send an e-mail to:

1. listserv@unixmail.rtpnc.epa.gov
2. Leave the subject line blank, or put a period in the subject area
3. Type the following in the body of the message:
 subscribe EPA-WASTE <first name> <last name>
 Example: subscribe EPA-WASTE John Smith

Contact:
Jerome Katz

Phone:
(314) 977-3864

Fax:
(314) 977-3897

Web:
www.slu.edu/eweb

eWEB

eWeb is an Internet site that provides information to individuals interested in starting, running, or growing a business. This site provides "how to" help as well as information on business planning, financing, franchising, business management, etc. eWeb is supported by the St. Louis University Entrepreneurship Program.

Address:
Export-Import Bank of
the United States
811 Vermont Avenue, N.W.
Washington, DC 20571

Phone:
(800) 565-3946

Fax:
(202) 565-3380

Web:
www.exim.gov

EXPORT-IMPORT BANK OF THE UNITED STATES

Export-Import (Ex-Im) Bank's mission is to create jobs through exports. It provides guarantees of working capital loans for U.S. exporters, guarantees the repayment of loans or makes loans to foreign purchasers of U.S. goods and services. Ex-Im Bank also provides credit insurance that protects U.S. exporters against the risks of non-payment by foreign buyers for political or commercial reasons. Ex-Im Bank does not compete with commercial lenders, but assumes the risks they cannot accept. It must always conclude that there is reasonable assurance of repayment on every transaction financed.

Address:
U.S. Environmental
Protection Agency
OSP/ORD
26 W. Martin Luther
King Drive
Cincinnati, OH 45268

Contact:
Cynthia Gravino

Phone:
(513) 569-7960

Fax:
(513) 569-7132

Web:
www.nalusda.gov/ttic/guide.htm
and
www.etc2.org

FEDERAL TECHNOLOGY TRANSFER ACT PROGRAM, U.S. EPA

In the past, legal and institutional barriers have prevented government and industry from collaborating in developing and marketing effective technologies to prevent and control pollution. The Federal Technology Transfer Act of 1986 (FTTA) removes some barriers to the joint development of commercial treatment technologies. The FTTA allows flexible Cooperative Research and Development Agreements (CRADA) among federal laboratories, industry, and academic institutions.

Under CRADAs, companies may be given exclusive rights to market and commercialize new technologies that result from the collaboration. For industry, the key advantage of CRADAs is the speed and ease with which the agreements can be negotiated and signed. CRADAs are not subject to federal contracting or grant requirements.

The FTTA also established in each federal agency an office of research and technology application (ORTA) which is responsible for technology transfer within each agency.

More information and links to Federal Technology Transfer Offices on the Internet are available at <http://www.nalusda.gov/ttic/guide.htm>.

Also visit the Environmental Technology Commercialization Center (ETC²), an EPA technology transfer center, for more information on technology commercialization and CRADAs, at <http://www.etc2.org>.

Address:

Foresight Science
and Technology, Inc.
P.O. Box 6815
New Bedford, MA
02742

Contact:

Phyl Speser

Phone:

(508) 984-0018

Fax:

(508) 984-0405

E-mail:

phyl@seeport.com

Web:

www.seeport.com

FORESIGHT SCIENCE AND TECHNOLOGY, INC.

Foresight Science and Technology, Inc., is a research and development corporation that specializes in commercialization of technology; grantsmanship, fund raising, and capitalization; and program development and evaluation. Foresight's Technology Niche Analysis Commercialization (TNAC) process helps their clients to design R&D projects, find and obtain R&D funding, locate markets for emerging technologies, successfully license or sell their technology to companies in those markets, and commercialize their technology through direct product sales, joint ventures, and strategic alliances. Foresight charges a fee for its services commensurate with the services provided.

Foresight also has created, with funding from the National Science Foundation, the Small Business Guide to Federal R&D Funding Opportunities, which is available at <<http://www.seeport.com/manuals/r&dbook/rdguide.htm>>.

Address:

GLOBALtechs
c/o OCETA
63 Polson Street, 2nd Floor
Toronto, Ontario, Canada
M5A 1A4

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E-mail:

info@globaltechs.com

Web:

www.globaltechs.com

GLOBALTECHS

GLOBALtechs, is an on-line site remediation technologies directory that provides detailed technical and project information on over 650 proven international technologies. Subscribers to GLOBALtechs can access technology descriptions, project data and results, technology contacts, and cost information all on-line. GLOBALtechs, searched via browser, keyword or problem solver, enables subscribers to identify technologies for specific site criteria. GLOBALtechs provides pertinent, current information to both potential users and suppliers of site remediation services, without the vendor or developer bias.

GLOBALtechs was created from merging two databases currently commercially available: SEDTEC and REMTEC™. GLOBALtechs also has been updated and expanded to provide the latest information and most innovative technologies in site remediation. Additions and updates to the information will occur on a continuous basis to ensure subscribers access to the newest information.

Single user subscriptions offer unlimited access to the GLOBALtechs on-line database, cover a period of 12 months from the date of purchase, and are priced at \$995.00 each.

Web:

www.gnet.org/
filecomponent/
2501.html

GNET CONTRACTING OPPORTUNITIES

GNET provides information and links to many contracting and teaming opportunities in the environment and technology arena, as well as data that can help product or service providers plan for future opportunities. Included are procurement notices from the Commerce Business Daily, Department of Defense, Department of Energy, and the National Aeronautics and Space Administration (NASA).

GNET maintains an interactive database, TechKnow, where technology providers can enter information about their innovative technology. This information is then readily available to remediation site managers and other decision-makers. Users of TechKnow can also list their remediation technology needs, which technology providers can search themselves to find a match. Some of the largest remediation sites in the United States regularly list their technology needs on TechKnow.

Address:

The University of
Michigan
Suite 181
Environmental and
Water Resources
Engineering Building
Ann Arbor, MI
48109-2125

Contact:

Walter Weber, Jr.

Phone:

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Fax:

(734) 936-4391

Web:

[www.engin.umich.edu/
dept/cee/research/
HSRC/index.html](http://www.engin.umich.edu/dept/cee/research/HSRC/index.html)

GREAT LAKES AND MID-ATLANTIC HAZARDOUS SUBSTANCE RESEARCH CENTER

The Great Lakes and Mid-Atlantic Hazardous Substance Research Center serves EPA Regions 3 (DE, MD, PA, VA, WV, DC) and 5 (IL, IN, MI, MN, OH, WI). Participating institutions are the University of Michigan, Michigan State University, and Howard University. The center's research program focuses on remediation technologies for sites contaminated with organic pollutants by integrating bioremediation with complementary chemical and physiochemical technologies. The center focuses on four general areas of research: biodegradation and bioventing; remediation of NAPLs in the saturated zone; remediation of soluble/sorbed contaminants in the saturated zone; and field research studies. This basic research agenda will move into field studies with the establishment of the National Center for Integrated Bioremediation Research and Development at Wurtsmith Air Force Base, Oscoda, Michigan. A second field study site is located in St. Joseph, Michigan analyzing the lake-aquifer interface and the intrinsic bioremediation of chlorinated solvents.

The center can offer technical assistance to developers interested in *in situ* bioremediation technology, as well as a field study site for collaborative work at Oscoda, Michigan. Other technology transfer activities include the publishing of research, production of a scientific journal entitled Synergos, and information outreach and exchange among other centers, state agencies, consultants, and the interested public.

Address:

101 Ward Hall
Kansas State University
Manhattan, KS
66506-2502

Contact:

Larry Erickson

Phone:

(785) 532-6519

Hotline:

(800) 798-7796

Fax:

(785) 532-5985

Web:

[www.ensg.ksu.
edu/HSRC](http://www.ensg.ksu.edu/HSRC)

GREAT PLAINS – ROCKY MOUNTAIN HAZARDOUS SUBSTANCE RESEARCH CENTER

The Great Plains-Rocky Mountain Hazardous Substance Research Center was established to conduct research on environmental concerns in EPA Regions 7 (IA, KS, MO, NE), and 8 (CO, MT, ND, SD, UT, WY). The center focuses on identification, treatment, and remediation of hazardous substances in agriculture, forestry, mining, mineral processing, and other industries as well as waste minimization related to these industries. The center also provides technology transfer assistance and training. Training initiated this year is being completed in conjunction with Native American colleges and other minority institutions. Developers can reach the Center's Technical Assistance Hotline by calling (800) 798-7796.

Kansas State University, which serves as the lead institution for the center, also houses the Kansas State University Center for Hazardous Substance Research. Kansas' center focuses its research on environmental contamination in groundwater and soils resulting from spills, leaking tanks, agricultural residue, solid waste disposal, and surface water pollutants. In addition, Kansas' center conducts training related to the manufacture, disposal, and transport of hazardous substances.

Participating institutions are Kansas State University, Montana State University, South Dakota State University, the University of Iowa, the University of Missouri, the University of Montana, the University of Nebraska, the University of Utah, and Utah State University.

Address:

Ground Water Remediation Field Laboratory
Bldg 459, P.O. Box 02063
Dover AFB, DE
19902-2063

Contact:

Alison Lightner

Phone:

(302) 678-8284

Fax:

(302) 677-4100

GROUND WATER REMEDIATION FIELD LABORATORY, DOVER AIR FORCE BASE, DE

The 3.5 acre Ground Water Remediation Field Laboratory (GRFL) site for contained release studies is in a previously unimpacted area that has been an open field since the base started. GRFL also oversees other areas at Dover Air Force Base available for remediation demonstrations. Types of demonstrations appropriate for this facility include *in situ* remediation, characterization, or monitoring of soil or groundwater.

Address:

GWRTAC
320 William Pitt Way
Pittsburgh, PA 15238

Phone:

(800) 373-1973

(412) 826-6835

Fax:

(412) 826-6810

E-mail:

gwrtaac@gwrtaac.org

Web:

www.gwrtaac.org

GROUND-WATER REMEDIATION TECHNOLOGIES ANALYSIS CENTER

Ground-Water Remediation Technologies Analysis Center (GWRTAC) is a specialized national environmental technology transfer center that provides current information concerning innovative groundwater remediation technologies.

GWRTAC offers a wide range of information on the state of development of all emerging groundwater remediation activities through a World Wide Web site, searchable case study databases, pertinent technical documents, e-mail to member subscribers, and a toll-free assistance line.

On the Web site, GWRTAC maintains a Technology Database, a Vendor Information Database, and a database of Technology Reports, all of which can be accessed by technology providers who can enter information about their innovative groundwater remediation technology. Once entered into the system, vendor information is available to professionals with immediate groundwater remediation needs.

Address:

Lamar University
P.O. Box 10613
Beaumont, TX 77710

Contact:

Jon Curless

Phone:

(409) 880-8768

Fax:

(409) 880-2397

E-mail:

curlessjh@hal.lamar.edu

GULF COAST HAZARDOUS SUBSTANCE RESEARCH CENTER

The Gulf Coast Hazardous Substance Research Center (GCHSRC) was established under the Superfund Amendments and Reauthorization Act of 1986. It is funded by EPA, the State of Texas, and Industrial Associates. Participating institutions are Lamar University - Beaumont, Louisiana State University, Mississippi State University, Texas Engineering Experiment Station/Texas A&M University, the University of Alabama, the University of Central Florida, and the University of Houston. The purpose of the center is to conduct research to aid in more effective hazardous substance response and waste management throughout the Gulf Coast through waste minimization and alternative technology development. In its support of 50 to 70 research projects annually, 80 percent of the center's program is concentrated on waste minimization and innovative waste treatment technology development and 20 percent of the effort is directed toward technology supporting activities.

GCHSRC's Information and Technology Transfer Program (I&TT) is responsible for improving dissemination of the information and technologies resulting from the center's research. The Gulf Coast Environmental Library was established in 1991 for use by researchers, faculty, students, and the public. It exists to serve business and industrial clients in their environmental information needs, including text of new federal and state regulations, samples of industrial waste minimization efforts, and copies of EPA test methods.

Address:

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Contact:

Nick Hazen or
Rick Kenney

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(303) 278-1528

E-mail:

hazenn@hazenusa.com

Web:

www.Hazenusa.com

HAZEN RESEARCH, INC.

Hazen Research, Inc. has over 75,000 square feet of offices, laboratories, pilot plants and demonstration plants in Golden, CO for the custom development and design of separation processes. Hazen has expertise with the following technologies: thermal processing, soil washing, materials handling, water treatment, leaching, and recovery from solution, particularly for metals. In addition, Hazen provides waste characterization, commercial analytical services, process engineering, and feasibility studies to its clients.

Hazen has capabilities to investigate and develop process technology for a wide range of wastes. Hazen undertakes treatability testing on RCRA regulated waste under the treatability exemption and also is licensed to conduct treatability testing on TSCA regulated waste. In addition, Hazen has a Radioactive Materials License.

Address:

Idaho National
Engineering Laboratory
850 Energy Place, MS 111B
Idaho Falls, ID 83401

Contact:

Kathleen Hain or
Dennis Green

Phone:

(208) 526-4392 (Hain)
(208) 526-1367 (Green)

Fax:

(208) 526-0160

E-mail:

hainke@inel.gov

IDAHO NATIONAL ENGINEERING LABORATORY, IDAHO FALLS, ID

The Idaho National Engineering Laboratory (INEL) initially was established by the federal government as the National Reactor Testing Station in 1949, and now conducts research and development in materials science, physical science, biotechnology, environmental science, and geoscience. There are three main areas available for technology demonstrations. The Record of Decision (ROD) for Test Area North includes provisions for innovative remediation technologies. The Central Facilities Area and the Radioactive Waste Management Complex are appropriate for demonstration of near-surface technologies such as barrier walls. The Test Area North is currently used for handling, storage, and research development of spent nuclear fuel. In addition, reactor safety studies, energy research, and defense programs (including production of tank armor) also are conducted.

Address:

IIT Research Institute
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10 West 35th Street
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Contact:

Gug Sresty

Phone:

(312) 567-4232

Fax:

(312) 567-4286

E-mail:

gsresty@iitri.org

Web:

www.iitri.org

IIT RESEARCH INSTITUTE, CHICAGO, IL

The IIT Research Institute (IITRI) is designed to encourage cooperation among its 300 member research scientists at the main campus of the Illinois Institute of Technology and the 400 additional scientists at satellite campuses. Specific IITRI services available to developers of hazardous waste treatment technology include professional testing and evaluation, technology development planning assistance, and services for matching innovative technologies with actual site needs. IITRI evaluates innovative technologies independently under confidential conditions, and conducts professional testing to verify developer claims.

Address:

Illinois Waste
Management and
Research Center
1 East Hazelwood Drive
Champaign, IL 61820

Contact:

Tim Lindsey

Phone:

(217) 333-8955

Fax:

(217) 333-8944

E-mail:

tlindsey@wmrc.hazard.
uiuc.edu

Web:

www.wmrc.uiuc.edu

ILLINOIS POLLUTION PREVENTION AND TECHNICAL ASSISTANCE PROGRAM

The Illinois Pollution Prevention and Technical Assistance (PPTA) Program is administered through the Illinois Waste Management and Research Center (WMRC). WMRC operates a testing and evaluation facility. The PPTA program acts as an intermediary among local Illinois businesses, technology developers, and regulatory agencies to reduce waste generation. The PPTA program offers advice to technology developers and access to networks within the state's business community. Information is offered on the availability of innovative hazardous waste treatment technologies. Participation in this program may offer developers of innovative hazardous waste technologies the opportunity to apply their technology to actual hazardous waste sites in the state of Illinois.

Address:

Illinois Department of
Natural Resources
1 East Hazelwood
Drive
Champaign, IL 61820

Contact:

George Vander Velde

Phone:

(217) 333-8940

Fax:

(217) 333-8944

E-mail:

Gvvelde@
wmrc.hazard.uiuc.edu

ILLINOIS WASTE MANAGEMENT AND RESEARCH CENTER

The Waste Management and Research Center (WMRC) located on the University of Illinois, Urbana-Champaign campus, was created by Illinois State legislation to support research and development on hazardous waste prevention, treatment, and remediation technologies. The facility accommodates researcher and vendor work at the large bench and small pilot-scales.

The center awards approximately \$1 million annually to sponsor five categories of research. These categories include waste characterization and assessment; waste reduction and pollution prevention; waste treatment, disposal, and remediation; environmental processes and effects; and risk assessment and policy analysis. Proposals are solicited on an annual cycle during late fall and winter. Funding for research projects that are selected averages approximately \$75,000 per year.

The 22,000 square foot Hazardous Materials Laboratory houses a pilot scale, high-hazard and two treatability study laboratories for working with industry and technology developers on waste reduction and treatment projects. The lab also has a full range of analytical support capabilities. It can accommodate technologies up to approximately tractor trailer size. Developers are currently authorized to conduct up to 1,000 kg treatability studies. The program uses \$100,000 of the center's research funds to provide testing assistance on pollution prevention technologies and techniques.

Contact:**Mike Hightower (Sandia)****INNOVATIVE TREATMENT REMEDIATION DEMONSTRATION****Phone:****(505) 844-5499****Fax:****(505) 844-0968****E-mail:****mmhight@sandia.gov**

The Innovative Treatment Remediation Demonstration (ITRD) program is funded by the Department of Energy (DOE) Office of Environmental Restoration (EM-40) to help accelerate the adoption and implementation of new and innovative remediation technologies. Developed as a Public-Private Partnership program with Clean Sites, Inc., and EPA's Technology Innovation Office (TIO) and coordinated by Sandia National Laboratories, the ITRD program attempts to reduce many of the classic barriers to the use of new technologies by involving government, industry, and regulatory agencies in the assessment, implementation, and validation of innovative technologies.

Web:**www.ita.doc.gov/uscs/uscsibp.html****INTERNATIONAL BUYER PROGRAM, U.S. DEPARTMENT OF COMMERCE**

The U.S. Department of Commerce (U.S. DOC) International Buyer Program is designed to help companies achieve their international marketing goals through participation in domestic trade shows. Each year the U.S. DOC selects more than 20 leading U.S. trade shows to promote worldwide through its global network of offices.

Commercial specialists at U.S. embassies and consulates abroad conduct intensive promotion campaigns for each International Buyer Program show. Qualified buyers and prospective representatives and distributors are recruited from all over the world to travel to the show.

As a U.S. exhibitor at a selected International Buyer Program show, you are offered many complimentary services:

- Worldwide promotion of your products and services through the Export Interest Directory, published by the show organizer and distributed to all international visitors at the event, as well as to our commercial offices abroad.
- Export counseling and services to help you meet prospective international distributors, representatives, and buyers at the International Business Center. Access to hundreds, sometimes thousands, of current international trade leads in your industry.
- Use of the on-site international lounge, business meeting facilities, and interpreter services.

Phone:
(800) 872-8723

Web:
www.ita.doc.gov

INTERNATIONAL TRADE ADMINISTRATION, U.S. DEPARTMENT OF COMMERCE

The U.S. Department of Commerce International Trade Administration's (ITA) mission is:

- To encourage, assist, and advocate U.S. exports by implementing a national export strategy, by focusing on the big emerging markets, by providing industry and country analysis for U.S. business, and by supporting new-to-export and new-to-market businesses through strategically located U.S. Export Assistance Centers, 83 domestic Commercial Service Offices and 134 Overseas Offices and commercial centers in 69 countries.
- To ensure U.S. business has equal access to foreign markets by advocating on behalf of U.S. exporters who are competing for major overseas contracts, and by implementing major trade agreements, such as the General Agreements on Tariffs and Trade (GATT), North American Free Trade Agreement (NAFTA), and the Japan "Framework."
- To enable U.S. businesses to compete against unfairly traded imports and to safeguard jobs and the competitive strength of U.S. industry by enforcing antidumping and countervailing duty laws and agreements that provide remedies for unfair trade practices.

The ITA maintains assistance centers for trade information, export assistance, trade compliance, and import administration.

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International Venture
Capital Institute
P.O. Box 1333
Stamford, CT 06904

Contact:
Caroll. A. Greathouse,
President

Phone:
(203) 323-3143

Fax:
(203) 359-5858

INTERNATIONAL VENTURE CAPITAL INSTITUTE

The mission of the International Venture Capital Institute (IVCI) is to promote entrepreneurship and joint ventures with entrepreneurs and small businesses, with an emphasis on networking and communication. IVCI assists in the formations and organization of networking organizations and prepares publication that may be of use to small companies and entrepreneurs seeking sources of funding. One such publication that may be of use is *The Directory of Business Incubators and Attached University Industrial Parks*.

Web:
www.itrcweb.org

INTERSTATE TECHNOLOGY AND REGULATORY COOPERATION WORKING GROUP

The Interstate Technology and Regulatory Cooperation (ITRC) Working Group was initiated by the Western Governors Association to expedite the use of technology for the characterization and cleanup of contaminated sites. Twenty-six states have participated in this project. Most of the participating states have agreed to accept each other's test results if the agreed upon testing protocols are used. This would make it possible to test a technology in one of these states and have such results accepted in the 25 other states. In addition to the state representatives, there are a number of other groups, such as the Southern States Energy Board and a number of stakeholders who have participated.

Web:
www.mac.doc.gov

MARKET ACCESS AND COMPLIANCE ON-LINE, U.S. DEPARTMENT OF COMMERCE

The U.S. Department of Commerce Market Access and Compliance (MAC) officers help U.S. businesses to overcome barriers to trade and investment. With expertise on nearly 200 countries, they provide critical, in-depth information enabling U.S. firms, particularly small- and medium-sized companies, to benefit fully from market access openings from the over 200 trade agreements which the U.S. has concluded over the past 5 years. Such expertise is vital to full and open access for U.S. business entering or expanding into world markets.

MAC maintains a series of sites that act as information resources for those interested a variety of topics, including:

- Russia and Newly Independent States: BISNIS ON/Line Special American Business Internship Training Program
- SABIT Central and Eastern Europe Business Information Center: CEEBICnet
- Big Emerging Markets: BEMS
- Trade Compliance Center: TCC
- North American Free Trade Agreement: NAFTA AMBIT Program for Northern Ireland and the Border Counties of Ireland TransAtlantic Business Dialogue: TABD

Address:

MBI International
P.O. Box 27609
Lansing, MI 48909

Contact:

Deborah Windish

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(517) 337-3181

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windish@mbi.org

MBI INTERNATIONAL'S CENTER FOR BIOTECHNOLOGY ENTREPRENEURSHIP

MBI International, in conjunction with its subsidiaries, Grand River Technologies, Inc. (GRT), and the nonprofit BioBusiness Incubator of Michigan (BBIM), encourage entrepreneurs to come to the Center for Biotechnology Entrepreneurship to develop, demonstrate, and move their technologies into the marketplace. MBI is a nonprofit technology research and business development corporation that seeks public and private partnerships to commercialize promising technologies for environmental cleanup, industrial waste treatment, agribased industrial products and processes, etc.

MBI offers a variety of services to assist in technology commercialization, including:

- Business and Technical Assessment—MBI will work with individuals and organizations to present ideas on business opportunities related to their technology areas.
- In-License—MBI will in-license promising technologies, develop and demonstrate their technical and market feasibility, and ready the technologies for commercialization.
- “Turnkey Operations”—MBI will provide the facilities and expertise to develop technologies and processes, demonstrate the technical and market feasibility, and ready them for commercialization.
- Contract Services—MBI can provide any aspect of the technology development process under contract, including business and market opportunity analysis.
- Business Partnership Development—MBI can identify industrial partners, match technology with a customer's needs, and develop commercialization plans to introduce the technology to the market.

Address:

McClellan Air Force
Base
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95652-1389

Contact:

Jim Lu

Phone:

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Fax:

(916) 643-0827

E-mail:

lu.jim@mccllellan.af.mil

MCCLLELLAN AIR FORCE BASE, SACRAMENTO, CA

The McClellan Air Force Base has been engaged in a wide variety of operations involving the use, storage, and disposal of hazardous materials. These include industrial solvents, caustic cleaners, electroplating chemicals, heavy metals, diesel and jet fuel, PCBs, low level radioactive wastes, and a variety of fuel oils and lubricants. Types of demonstrations appropriate for this facility include *in situ* and *ex situ* remediation characterization, or monitoring of soils and groundwater. This is a CERCLA (Superfund) site; all remediation activities are exempt from permitting.

Address:

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and Management
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Van Munching Hall
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20742-1815

Phone:

(301) 403-4290

Fax:

(301) 403-4292

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dingman@rhsmith.
umd.edu

Web:

www.bmgt.umd.edu/
Dingman

MICHAEL D. DINGMAN CENTER FOR ENTREPRENEURSHIP

The Michael D. Dingman Center for Entrepreneurship, operated by the University of Maryland, offers low-cost mentor services to new and mature emerging growth companies in the Mid-Atlantic region. Areas of assistance include: business planning, marketing strategies, financing, legal issues, and corporate partnering. Mentors are successful entrepreneurs, accountants, attorneys, consultants, and Maryland Business School faculty. The Center also manages the operation of the Baltimore-Washington Venture Group, which provides a forum where entrepreneurs and companies meet with providers of capital and management team candidates. The Venture Group facilitates contacts that lead to transactions such as financing, joint ventures, consulting relationships, and management team additions.

Address:

20 East Circle Drive
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(740) 593-4331

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(740) 593-1996

Web:

www.nbia.org

NATIONAL BUSINESS INCUBATION ASSOCIATION

Business incubation is a dynamic process of business enterprise development. Incubators nurture young firms, helping them to survive and grow during the start-up period when they are most vulnerable. Incubators provide hands-on management assistance, access to financing, and orchestrated exposure to critical business or technical support services. They also offer entrepreneurial firms shared office services, access to equipment, flexible leases and expandable space, all under one roof. Many incubators offer general management advice, business planning and implementation services, office services, assistance in obtaining financing, marketing assistance, financial/accounting services, technology consulting, legal/intellectual property assistance, and other services such as export assistance, bid assistance, conflict resolution services, computer laboratories, etc. The National Business Incubation Association Web site provides links to dozens of incubators, as well as links to organizations that may provide various forms of commercialization and other assistance.

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Energy and
Environmental
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Rice University
P.O. Box 1892 MS316
Houston, TX 77251-1892

Contact:

C.H. Ward

Phone:

(713) 527-4086

Fax:

(713) 285-5948

E-mail:

wardch@rice.edu

NATIONAL CENTER FOR GROUND WATER RESEARCH

The focus of the National Center for Ground Water Research is to conduct interdisciplinary, exploratory research to elucidate the behavior of synthetic organic chemicals in the subsurface. Participating institutions are Rice University, the University of Oklahoma, Oklahoma State University, and the University of Texas at Austin. The center, a university consortium, conducts research, training, and technology transfer needed for groundwater quality protection and restoration. The goal of the consortium is to conduct an interactive and focused multi-disciplinary research program that contributes to the basic science and methodologies needed to achieve risk reduction through protection and restoration of groundwater resources. The center's investigators have contributed to the development of models for chemical transport analysis, contamination potential of chemicals, and decision-support systems for the application of chemical transport models.

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National Center
for Integrated
Bioremediation
Research and
Development,
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umich.edu

Web:

[http://ncibrd.engin.
umich.edu](http://ncibrd.engin.umich.edu)

NATIONAL CENTER FOR INTEGRATED BIOREMEDIATION RESEARCH AND DEVELOPMENT

NCIBRD was established in 1993 with funding from the Department of Defense (DoD)-Strategic Environmental Research and Development Program (SERDP) through EPA's Office of Research and Development. NCIBRD's mission in the DoD-SERDP Natural Environmental Technology Test Sites (NETTS) program is to support the development and evaluation of fuel and chlorinated solvent hazardous waste site characterization and remediation technologies. Its mission is shared with NETTS locations at: Dover AFB, DE, and McClellan AFB, CA (U.S. Air Force); and Port Hueneme, and CA (U.S. Navy). NCIBRD represents the thrust of DoD/SERDP demonstration and evaluation efforts on *in situ* integrated physical, chemical and biological environmental technologies, and provides year-round test locations for site characterization and remediation technology evaluations.

Its primary field location is at the former Wurtsmith AFB (WAFB) in Oscoda, MI. The WAFB location was, prior to 1993, a Strategic Air Command B-52 Base. It is now under the authority of the U.S. Air Force Base Conversion Agency (USAF-BCA) which has responsibility for the cleanup and conversion to civilian use of the more than fifty contaminated sites and associated properties.

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National Defense Center
for Environmental
Excellence
11450 Scalp Avenue
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Contact:

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E-mail:

robertds@ctc.com

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[www.ndcee.ctc.
com/index.htm](http://www.ndcee.ctc.com/index.htm)

NATIONAL DEFENSE CENTER FOR ENVIRONMENTAL EXCELLENCE

In 1990, the Department of Defense (DoD) established the National Defense Center for Environmental Excellence (NDCEE) in Johnstown, PA, to lead and support DoD facilities and the associated industrial base in adopting a comprehensive approach to pollution prevention, and to address other high priority environmental issues. The NDCEE is operated by Concurrent Technologies Corporation (CTC), a non-profit institution. DoD encourages CTC to offer its pollution prevention services to U.S. industry to improve its competitiveness in the global economy.

The NDCEE, through CTC, identifies, evaluates, demonstrates, and transitions environmentally-acceptable manufacturing processes to its client base, and provides related information services. NDCEE's other focus areas include: environmental restoration; waste minimization; waste management; materials recycling; risk assessment; and medical waste management. A key resource is a 185,000 square foot Demonstration Factory, which incorporates production-scale, state-of-the-art equipment that enables the NDCEE to perform process demonstrations, validations, education, and training activities.

NATIONAL ENVIRONMENTAL TECHNOLOGY DEMONSTRATION PROGRAM, U.S. DEPARTMENT OF DEFENSE

The DoD/National Environmental Technology Demonstration Program (NETDP) is a coordinated effort of the Air Force, the Army, the Navy, and EPA to establish a coordinated environmental technology testing and evaluation program to help reduce the duplication of effort and inefficiencies associated with multiple programs. Areas of responsibility are divided among the services and EPA.

The NETDP uses the Reliance agreements as its foundation. It focuses on the demonstration of remediation technologies that respond to the primary needs of the services.

As the principal manufacturer of field weapons, the Army has been given the lead in the area of energetics materials remediation technology, and the Navy and Air Force have been given primary responsibility for technology development in the area of petroleum, oils, lubricants (POL) and solvents.

EPA, through the University of Michigan, is developing the National Center for Bioremediation Research and Development at Wurtsmith Air Force Base in Oscoda, Michigan, which will provide a controlled field test-bed facility for conducting the investigations required to develop, evaluate, and establish a general basis for the design and engineering of integrated bioremediation systems. The project focuses principally on in-situ remediation of surface soils, subsoils, surface waters, and groundwater contaminated by organic materials.

EPA's Consortium for Site Characterization Technology will identify, evaluate, demonstrate, and transfer information about innovative and alternative monitoring, measurement, and site characterization technologies.

DOD/National Environmental Technology Demonstration Program Contacts

Army Environmental Technology Evaluation Center

Jeff Marqusee
USAEC, SFIM-AEC-TSD
APG, MD 21010-5401
(703) 696-2120

Consortium for Site Characterization Technology

Eric Koglin
U.S. EPA NERL
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Las Vegas, NV 89193-2478
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Navy Environmental Technology Demonstration Site for Advanced Fuel Hydrocarbon Remediation Technologies

Ernest Lory
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Port Hueneme, CA 93034-4328
(805) 982-1299

National Center for Bioremediation Research and Development

Mike Barcelona
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Web:

[www.hgl.com/serdp/
netts/default.html](http://www.hgl.com/serdp/netts/default.html)

NATIONAL ENVIRONMENTAL TECHNOLOGY TEST SITES PROGRAM

The National Environmental Technology Test Sites (NETTS) Program was established in 1993 to facilitate the transition of environmental remediation technologies to full-scale use by overcoming the barriers that presently inhibit commercialization of such technologies. The NETTS Program is a comprehensive technology demonstration, evaluation, and transfer program which addresses barriers to the commercialization of innovative remediation technologies. The Program's goal is to establish a coordinated environmental testing and evaluation program to reduce the cost and accelerate the pace of remediation technology development and deployment.

The Program provides sites for applied research and comparative demonstrations for evaluating numerous innovative cleanup, site characterization, and monitoring technologies. The Program is funded by the Strategic Environmental Research and Development Program (SERDP).

Address:

P.O. Box 4078
Butte, MT 59702

Contact:

Mary Ann Harrington-
Baker

Phone:

(406) 494-7240

Fax:

(406) 494-7230

E-mail

maryanhb@mse-ta.com

NATIONAL ENVIRONMENTAL WASTE TECHNOLOGY TESTING AND EVALUATION CENTER

The National Environmental Waste Technology Testing and Evaluation Center uses the facilities and capabilities of the U.S. Department of Energy Component Development and Integration Facility, Montana College of Mineral Science and Technology, and Montana Technology Companies. Full testing and evaluation services are available in laboratory-, bench-, pilot-, and demonstration-size facilities, including a fully equipped analytical laboratory and environmental monitoring and support facilities. In addition to analytical equipment and facilities, access is available to more than 300 personnel with research, development, testing, operating and evaluating experience in mining and hazardous waste treatment technology.

The center also has access to the largest Superfund site in the country, and to the Berkeley Pit that contains approximately 22 billion gallons of groundwater contaminated with metallic and inorganic acid mine drainage.

Address:

316 Washington Avenue
Wheeling, WV 26003

Phone:

(800) 678-6882

Fax:

(304) 243-4388

E-mail:

technology@nttc.edu

Web:

www.nttc.edu

NATIONAL TECHNOLOGY TRANSFER CENTER

The National Technology Transfer Center (NTTC), housed at Wheeling Jesuit College, was established by Congress to strengthen the competitiveness of American industry by ensuring that business has rapid access to marketable federal technologies and by promoting collaboration between U.S. companies and federal laboratories in the development and commercialization of technological products, processes, and services. NTTC addresses these goals by providing the following services:

- Gateway [(800) 678-6882] - Developers can call Gateway to locate laboratory contacts who can answer technical questions. Technology agents on Gateway will also provide callers with information on current and completed research and can help developers explore licensing opportunities and pursue Cooperative Research and Development Agreements (CRADA). Information Specialists will draw on the Federal R&D Resource Information System to address callers' questions. This system includes information on federal R&D technologies, resources, facilities, and expertise available. It includes government databases describing research in progress, technical reports, and new technologies available for commercialization. NTTC's system also includes an updated electronic directory of federal laboratories and technology resources.
- Business Gold - Provides users with information on federal technologies and business opportunities at no cost. The database includes announcements of new federal technologies available for licensing and development and solicitations and other technology transfer opportunities.

Developers can access Business Gold using a modem or via the Internet:

Dial-Up Bulletin Board

- Set data bits to 7, stop bits to 1, parity to Even, and emulation to vt100
- 300-2400 baud modems dial (304) 243-2561
- 9600 modems and higher dial (304) 243-2560
- For help or more information, call: (304) 243-2570
- First time sign-ons login as guest; no password is required

Internet Connection

- Telnet to iron.nttc.edu (192.188.119.50)
- Login as visitor, using your e-mail address as your password
- For more information, refer to info@nttc.edu
- All files are located in a public directory (/pub). Use anonymous ftp to transfer files or e-mail the files to your own mailbox.

NTTC also implements an R&D Program and Technology Assessment Program, through which a panel of industry representatives conduct technical evaluations of major federal R&D activities. In addition, NTTC develops a range of training programs focused on technology transfer and enhancing local, state, and regional economic development.

Address:

Naval Construction
Battalion Center,
Port Hueneme, CA
Naval Facilities
Engineering Service
Center
Port Hueneme, CA
93034

Contact:

Ernest Lory

Phone:

(805) 982-1299

Fax:

(805) 982-4304

E-mail:

elory@nsesc.navy.mil

NAVAL CONSTRUCTION BATTALION CENTER, PORT HUENEME, CA

Military vehicle use and maintenance and various other facility activities have contaminated the area at the Naval Construction Battalion Center, Port Hueneme, CA with fuels and oils, pesticides, detergents, acids, solvents, and heavy metals. PCBs are present from transformer fluids. Fire fighting activities at training burnsites have added other contaminants. *In situ* and *ex situ* remediation, characterization, or monitoring of soil, groundwater, and sediments are types of appropriate demonstrations for this facility. No analytical capabilities are available for use by technology developers on-site, but there are several commercial laboratories certified by the State of California within a 45-minute drive of the center.

Web:

www.nelp.navy.mil

NAVAL ENVIRONMENTAL LEADERSHIP PROGRAM

The Chief of Naval Operations Environmental Quality Management Board established the Navy Environmental Leadership Program (NELP) to find new and innovative ways to manage Navy environmental programs. Two shore installations were designated to perform the NELP mission: on the West coast, Naval Air Station North Island, Coronado, California; on the East coast, Naval Station Mayport, Florida. The mission of the NELP is to act as a test bed for new and innovative technologies and focused management to address the full spectrum of environmental issues, and to export successes throughout the Navy.

Address:

28 West State Street,
P.O. Box 832
Trenton, NJ 08625-0832

Contact:

John Tesoriero
Executive Director

Phone:

(609) 984-1671

Fax:

(609) 292-5920

E-mail:

scitech@scitech.
state.nj.us

NEW JERSEY COMMISSION ON SCIENCE AND TECHNOLOGY

The New Jersey Commission on Science and Technology is the state of New Jersey's agency for technology-based economic development. It funds grants for a series of advanced technology centers, including the Hazardous Substance Management Research Center and its affiliated centers and technical assistance programs, based at the New Jersey Institute of Technology.

The Commission provides New Jersey small businesses participating in the Federal Small Business Innovative Research Program with technical and financial assistance to supplement funding between phases and also funds a small business assistance voucher program to enable small and medium-sized companies to procure R&D services on a small scale from the commission's programs.

The commission can assist larger or out-of-state companies or organizations by referring them to technical contacts in the New Jersey university system and coordinating their interaction with those sources of technical assistance.

Address:
138 Warren Street
Newark, NJ 07102

Contact:
Richard S. Magee

Phone:
(973) 596-5883

Fax:
(973) 802-1946

NEW JERSEY INSTITUTE OF TECHNOLOGY - OTTO H. YORK CENTER FOR ENVIRONMENTAL ENGINEERING AND SCIENCE

The Otto H. York Center for Environmental Engineering and Science (CEES) houses a number of New Jersey Institute of Technology environmental centers, programs, and initiatives, including the Hazardous Substance Management Research Center (HSMRC) and the Northeast Hazardous Substance Research Center. Participating institutions are Princeton University, Rutgers University, Stevens Institute of Technology, and the University of Medicine and Dentistry of New Jersey.

HSMRC aids in the development of new products, processes, and technologies to minimize, treat, and manage hazardous waste; furnishes the public and private sectors with technologies necessary to identify and remediate hazardous spills and burial sites; and facilitates the exchange of ideas and knowledge among industry, government, academia, and the public. HSMRC's focus areas include: incineration, biological and chemical treatment, physical treatment; site assessment, and remedial action.

CEES also houses the Emission Reduction Research Center, the Center for Airborne Organics, the Integrated Pollution Prevention Initiative, and the New Jersey Technical Assistance Program for Industrial Pollution Prevention and is affiliated with the Institute for Hazardous and Toxic Waste Management.

Address:
Waste Management
Education and
Research Consortium
New Mexico State
University
P.O. Box 30001,
MSC WERC
Las Cruces, NM
88003-8001

Contact:
Mr. Abbas Ghassemi

Phone:
(505) 646-1719

Fax:
(505) 646-4149

E-mail:
werc@nmsu.edu

NEW MEXICO STATE UNIVERSITY

New Mexico State University is the lead organization of the Waste Management Education and Research Consortium. Participating institutions are the University of the New Mexico, New Mexico Institute of Mining and Technology, Navajo Community College, and Los Alamos and Sandia National Laboratories. The consortium conducts research in all areas of hazardous waste management. Currently, 32 projects are in process, including research on *in situ* remediation and bioremediation of toxic wastes. Eight of the projects are in the demonstration stage and approaching commercial realization. The consortium is examining various technologies that involve sensor instrumentation and robotics as well as physical, chemical, and biological methods for cleaning up soil and water. Faculty and staff of the University collaborate with industry and third parties in developing new technology. The University distributes requests for proposals that specify the research topic areas.

Address:

Northeast Hazardous
Substance Research
Center
New Jersey Institute
of Technology
Newark, NJ 07103

Contact:

Richard Magee

Phone:

(973) 596-5883

Fax:

(973) 802-1946

Web:

[www.cees.njit.edu/
nhsrc](http://www.cees.njit.edu/nhsrc)

NORTHEAST HAZARDOUS SUBSTANCE RESEARCH CENTER

The Northeast Hazardous Substance Research Center (NHSRC) supports EPA Regions 1 and 2. The center's programs focus on the development and demonstration of remediation and treatment technologies. In particular, the center concentrates on *in situ* remediation techniques and incineration.

Participating institutions are the New Jersey Institute of Technology, Massachusetts Institute of Technology, Princeton University, Rutgers University, Stevens Institute of Technology, Tufts University, and the University of Medicine and Dentistry of New Jersey.

Address:

Lockheed Martin
Energy Systems, Inc.
P.O. Box 2008, Mail
Stop 6038, Oak Ridge,
TN 37831-6038

Contact:

Philip M. Jardine

Phone:

(423) 574-8058

Fax:

(423) 576-8646

E-mail:

jardinepm@ornl.gov

OAK RIDGE SUBSURFACE WEIRS, OAK RIDGE, TN

Demonstrations of *in situ* and *ex situ* technologies for characterization, or monitoring of soil and groundwater are appropriate at the Oak Ridge Subsurface Weirs.

The field facility is designed to perform groundwater tracer injection experiments in fractured shale bedrock. The site is equipped with numerous multi-level sampling wells and wells designated for continuous water pressure head monitoring. Sampling from rock matrix and fracture regimes along the entire flow field is possible. Injection set-up is computer driven and designed to deliver transient or steady-state tracer concentrations into rock matrix or fractured regime. The site is conducive to studying advection and diffusion in shale bedrock. A permit may be required to conduct demonstrations. Two sites of interest are the Melton Branch and the WAG 5 Branch site.

Melton Branch is an uncontaminated site. It has been used for a variety of storm driven subsurface flow and transport studies involving inorganic and organic tracers and natural isotopic tracers.

The WAG 5 Branch site is contaminated with tritium, strontium-90, a variety of DNAPLs, and toluene. Long-term multi-component groundwater tracer studies have been conducted here to investigate advective and diffusive mass transfer of contaminants in the fractured shale bedrock.

Address:

Environmental Restoration
and Waste Management,
Technology Development
U.S. Department of Energy
Washington, DC 20585

Web:

www.em.doe.gov/er

OFFICE OF ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT, U.S. DEPARTMENT OF ENERGY

The U.S. Department of Energy (DOE) Office of Environmental Restoration and Waste Management (EM) is charged with overseeing a multibillion-dollar environmental cleanup effort. EM leads a national research, development, demonstration, testing, and evaluation program to provide environmental restoration and waste management technologies to DOE sites and to manage waste generated by DOE.

DOE also supports the development of promising environmental cleanup business and research opportunities through a range of financial assistance vehicles and technology transfer tools.

Developers can obtain information about DOE's business and research opportunities from the U.S. Department of Energy Environmental Cleanup Technology Development Program Business and Research Opportunities Guide (DOE/EM-0115P). This Guide can be purchased from the National Technical Information Service at (703) 605-6000.

DOE/EM's largest assistance vehicles are Research Opportunity Announcements (ROA) and Program R&D Announcements (PRDA). See page 74 of this guide for more information. DOE also provides financial assistance through the Small Business Innovative Research Program and the Small Business Technology Transfer Program, both of which are listed in this guide on page 79.

Address:

International Trade
Administration
U.S. Department
of Commerce
Room 1003
14th and Constitution
Ave., N.W.
Washington, DC 20230

Contact:

Carlos Montoulieu

Phone:

(202) 482-5225

Fax:

(202) 482-5665

Web:

www.ita.doc.gov/

OFFICE OF ENVIRONMENTAL TECHNOLOGIES EXPORTS, U.S. DEPARTMENT OF COMMERCE

The Office of Environmental Technologies Exports (ETE) introduces export-oriented U.S. environmental technology companies to U.S. government trade development programs. The trade development programs provide developers access to information about high-potential export markets and U.S. government activities related to emerging markets.

ETE also can direct developers to government export financing support programs and projects, such as the Export-Import Bank, the Overseas Private Investment Corporation, the U.S. Trade and Development Agency, and multilateral development banks. In addition, ETE identifies subsector opportunities and requirements that developers must address to compete for major procurement opportunities.

To reach the ETE Web page, go to <http://www.ita.doc.gov> and click on "Industries and Sectors" and then on "Environmental Technologies."

Address:

U.S. Small Business
Administration
409 3rd Street S.W.
8th Floor
Washington, DC 20416

Contact:

James Wilfong

Phone:

(202)205-6720

Fax:

(202)205-7272

E-mail:

james.wilfong@
sba.gov

Web:

www.sba.gov/OIT

OFFICE OF INTERNATIONAL TRADE, U.S. SMALL BUSINESS ADMINISTRATION

The U.S. Small Business Administration's (SBA) Office of International Trade (OIT) provides export financing and business development assistance to established and prospective small business exporters. The Export Working Capital Program (EWCP) encourages lenders to "back" small-business-exporter deals by significantly reducing the risk associated with such deals. The EWCP can support single transactions or multiple export sales. Under the program, the SBA can guarantee up to 85 percent of a private sector loan as much as \$750,000. Loan maturities are generally set at 12 months, with two options to renew, for a total of 36 months.

Guarantees can be extended for preshipment working capital, postshipment exposure coverage, or a combination of pre- and post-shipment financing.

OIT also works in cooperation with other federal agencies and public and private-sector groups to encourage small business exports and to assist small businesses seeking to export. OIT's outreach efforts include sponsoring or supporting export training conferences and developing "how-to" and market-specific publications for exporters. OIT directs and coordinates SBA's ongoing export initiatives, such as the Export Legal Assistance Network and SBA's Automated Trade Locator Assistance System.

Contact:

Kurt Gerdes

Phone:

(301)903-7289

Fax:

(301)903-7457

E-mail:

kurt.gerdes@em.doe.gov

Web:

<http://em-50.em.doe.gov>

OFFICE OF SCIENCE AND TECHNOLOGY, U.S. DEPARTMENT OF ENERGY

The Office of Science and Technology (OST) manages and directs targeted basic research and focused, solution-oriented technology development programs to support the Office of Environmental Management. OST programs involve research, development, demonstration, testing and evaluation activities designed to produce innovative technologies and technology systems to meet national needs for regulatory compliance, lower life-cycle costs, and reduced risks to the environment and to public health.

The Technology Management System is designed to provide access to data and information relevant to OST programs, technologies, and problems.

Within the OST, the Office of Technology Systems maintains focus areas and cross-cutting study areas on the following:

- Mixed Waste
- Subsurface Contaminants
- Tanks
- Characterization, Monitoring, and Sensor Technology

Address:

Olympic Venture Partners
2420 Carillon Point
Kirkland, WA 98033

Phone:

(425) 889-9192

Fax:

(425) 889-0152

Web:

www.ovp.com

and

Address:

Olympic Venture Partners
340 Oswego Pointe Drive
Suite 200
Lake Oswego, OR 97034

Phone:

(503) 697-8766

Fax:

(503) 697-8863

E-mail:

info@ovp.com

OLYMPIC VENTURE PARTNERS

Olympic Venture Partners (OVP) is a technology-focused venture capital firm in the Pacific Northwest. The firm makes equity investments in early stage technology-based companies in the western third of North America, while maintaining a leading market share position in the Pacific Northwest. Specific emphasis is on firms in the software, life sciences, multimedia, communications, health care, and environmental sectors.

Address:

63 Polson Street
2nd Floor
Toronto, Ontario
Canada M5A1A4

Phone:

(416) 778-5264

Fax:

(416) 778-5624

E-mail:

oceta@oceta.on.ca

Web:

www.oceta.on.ca

**ONTARIO CENTRE FOR ENVIRONMENTAL TECHNOLOGY
ADVANCEMENT**

The Ontario Centre for Environmental Technology Advancement (OCETA) is a private sector, not-for-profit corporation committed to helping small and medium-sized enterprises overcome the barriers involved in the commercialization of new environmental technologies. OCETA works with its clients to develop plans to help move innovative technologies into the marketplace, which includes strategic planning, market analysis, financial brokerage, and assistance with technology demonstrations. OCETA operates on a fee-for-service basis and can provide flexible financing terms with payment for services contingent upon the future success of the client's business.

Address:

1100 New York
Avenue, N.W. ,
Washington, DC 20527

Phone:

(202) 336-8799
(OPIC InfoLine)

Fax:

(202) 408-9859

E-mail:

info@opic.gov

Web:

www.opic.gov

OVERSEAS PRIVATE INVESTMENT CORPORATION

The Overseas Private Investment Corporation (OPIC) assists American investors by financing businesses through loans and loan guarantees, insuring investments against a range of risks, and providing other investor services in 140 countries and areas worldwide.

OPIC supports, finances, and insures projects that have a positive effect on U.S. employment, are financially sound, and promise significant benefits to the social and economic development of the host country. Assistance is available for new investments, privatizations, and for the expansion and modernization of existing plants sponsored by U.S. investors. Investments may take the form of conventional equity investments and loans, construction and service contracts, production sharing agreements, or leases, for example.

Interested parties can receive various OPIC documents by facsimile by mailing requests to the address above or by calling OPIC FactsLine at (202) 336-8700. Available documents include the Preliminary Application for Financing (OPIC Form 115, FactsLine request number 6902) and a Request for Registration for Political Risk Investment Insurance (OPIC Form 50, FactsLine request number 7902).

Web:

[http://
cbdnet.access.gpo.gov](http://cbdnet.access.gpo.gov)

PROGRAM RESEARCH AND DEVELOPMENT ANNOUNCEMENTS AND RESEARCH OPPORTUNITY ANNOUNCEMENTS, U.S. DEPARTMENT OF ENERGY

Program Research and Development (R&D) Announcements (PRDA) are one of the U.S. Department of Energy's (DOE) major assistance vehicles for developing technologies. PRDAs solicit a broad mix of proposals where R&D, including demonstration, testing, and evaluation, is required within broadly defined areas of interest. DOE may issue a PRDA in response to an individual program need such as the cleanup of a particular contaminant at a specific site. Multiple awards for proposals, which may have varied approaches or concepts, are generally made. Numerous PRDAs may be issued each year. PRDAs are published in the Commerce Business Daily.

Research Opportunity Announcements (ROA) are another major assistance vehicle for developing technologies. ROAs solicit industry and academic proposals throughout the year ("rolling admissions") for potential contracts in applied research. ROAs support research efforts for the development of technologies with potential application in the environmental management program. A proposed technology should improve DOE's capabilities in areas such as *in situ* remediation; detection, characterization, and monitoring; efficient separations technology for radioactive waste; and robotics.

ROAs are published in the Commerce Business Daily. The program includes some set-asides for small businesses.

Web:
www.remedial.com

REMEDIATION INFORMATION MANAGEMENT SYSTEM

The Remediation Information Management System (RIMS) is an on-line library of information about nearly 900 remediation technologies. RIMS contains journals and newsletters, abstract summaries, technology descriptions, cost information, case studies, sources, and citations on a variety of technology categories. RIMS is available at any time to help with feasibility studies, remedial investigations, and any type of remediation research.

All of the information in RIMS has been put through an extensive quality assurance and quality control process by the expert project team at the Research Triangle Institute (RTI), so it is objective and reliable. The RIMS database is updated on a monthly basis. RIMS also contains comprehensive listings for technology vendors. There is a fee to subscribe to the RIMS database, but before subscribing, RIMS offers a free “test drive” of its services. RIMS can be located under the Environmental Technologies link on the Web site.

Web:
www.rtdf.org

REMEDIATION TECHNOLOGIES DEVELOPMENT FORUM

The Remediation Technologies Development Forum (RTDF) was established in 1992 by the U.S. EPA to foster collaboration between the public and private sectors in developing innovative solutions to mutual hazardous waste problems. The RTDF has grown to include partners from industry, several government agencies, and academia who share the common goal of developing more effective, less costly hazardous waste characterization treatment technologies.

The RTDF is one of a few government programs designed to foster public-private partnerships to conduct laboratory and applied research to develop, test, and evaluate innovative remediation technologies. Through the unprecedented collaboration of the RTDF, companies, government agencies, and universities are voluntarily sharing knowledge, experience, equipment, facilities, and even proprietary technology to address mutual remediation problems.

Address:

P.O. Box 12194
Research Triangle Park,
NC 27709-2194

Phone:

(919) 990-8388

E-mail:

tlv@rti.org

Web:

www.rti.org/
gen_info.html

RESEARCH TRIANGLE INSTITUTE

Research Triangle Institute (RTI) is an independent nonprofit organization performing research in many disciplines for government, industry and other clients throughout the U.S. and abroad. RTI conducts research that responds to priorities in medicine and pharmaceuticals, public health, advanced technologies, environmental protection, and public policies.

The Environmental Sciences and Engineering Research Area develops basic information, regulatory strategies, and new technologies for environmental protection. The three research centers within this area are:

- Environmental Measurements and Quality Assurance
- Environmental Analysis
- Engineering and Environmental Technology

For more specific contact information, browse the various research center programs on the RTI Web site.

Phone:

(800) 424-9346
TDD (800) 553-7672

Hours of Service:

Monday-Friday,
9:00 a.m. - 6:00 p.m. EST

Web:

www.epa.gov/
epaoswer/hotline/
index.htm

RESOURCE CONSERVATION AND RECOVERY ACT, SUPERFUND, AND EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW HOTLINE

The Hotline responds to factual questions on federal EPA regulations developed under:

- The Resource Conservation and Recovery Act (RCRA), which includes the Underground Storage Tank (UST) program
- The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund)
- The Emergency Planning and Community Right-to-Know Act (EPCRA)
- The Oil Pollution Act (OPA)

The Hotline offers information to a broad audience of callers with diverse backgrounds and varying degrees of regulatory knowledge.

Address:

Sandia National Laboratories,
New Mexico
P.O. Box 5800
Albuquerque, NM 87185
and

Sandia National Laboratories,
California
P.O. Box 969
Livermore, CA 94551

Phone:

Technology Transfer
Partnerships Center
(505) 843-4164

Web:

www.sandia.gov

SANDIA NATIONAL LABORATORIES

Sandia National Laboratories have cutting edge technologies and facilities available for new technology development. Sandia can offer free advice on a technical problem for a small business to multiyear cooperative research and development partnerships with industrial corporations. Of particular interest to technology developers is Sandia's Technology Transfer Partnerships Program, which partners industry and academia through a wide variety of agreement types. For more information on Sandia's Technology Transfer Partnerships, visit <<http://corpbusdev.sandia.gov>> or call (505) 843-4164.

Address:
2120 Williston Road
Aiken County, SC 29802

Contact:
Yul Holloway

Phone:
(803) 652-7772

Fax:
(803) 642-2124

SAVANNAH RIVER RESEARCH CAMPUS

The Savannah River Research Campus is a 422-acre technology park under development in Aiken County, South Carolina, adjacent to the Savannah River Superfund Site. The research center will provide office space, research laboratories, and incubator space in support of research and incubator activities and will span 47,000-square feet. The research center will be occupied by the Department of Energy, Westinghouse, and the South Carolina Research Authority, with the Advanced Analytical Center for Environmental Services locating on the campus in the near future. The Savannah River Site is already the location of environmental developments ranging from hydrogen to robotics to advanced environmental technology and is assisting companies in their efforts to solve manufacturing and maintenance problems and to form partnerships in developing and demonstrating technologies.

Address:
U.S. Small Business
Administration
409 Third Street, SW
Washington, DC 20416

Phone:
(800) 634-0245

Web:
www.score.org

SERVICE CORPS OF RETIRED EXECUTIVES

The Service Corps of Retired Executives (SCORE) is a nonprofit organization dedicated to entrepreneur education and the formation, growth, and success of small business nationwide. SCORE volunteers, working and retired executives and business owners, dedicate their time and expertise to serve as counselors to America's small businesses. Experts in accounting, finance, law, marketing, engineering, and retail provide free counseling and mentoring to entrepreneurs. More than 12,000 volunteer members provide individual counseling and business workshops for aspiring entrepreneurs and small business owners. There are more than 750 counseling locations throughout the country.

SCORE offers the following services:

- No fee prebusiness counseling
- No fee existing business counseling
- No fee mentoring for longer term business advising sessions
- Low cost, local workshops on topics such as business planning and management, financing, and marketing
- Access to information on relevant subjects, including business planning, financing and marketing
- Local contacts for additional assistance

Web:

www.acq.osd.mil/sadbu

SMALL BUSINESS AND CONTRACTING OPPORTUNITIES, U.S. DEPARTMENT OF DEFENSE

The Office of the Assistant Deputy Under Secretary of Defense for Environmental Cleanup and the Small and Disadvantaged Business Utilization Office work closely with the small business representatives of each of the military services to promote environmental restoration opportunities within the Department of Defense (DoD) for small businesses. The continued participation of small businesses in DoD's restoration program is a priority within Environmental Security. This section consolidates information from each of the military services in one place, including contracting opportunities and serves as a place for "one-stop-shopping" for small businesses who are interested in performing environmental cleanup work for DoD.

The site consolidates information across military branches on:

- Contact offices for Small and Disadvantaged Business Utilization
- Government contract information resources throughout the DoD and the military services, which may provide environmental restoration-related business opportunities
- Reference documents about small business participation in the defense environmental cleanup mission, contracting, and related topics
- Conferences, meetings, and other events of interest to small businesses

Address:

U.S. Small Business
Administration
409 Third Street, SW
Washington, DC 20416

Phone:

(202) 205-6766

Fax:

(202) 205-7064

TDD:

(704) 344-6640

The SBA has offices throughout the United States. For the one nearest you, look under "U.S. Government" in your telephone directory, or call the SBA Answer Desk at (800) 8-ASK-SBA or (800) 827-5722.

Web:

www.sba.gov

SMALL BUSINESS DEVELOPMENT CENTER PROGRAM, U.S. SMALL BUSINESS ADMINISTRATION

The U.S. Small Business Administration (SBA) administers the Small Business Development Center (SBDC) Program to provide management assistance to current and prospective small business owners. SBDCs offer one-stop assistance to small businesses by providing a wide variety of information and guidance in central and easily accessible branch locations. The program is a cooperative effort of the private sector, the educational community, and federal, state and local governments. It enhances economic development by providing small businesses with management and technical assistance. There are now 57 SBDCs—one in every state (Texas has four), the District of Columbia, Puerto Rico, the U.S. Virgin Islands and Guam—with a network of more than 1,000 service locations. In each state there is a lead organization that sponsors the SBDC and manages the program. The lead organization coordinates program services offered to small businesses through a network of subcenters and satellite locations in each state. Subcenters are located at colleges, universities, community colleges, vocational schools, chambers of commerce, and economic-development corporations. SBDC assistance is tailored to the local community and the needs of individual clients. Each center develops services in cooperation with local SBA district offices to ensure statewide coordination with other available resources.

Web:

[www.seeport.com/
manuals/r&dbook/
rdguide.htm](http://www.seeport.com/manuals/r&dbook/rdguide.htm)

SMALL BUSINESS GUIDE TO FEDERAL R&D FUNDING OPPORTUNITIES

The Small Business Guide to Federal R&D Funding Opportunities was produced by Foresight Science & Technology, Inc., under contract to the National Science Foundation. The purpose of the guide is to assist small businesses competing for Small Business Innovative Research (SBIR) and Small Business Technology Transfer (STTR) awards; however, it includes some information which may be helpful to SBIR awardees seeking Phase III funding.

The Small Business Guide to Federal R&D Funding Opportunities includes chapters on commercialization, market research, marketing, and financing. The guide is available on-line at <http://www.seeport.com/manuals/r&dbook/rdguide.htm>.

Address:

U.S. Small Business
Administration,
Office of Technology
409 Third St. SW
Washington, DC 20416

Phone:

(202) 205-6450

Web:

[http://www.sba.gov/
SBIR/sbir.html](http://www.sba.gov/SBIR/sbir.html)

SMALL BUSINESS INNOVATIVE RESEARCH PROGRAM, U.S. SMALL BUSINESS ADMINISTRATION

The Small Business Innovative Research (SBIR) Program is a highly competitive program that encourages small business to develop their technological potential. SBIR targets the entrepreneurial sector because that is where most innovation and innovators thrive. SBIR funds the critical startup and development stages and it encourages the commercialization of the technology, product, or service, which, in turn, stimulates the U.S. economy. Each year, ten federal departments and agencies are required by SBIR to reserve a portion of their R&D funds for award to small business.

Following submission of proposals, agencies make SBIR awards based on small business qualification, degree of innovation, technical merit, and future market potential. Small businesses that receive awards or grants then begin a three-phase program.

- Phase I is the startup phase.
- Phase II is the R&D phase
- Phase III is the commercialization phase

Contact:

Dr. Robert Berger

Phone:

(301) 903-1414

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(301) 903-5488

E-mail:

sbir-sttr@science.doe.gov

Web:

<http://sttr.er.doe.gov/sttr>

SMALL BUSINESS TECHNOLOGY TRANSFER PROGRAM, U.S. DEPARTMENT OF ENERGY

The U.S. Department of Energy's (DOE) Small Business Technology Transfer Program (STTR) is a highly competitive program that reserves specific percentages of federal R&D funding to support innovative technology development by small businesses.

STTR is similar to the Small Business Innovation Research (SBIR) program in that both programs seek to increase the participation of small businesses in federal R&D and to increase private sector commercialization of technology developed through federal R&D. The unique feature of the STTR program is that, for both Phase I and Phase II projects, at least 40% of the work must be performed by the small business and at least 30% of the work must be performed by a non-profit research institution. Such institutions include federally-funded research and development centers (for example, DOE national laboratories), universities, non-profit hospitals, and other non-profits.

Address:

Smithville Phase IV
Bedrock
Remediation
Program
2769 Thompson
Avenue
Smithville, Ontario,
Canada L0R 2A0

Contacts:

Ted O'Neill
Project Manager
toneill@niagara.com

David Ketcheson
Technical Manager
dketches@niagara.com

Phone:

(905) 957-4077

Fax:

(905) 957-4079

SMITHVILLE PHASE IV BEDROCK REMEDIATION PROGRAM, SMITHVILLE, ONTARIO, CANADA

Demonstrations of *in situ* or *ex situ* remediation, characterization, or monitoring of soil, groundwater, or fractured rock are appropriate for the facility.

PCB wastes were stored at the site between 1978 and 1985. Chlorobenzenes dissolved the PCB and served as the “carrier” fluid. Old transformers were possibly “spent” and overheated; thus conversion to dioxins and furans seems reasonable. The transformers were cleaned at the site with a chlorinated solvent believed to be trichloroethene. Presence of other chlorinated solvents may be breakdown products or used industrial-grade solvents. Contaminant releases were discovered at the facility in 1985. An estimated 8,000 gallons of DNAPLs have migrated to the underlying bedrock about 19.7 feet below ground surface. By 1993, the surface of the site had been restored through the use of an on-site mobile incinerator. Research is underway to restore the fractured carbonate bedrock that was used as a local drinking water supply.

The site has excellent data available and work is in progress to model site conditions with a 3-D fracture flow model called FRAC3DVS. The site is located within the Michigan Basin and is composed of relatively simple “pancake” geology (stratigraphic profile). The local community supports cleanup efforts and there is no current litigation.

A full service commercial analytical laboratory on contract to the site is about 25 miles away. The laboratory, Zenon, has been accredited by the States of New York, Virginia, and Washington, and the Department of the Army among others. Equipment includes GC/MS, GC, and HPLC. Technology developers are permitted to do their own analysis using available facilities.

A permit is required to conduct demonstrations. Both the technology developer and the facility must submit applications. The length of time it takes to obtain a permit depends on the type of demonstration proposed. National and provincial regulations apply. Permission to add injectants for remediation may be granted on a case-by-case basis. If a passive containment system is constructed to isolate contaminants, it may be possible to consider addition of other chemicals.

Phone:

(888) 748-8379

E-mail:

lballen@solquest.com

Web:

www.solquest.com

SOLUTION QUEST

Solution Quest provides a variety of solutions based on its clients needs. These solutions can generally be grouped into four areas: management, environmental, resource, and Internet/Web. Solution Quest can help develop and implement marketing and sales programs, literature, advertising copy and campaigns, as well as conduct market research and analysis. Solution Quest can also help with the development of bids and proposals, and can help your company find the resources it needs to succeed.

Address:

3221 CEBA Building
Louisiana State University
Baton Rouge, LA
70803-6770

Contact:

Danny Reible

Phone:

(225) 388-6770

Fax:

(225) 388-5043

E-mail:

reible@che.lsu.edu

Web:

www.hsrc.org/hsrc/html/south.html

SOUTH AND SOUTHWEST HAZARDOUS SUBSTANCE RESEARCH CENTER

The South and Southwest Hazardous Substance Research Center conducts research on hazardous substance problems unique to U.S. EPA Regions 4 (AL, FL, GA, KY, MS, NC, SC, TN) and 6 (AR, LA, NM, OK, TX), for example, wood treating wastes, and is focused on contaminated sediment and dredged material research with project themes. Participating institutions are Louisiana State University, Georgia Institute of Technology, and Rice University. Themes within these focus areas include contaminant transport and transformation processes, management and control of remediation technology, ecological effects and exposure levels of sensitive receptors, and human exposure to chemicals in contaminated sediments and dredged material. In addition to research, the center conducts training and technology transfer activities such as regulatory conferences, newsletters, and technology briefs.

Address:

1900 SW 34th Street
Suite 206
Gainesville, FL 32608-1260

Phone:

(352) 294-7822

Fax:

(352) 294-7802

E-mail:

STACINF@
nervm.nerdc.ufl.edu

Web:

www.state.fl.us/stac

SOUTHERN TECHNOLOGY APPLICATIONS CENTER

The Southern Technology Applications Center (STAC) is part of the National Aeronautics and Space Administration's (NASA) Southeast Regional Technology Transfer Center. STAC provides commercialization services that encompass many of the components necessary in maximizing an organization's use of technology-related resources. STAC's expert staff can customize services to assist technology developers in every phase of the technology development and commercialization processes – from idea generation to sales, marketing and distribution.

Technology Licensing - STAC assists companies, universities, federal laboratories, and individuals in marketing and licensing internally developed technologies and capabilities. As the Southeast Regional Technology Transfer Center, STAC assists companies in acquiring technology created at NASA's field centers. STAC's commercialization staff has extensive experience in designing, structuring, and negotiating equitable licensing agreements.

Collaborative Agreements - Federal law allows companies to perform joint research and development with federal laboratories utilizing collaborative arrangements such as NASA's Space Act Agreements and other federal agencies' Cooperative Research and Development Agreements (CRADA). These agreements provide companies with access to federal laboratory technical staff, specialized facilities and unique equipment. STAC assists clients in accessing the vast resources of the federal laboratories and in structuring collaborative arrangements.

Technology Locating - STAC helps clients in identifying technologies that will solve manufacturing and product development problems. Awareness of the technologies available, combined with a thorough knowledge of federal laboratory capabilities, allows STAC to direct clients toward technology facilities or expertise applicable to specific commercial needs.

Address:

5039 Pine Creek Drive
Westerville, OH 43081

Phone:

(614) 901-1690

Fax:

(614) 901-1696

E-mail:

ssti@ssti.org

Web:

www.ssti.org

STATE SCIENCE AND TECHNOLOGY INSTITUTE

The State Science and Technology Institute (SSTI) is a national, nonprofit organization dedicated to improving government-industry programs that encourage economic growth through the application of science and technology. The institute also works to advance cooperation between the states and federal cooperation between the states and federal cooperative technology programs for more effective economic development.

SSTI provides assistance to state and federal Science and Technology policy makers and program staff through four service areas:

- **Information:** SSTI serves as a central resource center for current and historical information on cooperative technology programs. SSTI publishes the *SSTI Weekly Digest*, an electronic newsletter summarizing the top issues of the week for the science and technology community.
- **Education:** SSTI holds an annual conference each year for the professional development and education of state and federal science and technology leaders. SSTI also sponsors workshops, courses and seminars designed to assist science and technology program staff in policy formation, evaluation and program management.
- **Research:** The institute conducts policy research and impact analyses for state and federal science and technology programs. Research results are published through annual and biennial reports, issue briefs, special reports, program papers, and the *Compendium of State and Federal Cooperative Technology Programs*. Most are available through the Web site or by ordering directly from SSTI.
- **Facilitation:** SSTI encourages greater communication and cooperation between state and federal science and technology programs, including sponsorship of meetings designed to encourage dialogue between the states, federal agencies, industry, and laboratories.

Web:

[www.clu-in.org/
products/ebc/
ebcrpt.htm](http://www.clu-in.org/products/ebc/ebcrpt.htm)

STATE SOURCES OF COMMERCIALIZATION ASSISTANCE

The state sources of commercialization assistance can be found on the CLU-IN Web site. The webpage lists many state environmental business council resources. Also, the webpage summarizes the activities of organizations that are involved in supporting the development and transfer of innovative environmental technology through activities such as barrier reduction, economic development, and marketing.

Address:

New York State Center
for Hazardous Waste
Management
207 Jarvis Hall
Buffalo, NY 14260

Contact:

A. Scott Weber

Phone:

(716) 645-3446

Fax:

(716) 645-3463/3667

E-mail:

weber@acsu.buffalo.edu

Web:

http://
wings.buffalo.edu/
hazwaste

STATE UNIVERSITY OF NEW YORK AT BUFFALO

The New York State Center for Hazardous Waste Management administers research and pilot-scale demonstration projects directed at the development of technologies applicable to the remediation of contaminated environmental media, waste reduction, waste treatment, and productive reuse of hazardous waste. The center reviews competitive proposals from university and private industry researchers in New York state and awards contracts on an annual basis. The center is currently involved in a multivendor demonstration of bioremediation technologies at a state Superfund site. The center draws on R&D talent statewide in carrying out its research programs.

Address:

U.S. Environmental
Protection Agency
26 W. Martin Luther
King Drive
Cincinnati, OH 45268
Mail Stop 445

Contact:

Annette Gatchett

Phone:

(513) 569-7697

Fax:

(513) 569-7620

E-mail:

gatchett.annette@
epamail.epa.gov

Web page:

www.clu-in.org/
vendweb/demonstr/
sitefram.htm

or

www.epa.gov/ORD/
SITE/index.html

SUPERFUND INNOVATIVE TECHNOLOGY EVALUATION PROGRAM, U.S. EPA

The Superfund Innovative Technology Evaluation (SITE) program was established in 1986 by the U.S. EPA's Offices of Research and Development (ORD) and Solid Waste and Emergency Response (OSWER). Its purpose is to promote the development and use of innovative technologies to clean up Superfund sites across the country.

The SITE Program has two major components:

- **The Demonstration program** – generates performance, engineering, and cost data through selected innovative technology demonstrations. EPA publishes an annual solicitation for proposals from developers to demonstrate their technologies, ideally at actual Superfund sites. Under this program, the vendor typically pays for the operation of the demonstration. EPA pays for the planning, sampling, and analysis and generates reports to communicate the results of the demonstration. Questions regarding the SITE Demonstration program should be directed to Vince Gallardo at (513) 569-7176 or Randy Parker at (513) 569-7271.
- **The Monitoring and Measurement Technologies Program** – supports the development and demonstration of innovative field-ready technologies that sample, detect, monitor, or measure hazardous substances in the air, surface water, soil, wastes, and biological tissues. For more information contact Steve Billets at (702) 798-2232.

Address:

U.S. Environmental
Protection Agency
Office of Science,
Planning and Regula-
tory Evaluation (H-8105)
Office of Research and
Development
401 M Street, SW
Washington, DC 20460

Contact:

Amy Mills

Phone:

(202) 260-7667

Fax:

(202) 260-0507

SUPERFUND TECHNICAL LIAISON PROGRAM, U.S. EPA

The Superfund Technical Liaison Program was created in 1990 jointly by the U.S. EPA's Office of Research and Development (ORD) and Office of Solid Waste and Emergency Response (OSWER) to expand the technical support available to Regional staff. It is managed within the Regional Operations Staff of ORD's Office of Science, Planning and Regulatory Evaluation (OSPRES) at EPA Headquarters.

Technical Liaisons are ORD senior scientists and engineers located in the EPA Regional hazardous waste offices. They interact on a daily basis with remedial project managers, on-scene coordinators, Regional management, and other hazardous waste personnel. The liaisons foster communications—especially the transfer of scientific and engineering products—between ORD laboratories and the Regions. They can provide developers with technical information on sites and technologies in the EPA Regions.

Superfund Technical Liaisons

Steve Mangion, Region 1
U.S. EPA (HBS)
JFK Federal Building
Boston, Massachusetts 02203
(617) 918-1452

Jon Josephs, Region 2
U.S. EPA
290 Broadway, 18th Floor
New York, NY 10007-1866
(212) 637-4317

Norm Kulujian, Region 3
U.S. EPA, (3HWO2)
1650 Arch Street
Philadelphia, PA 19103-2029
(215) 814-3130

Felicia Barnett, Region 4
Office of Technical Services,
U.S. EPA
61 Forsyth Street
Atlanta, GA 30303-3415
(404) 562-8659

Robert Mournighan, Region 7
SUPR/SACR, U.S. EPA
726 Minnesota Avenue
Kansas City, KS 66101
(913) 551-7913

Robert Stone, Region 8
8EPR-PS, U.S. EPA (6T-513)
999 18th Street, Suite 500
Denver, CO 80202-2466
(303) 312-6777

Mike Gill, Region 9
75 Hawthorne Street (SFD-8-2)
San Francisco, CA 94105
(415) 744-2385

John Barich, Region 10
Technical Support Branch
Environmental Science Division,
U.S. EPA
1200 Sixth Avenue
Seattle, WA 98101
(206) 553-8562

Web:

[http://
sbn.envirolink.org/
busopps/index.html](http://sbn.envirolink.org/busopps/index.html)

SUSTAINABLE BUSINESS NETWORK

The Sustainable Business Network is a resource of sustainable business opportunities that help businesses find the resources they need to grow and help investors find promising opportunities. This site offers opportunities for investors and partners, distributors and licensees, and capital and contracts.

Web:

<http://web.ead.anl.gov/techcon/>

TECHCON

TechCon is a Department of Energy (DOE) program connecting DOE's site-specific environmental management needs with private industry capabilities and public sector experience. To facilitate the connection, TechCon solicits information from private industry and the public sector about solutions to specific remediation project opportunities with DOE. The Web site links to a list of current projects and instructions so technology developers present their capabilities and project experience to the respective DOE remediation project team, review submitted capabilities statements and project histories, or communicate with others involved in the project.

Web:

www.techknow.org

TECHKNOW

TechKnow is a free, interactive database that is available over the Internet. The database provides information for people interested in environmentally sustainable technologies. Originally, TechKnow only contained environmental remediation technologies but has now branched off to other forms of sustainable technologies. One of the main goals of the database is to remain current. To do this, individual technology owners and sponsors are invited to enter in their own data. They assign themselves a password and can then come in and update their own entries on a regular basis as the status of the technology changes.

TechKnow was developed by The Global Environment and Technology Foundation (GETF) under a Cooperative Agreement with the U.S. Department of Energy and a grant from the U.S. Environmental Protection Agency, Stratospheric Protection Division. GETF is a 501(c)(3) not-for-profit corporation that fosters innovation by uniting the environment, technology and enterprise to encourage sustainable practices.

Phone:

(312) 644-0828

Fax:

(312) 644-8557

E-mail:

t2s@t2s.org

Web:

www.t2s.org

TECHNOLOGY TRANSFER SOCIETY

The Technology Transfer Society (T2S) is a not-for-profit professional organization dedicated to sharing methods, opportunities and schools of thought with the technology transfer community. T2S achieves its mission through programs, publications, forums, an annual conference, and other services designed to provide resources of information and contacts. T2S draws these resources from their knowledgeable members, who have technology transfer experience and expertise.

The T2S publishes the *Journal of Technology Transfer* three times per year, the monthly *T²Squared* newsletter, and a 500 page Annual Proceedings of the Technology Transfer Society (latest strategies in technology transfer), as publications to keep you informed. Organizations find opportunities to promote their businesses and learn how to incorporate technology transfer into their business strategies. The T2S Annual Meetings feature top technology transfer professionals presenting the latest topics, and allow international technology matching and networking opportunities.

The T2S Chapter network includes opportunities to network locally in Arkansas; Boston; Denver; Huntsville, AL; Los Angeles; Northern California; Washington D.C.; and Wheeling, WV. T2S members receive T2S publications absolutely free and may attend meetings at member-only discount rates, and may advertise in the T2S publications at a 20 percent discount.

Contact:
Lee Martin

Phone:
(423) 220-8832 or
(615) 253-1946

TENNESSEE TECHNOLOGY FOUNDATION

While the Tennessee Technology Foundation (TTF) was created as a private, nonprofit corporation with an initial focus on promoting and supporting the Oak Ridge/Knoxville Technology Corridor, its charter gives it a mission that is statewide in scope. Thus, the foundation offers its services throughout Tennessee. That mission is to diversify and expand the employment opportunities and capital investment in Tennessee by promoting technology-based economic development. TTF does so by (1) providing specialized support to area economic development organizations in targeting and recruiting high-tech companies and (2) supporting technology transfer and commercialization.

Among other activities, the foundation's four staff members:

- Promote and nurture joint efforts among Tennessee's universities, federal research centers and businesses to enhance economic development through collaborative research and development, joint ventures, facility access, and similar arrangements
- Provide leadership or assistance on major research and technology-based project proposals, such as the Superconducting Supercollider
- Promote and offer technical review and writing support to companies applying for federal Small Business Innovation Research grants
- Identify and market Tennessee's research and technological resources
- Provide customized assistance in finding facilities or sites for technology-based companies
- Help firms seeking to commercialize federally sponsored and university-developed technology
- Provide assistance to start-up and existing technology-based firms in obtaining capital and other resources

Address:
401 M Street, No. 7408
Washington, DC 20460

Phone:
(202) 554-1404
(202) 554-0551 (TDD)

Fax:
(202) 554-5603

E-mail:
tsca-hotline@epa.gov

Hours of Service:
8:30 a.m. - 5:00 p.m.
(ET) Mon-Fri

TOXIC SUBSTANCES CONTROL ACT ASSISTANCE INFORMATION SERVICE, U.S. EPA

Developers of technologies for treating polychlorinated biphenyls (PCB) should be aware that these technologies are subject to separate regulation by EPA's Office of Toxic Substances (40 CFR 761).

Sponsored by the Office of Pollution Prevention and Toxics, the Toxic Assistance Information Service (TAIS) provides technical assistance and information about programs implemented under the Toxic Substances Control Act (TSCA), the Asbestos School Hazard Abatement Act (ASHAA), the Asbestos Hazard Emergency Response Act (AHERA), the Asbestos School Hazard Abatement Reauthorization Act (ASHARA), the Residential Lead-Based Paint Hazard Reduction Act (Title X of TSCA), and EPA's 33/50 program. The TAIS provides copies of TSCA information, such as Federal Register notices and support documents, to requestors through its Clearinghouse function.

Address:

1401 Constitution Avenue, NW
U.S. Department of Commerce
Ronald Reagan Building
RTIC Stop
Washington, DC 20230

Phone:

(800) 872-8723,
(800) 833-8723 TDD

Fax:

(202) 482-4473

E-mail:

tic@ita.doc.gov

Web:

www.ita.doc.gov/tic

TRADE INFORMATION CENTER, U.S. DEPARTMENT OF COMMERCE

The Trade Information Center is a central access point for information about federal export assistance programs that provide export counseling, international market research and trade leads, overseas and domestic trade events and activities, export financing, and advice about documentation and licensing requirements. The center is operated by the Trade Promotion Committee, which includes 19 federal agencies responsible for international trade and export promotion.

The center provides callers with reports and statistics from the National Trade Data Bank, which includes more than 10,000 government documents related to export production and international markets. In addition, the center advises businesses about upcoming conferences, trade missions, and fairs offered in the U.S. and overseas by federal, state, and local organizations.

Web:

www.unisphere.com

UNISPHERE

UNISPHERE is an international organization based in Washington, DC supported by public and private partners in 23 countries. It operates a virtual venture market for firms with advanced technology products and services. It also expedites firm-to-firm matching and facilitates communication between its partners on the Internet. The Web site offers in-depth information about UNISPHERE partners, news, discussion groups, and practical information about joint venturing.

Web:

www.environmental.usace.army.mil/hq/tools/opportunity/opportunity.html

U.S. ARMY CORPS OF ENGINEERS ENVIRONMENTAL PROGRAMS CONTRACTING OPPORTUNITIES

The U.S. Army Corps of Engineers (USACE) supports all four pillars of the Army's Environmental Strategy into the 21st Century: 1) Restoration; 2) Compliance; 3) Prevention; and 4) Conservation. USACE provides comprehensive environmental services to the Army, Department of Defense (DoD), U.S. Environmental Protection Agency (EPA), Department of Energy (DOE), and other federal agencies.

The majority of the Architect-Engineer (A-E) and construction services utilized by USACE are acquired by contract with private firms. USACE policies and information about A-E contracting can be found in Engineer Pamphlet (EP) 715-1-4. USACE policies and information about construction contracting can be found in EP 415-1-5. Copies of these pamphlets are available from the local USACE district or from the USACE Publications Depot.

Web:
www.business.gov

U.S. BUSINESS ADVISOR: LAWS AND REGULATIONS

The U.S. Business Advisor exists to provide business with one-stop access to federal government information, services, and transactions. This site provides links to over 20 sources of information, including:

- 1990 Clean Air Act Amendment
- Hazardous Waste Program
- NOx Reduction Program
- Ozone Regulations
- Pesticide Regulation Notices
- Press Releases
- Restricted Use Products

Web:
www.epa.gov/epahome/rules.html

U.S. EPA LAWS AND REGULATIONS

This Web site provides access to specific regulations and legislation pertaining to environmental protection, including:

- Federal Register documents issued by EPA
- The Unified Agenda; EPA's semiannual regulatory agendas describing regulatory actions they are developing or have recently completed
- The Code of Federal Regulations (CFR) database

EPA REGIONAL CONTACTS

Region 1

(CT, ME, MA, NH, RI, VT)
 (617) 918-1111

Region 2

(NJ, NY, Puerto Rico, U.S. Virgin Islands)
 (212) 637-3000

Region 3

(DE, MD, PA, VA, WV, DC)
 (215) 814-5000

Region 4

(AL, FL, GA, KY, MS, NC, SC, TN)
 (404) 562-9900

Region 5

(IL, IN, MI, MN, OH, WI)
 (312) 353-2000

Region 6

(AR, LA, NM, OK, TX)
 (214) 655-2200

Region 7

(IA, KS, MO, NE)
 (913) 551-7003

Region 8

(CO, MT, ND, SD, UT, WY)
 (303) 312-6312

Region 9

(AZ, CA, HI, NV, American Samoa, Guam)
 (415) 744-1305

Region 10

(AK, ID, OR, WA)
 (206) 553-1200

Address:

U.S. Environmental
Protection Agency
Environmental Sciences
Division
P.O. Box 93478
Las Vegas, NV 89193-3478

Phone:

(702) 798-2100

Fax:

(702) 798-2637

Web:

www.epa.gov/crdlvweb

U.S. EPA NATIONAL EXPOSURE RESEARCH LABORATORY - ENVIRONMENTAL SCIENCES DIVISION

The National Exposure Research Laboratory (NERL) is EPA's center for the investigation of technical and management approaches for identifying and quantifying risks to human health and the environment. Goals of the Laboratory's research program are to (1) develop and evaluate methods and technologies for characterizing and monitoring air, soil, and water; (2) support regulatory and policy decisions; and (3) provide the science support needed to ensure effective implementation of environmental regulations and strategies.

The staff at the NERL Environmental Sciences Division (ESD) conduct research, development, and technology transfer programs on environmental exposures to ecological and human receptors. ESD develops methods for characterizing chemical and physical stressors, with special emphasis on ecological exposure. ESD develops landscape and regional assessment capabilities through the use of remote sensing and advanced monitoring technology to issues involving surface and subsurface contamination. To carry out these functions, ESD applies a multidisciplinary, multimedia approach in both laboratory and field settings.

Web:
[www.epa.gov/ORD/
NRMRL](http://www.epa.gov/ORD/NRMRL)

U.S. EPA NATIONAL RISK MANAGEMENT RESEARCH LABORATORY (NRMRL)

The National Risk Management Research Laboratory (NRMRL), located in Cincinnati, Ohio advances the scientific understanding and the development and application of technological solutions to prevent, control, or remediate important environmental problems that threaten human health and the environment. NRMRL divisions include:

- Air Pollution Prevention and Control Division - located in Research Triangle Park, North Carolina; this division is responsible for research, development, and evaluation of air pollution control technologies. Call (919) 541-2821 for more information.
- Land Remediation and Pollution Control Division - located in Cincinnati, Ohio; this division conducts research at the basic level as well as bench- and pilot-scale to explore innovative solutions to current and future land pollution problems. Call (513) 569-7861 or (513) 569-7696 for more information.
- Subsurface Protection and Remediation Division - (formerly the Robert S. Kerr Environmental Research Laboratory) in Ada, Oklahoma conducts research and engages in technical assistance and technology transfer on the chemical, physical and biological structure and processes of the subsurface environment, the biochemical interactions in that environment and fluxes to other environmental media. Call (580) 436-8500 for more information.
- Sustainable Technology Division - located in Cincinnati, Ohio; this division's mission is to advance the scientific understanding, development and application of technologies and methods of prevention, removal and control of environmental risks to human health and ecology. Call (513) 569-7509 for more information.
- Technology Transfer and Support Division - (formerly the Center for Environmental Research Information) located in Cincinnati, Ohio; this division serves as a focal point for technology transfer activities, communication, and coordination of information on NRMRL's science activities and research programs with Agency Program and Regional Offices, state and local governments, universities and other Federal agencies. Call (513) 569-7406 or (513) 569-7588 for more information.
- Water Supply and Water Resources Division - located in Cincinnati, Ohio and Edison, NJ; this division conducts research to help prepare the primary and secondary regulations for drinking water and to develop technologies and strategies for controlling waterborne contaminants. Call (513) 569-7201 for more information.

Address:

U.S. Environmental
Protection Agency
T & E Facility
Cincinnati, OH 45268

Contact:

Frank Evans

Phone:

(513) 569-7051

Fax:

(513) 569-7052

U.S. EPA TEST AND EVALUATION FACILITY

The U.S. Environmental Protection Agency Test and Evaluation Facility was constructed in 1979 to accommodate a broad spectrum of approaches to treating wastewater. However, the RCRA-permitted facility can perform research and testing for treatment of hazardous waste. The facility is managed under contract by the operational support contractor IT Environmental Programs, Inc. The facility contains a 24,000-square-foot high-bay experimental area, on-site analytical chemistry laboratories, chemical storage areas, hazardous waste storage facilities, liquid pumping systems, and two 5-ton bridge cranes. The facility's research capabilities are accessible to other government agencies, as well as to private industry and developers.

Address:

U.S. Small Business
Administration
Office of Economic
Development
409 Third Street, S.W.
Suite 8200
Washington, DC 20416

Web:

www.sba.gov

U.S. SMALL BUSINESS ADMINISTRATION

The U.S. Small Business Administration (SBA) is an independent agency dedicated to fostering the growth and prosperity of small businesses. The agency has numerous programs that can be useful to businesses in the development and commercialization of innovative technologies. With a portfolio of business loans, loan guarantees and disaster loans worth more than \$45 billion, SBA is the nation's largest single financial backer of small businesses. In 1998, the SBA offered management and technical assistance to more than one million small business owners.

Address:

Center for Clean
Technology
7440 Boelter Hall
P.O. Box 951600
Los Angeles, CA
90095-1600

Contact:

Selim Senkan, Director

Phone:

(310) 206-3071

E-mail:

cct@seas.ucla.edu

Fax:

(310) 206-3906

Web:

[http://
cct.seas.ucla.edu/
cct.home.html](http://cct.seas.ucla.edu/cct.home.html)

UNIVERSITY OF CALIFORNIA, LOS ANGELES, CA

The Center for Clean Technology at the University of California at Los Angeles, founded in 1990, employs a focused, multidisciplinary approach to meeting pressing environmental challenges. The goal of the center is to create a science, engineering, and human resource base for the design of clean, economically competitive technologies.

The center brings together engineering and applied science research programs in six areas: pollution prevention; thermal treatment; wastewater treatment; multimedia transport and transformation; remediation and restoration; and risk and systems analysis for the control of toxics. More than 30 investigators are involved in more than 50 research projects.

In addition to collaborative projects, the center maintains technology transfer and outreach efforts, including an Industrial Affiliates Program and workshops, newsletters, and technical advisory committee meetings.

Address:

Center for Hazardous
Waste Research
Department of Civil
and Environmental
Engineering
Cincinnati, OH 45221

Contact:

Dr. Scarpino

Phone:

(513) 556-3738

UNIVERSITY OF CINCINNATI, CINCINNATI, OH

In addition to services provided through the U.S. Environmental Protection Agency's Solid and Hazardous Waste Research Facility in Center Hill, Ohio, the University of Cincinnati conducts research on hazardous waste treatment technologies. Specific research projects have included: biological treatment that uses thin film bioreactors, solidification and stabilization of soils, reverse osmosis, composting of hazardous waste, and wastewater treatment. The university is testing aerobic and anaerobic treatment methods in fluidized bed reactors that use activated carbons as a support medium.

Address:

The Florida Center for
Solid and Hazardous
Waste Management
2207-D NW 13th Street
Gainesville, FL 32609

Contacts:

John Schert, Paul Still

Phone:

(352) 392-6264

Fax:

(352) 846-0183

Web:

www.floridacenter.org

UNIVERSITY OF FLORIDA, GAINESVILLE, FL

The University of Florida is the host institution for the Florida Center for Solid and Hazardous Waste Management. Participating institutions are Florida State University, the University of South Florida, the University of Central Florida, Florida A&M University, Florida Atlantic University, Florida Institute of Technology, and the University of Miami. Established by the Florida legislature in 1988, the center conducts research and provides education in hazardous waste management. Specific areas include methods and processes for recycling, treating, and disposing of solid and hazardous waste. The center annually issues requests for pre-proposals from which it selects new research projects and among which it appropriates funding. Staff of the center provide technical information by telephone or facsimile, as well as access to the center's library. The center also operates the Florida Recycling Marketing System (FRMS), an electronic bulletin board that offers information about waste reduction, waste exchange, recycling, and composting. The modem access number for FRMS is (800) 348-1239.

Address:

Center for Environ-
mental Biotechnology
University of Tennessee
676 Dabney Hall
Knoxville, TN 37996-1605

Contact:

Gary Saylor

Phone:

(423) 974-8080

Fax:

(423) 974-8086

UNIVERSITY OF TENNESSEE, KNOXVILLE, TN

The Center for Environmental Biotechnology (CEB) focuses on training and research leading to the development and effective use of microorganisms for environmental remediation. CEB is located near more than 70 environmental service companies, employs 70 professionals in the field, and has 30,000 square feet of fully equipped research space, with 15,000 square feet as a single laboratory facility exclusively for environmental research and biotechnology. CEB receives federal, industry, and university support to conduct research activities. Ongoing investigations include: development of a molecular probe for monitoring and optimizing TCE degradation; molecular methods for quantifying microbial degradation of PAH in soil at manufactured gas plants; and bioluminescent sensor technology for on line *in situ* measurement of biodegradation.

Address:

Waterloo Centre
for Groundwater
Research
Waterloo, ONT
Canada N2L3G1

Contact:

Dennis Gregor

Phone:

(519) 885-1211,
ext. 2189

Fax:

(519) 725-8720

UNIVERSITY OF WATERLOO, ONTARIO

The Waterloo Centre is the largest groundwater research center in Canada. The Centre also is affiliated with other university and nonuniversity research groups in Canada. The Centre performs field research, laboratory testing, and computer modeling research in organic and inorganic contaminant hydrogeology. Areas of research and testing expertise at the Centre include processes of contaminant movement through subsurfaces, fate of contaminants, and remediation technology. The Centre's facilities include experimental laboratories and analytical capabilities. Of particular interest to developers is the availability of field sites at which the behavior, fate, and remediation of contaminants in the subsurface are tested.

Address:

P.O. Box 3354
Room 6012, Ag. "C"
Laramie, WY 82071-3354

Contact:

Dr. Quentin Skinner

Phone:

(307) 766-4139

Fax:

(307) 766-6403

E-mail:

qskinner@uwyl.edu

UNIVERSITY OF WYOMING CENTER FOR ENVIRONMENTAL SIMULATION STUDIES, LARAMIE, WY

The University of Wyoming Center for Environmental Simulation Studies (CESS) offers developers a five-story environmental simulation laboratory (ESL) consisting of a 24 foot long, 20 foot wide, and 10 foot deep concrete lysimeter where large soil embankments can be built. The Center also has developed detailed plans to construct four additional ESL laboratories. Rainfall, stream flow, groundwater, sunlight, plant life cycles, and climate can be simulated in the existing ESL, which is covered by an environmental chamber.

The existing and planned ESLs allow for the systematic testing of technologies without the initial cost and monitoring difficulties often encountered with large-scale field trials. Using the ESL, developers can acquire high quality results through a range of operating conditions and conducted at a scale between bench, laboratory, and field studies. Contained testing, such as that at CESS, is often cost effective, timely, and offers a lower risk than field testing. The University of Wyoming also provides developers access to other support facilities and technical expertise.

Address:

CIT Tower
2214 Rock Hill Road
Suite 600
Herndon, VA 21070-4200

Contact:

Jerry Coughter

Phone:

(703) 689-3013 or
(800) 3-TECHVA

Fax:

(703) 689-3041

E-mail:

jcoughter@cit.org

Web:

<http://cit.org>

VIRGINIA'S CENTER FOR INNOVATIVE TECHNOLOGY

Virginia's Center for Innovative Technology (CIT) is a nonprofit corporation created by the Virginia General Assembly to foster the state's technological growth and competitiveness. CIT matches a company's needs with the R&D capabilities of faculty researchers and laboratories at Virginia universities. CIT provides immediate technology transfer and assistance to Virginia companies at no cost. The center strives to help developers initiate research within six weeks of contact with CIT.

CIT will match Virginia companies in need of technical assistance with university experts. CIT also responds to proposals for funding from the company and university pairs. CIT helps to pull technologies out of Federal laboratories so that they can be set up at private companies. CIT also works with universities to develop protocols, that can be sold at a low cost to Virginia small businesses.

CIT funds and conducts industry-driven research at the University of Virginia, Virginia Polytechnic Institute and State University, Old Dominion University, Virginia Commonwealth University, George Mason University, and the College of William and Mary and funds and operates technology development centers and institutes.

Address:

The Volunteer Site
P.O. Box 22608
Chattanooga, TN
37422-2608

Contact:

Beverly Bair

Phone:

(800) 732-1187

E-mail:

volsite1@vol.com

Web:

www.volunteersite.com/volite.htm

VOLUNTEER ARMY AMMUNITION PLANT, CHATTANOOGA, TN

A former Army plant that manufactured TNT, the Volunteer Army Ammunition Plant (VAAP) is now a 7,000 acre eco-industrial park available as a demonstration site for technology developers. VAAP is a national demonstration site for technology developers. VAAP is a National Environmental Testing Center site with amenities that include warehouses, water and wastewater treatment, office and administrative spaces. Businesses can use these amenities with flexible lease terms from the U.S. Army. Types of demonstrations appropriate for this site include *in situ* and *ex situ* remediation of soil and groundwater.

Address:

U.S. Army Engineer
Waterways
Experiment Station
3909 Hall Ferry Road
Vicksburg, MS 39180

Contact:

Norman Francingues

Phone:

(601) 634-3703

Fax:

(601) 634-4263

E-mail:

francin@wes.army.mil

Web:

www.wes.army.mil/el/
hwrc

WATERWAYS EXPERIMENT STATION HAZARDOUS WASTE RESEARCH CENTER

The U.S. Army Engineer Waterways Experiment Station (WES) is playing a major role in development of technologies for cleanup of toxic and hazardous waste in military and civilian sites. Basic and applied research efforts are coordinated through WES's Hazardous Waste Research Center (HWRC) that opened in fiscal year 1988. The HWRC provides research and development and innovative technology demonstration support to all Corps of Engineers Districts and Divisions, the ten EPA regions under the Resource Conservation and Recovery Act, the Superfund program and the Assessment and Remediation of Contaminated Sediments program under the Clean Water Act. The HWRC conducts research at all levels, from initial laboratory investigations to the development and application of new and innovative technologies on site. Research is performed on a cost reimbursement basis and executed through a variety of federal funding arrangements, including work with the private sector under cooperative research and development agreements (CRDAs) to expedite transfer of remediation technologies to the governmental and private sector.

Address:

University of Buffalo
Incubator
Baird Research Park
1576 Sweet Home Road
Amherst, NY 14228

Contact:

Jack McGowan

Phone:

(716) 636-3626

Fax:

(716) 636-3630

E-mail:

jmcgowan@acsu.
buffalo.edu

Web:

http://wings.
buffalo.edu/wnytdc

WESTERN NEW YORK TECHNOLOGY DEVELOPMENT CENTER

The mission of the Western New York Technology Development Center (TDC) is to promote technical business creation and expansion, primarily for the five western counties of New York. The TDC, located adjacent to the State University of New York at Buffalo, has established a working relationship, especially for technical assistance, with the New York Center for Hazardous Waste Management. The TDC-managed University of Buffalo Incubator provides both physical space and essential start-up services for new technical business ventures. The center is a 40,000 square foot facility, which accommodates activities requiring up to 2,500 square feet of space. The facility is outfitted with wet laboratories and central services including compressed air, vacuum natural gas, and distilled water. In addition, the center provides a full range of services, including capital resources. Environmental health and safety services are provided through the University at Buffalo. Prospective developers are required to submit a business plan or a research plan.

Address:

Department of Civil
Engineering
Stanford University
Stanford, CA
94305-4020

Contact:

Perry McCarty

Phone:

(650) 723-4131

Fax:

(650) 725-9474

Web:

[www-seep-server.stanford.edu/
SEEPWeb/wrsrc](http://www-seep-server.stanford.edu/SEEPWeb/wrsrc)

WESTERN REGION HAZARDOUS SUBSTANCE RESEARCH CENTER

The Western Region Hazardous Substance Research Center services EPA Regions 9 (AZ, CA, HI, NV, American Samoa, Guam) and 10 (AK, ID, OR, WA). Participating institutions are Stanford University and Oregon State University. The primary research focus for the center is to support the development of alternative and advanced physical, chemical, and biological processes for treating hazardous substances in the surface and subsurface environments. A major focus of the center's research program is in groundwater treatment and remediation of subsurface contamination.

