United States Environmental Protection Agency
Solid Waste and Emergency Response (OS-110W)
EPA 542-N-93-004
June 1993

EPA

VISITT

Vendor Information System for Innovative Treatment Technologies

An Intermittent Bulletin on a Database for Innovative Remediation Technologies

VISITT 2.0 Grows to 231 Innovative Technologies

VISITT 2.0 contains data on 231 technologies offered by 141 companies. The database includes completely updated information on more than 80 percent of the 97 vendors in VISITT 1.0; most of the others no longer market an innovative technology. VISITT 2.0 also contains data submitted by an additional 61 vendors, offering 88 technologies. In eight of the nine major technology categories included in VISITT, the number of technologies listed has increased, with the largest growth for soil vapor extraction/dual-phase extraction, followed by in situ bioremediation, thermal desorption, and in situ thermally enhanced recovery (Exhibit 1). Overall, the number of technologies to treat soil or ground water in place more than doubled. Exhibit 2 shows the proportion of VISITT 2.0 technologies represented by each major technology category.

VISITT 2.0 features five new technology categories, including in situ dual-phase extraction for soil/ground water, pneumatic fracturing, and pyrolysis. The

(continued on page 3)

VISITT 1.0 Tops 7,300 Registered Users

The first release of the VISITT database has been well received by the remediation community. Since it became available in June 1992, VISITT has acquired more than 7,300 registered users in 50 countries. Users include representatives of federal, state, and local government; universities; law firms; and private industry, including more than 100 "Fortune 500" companies.

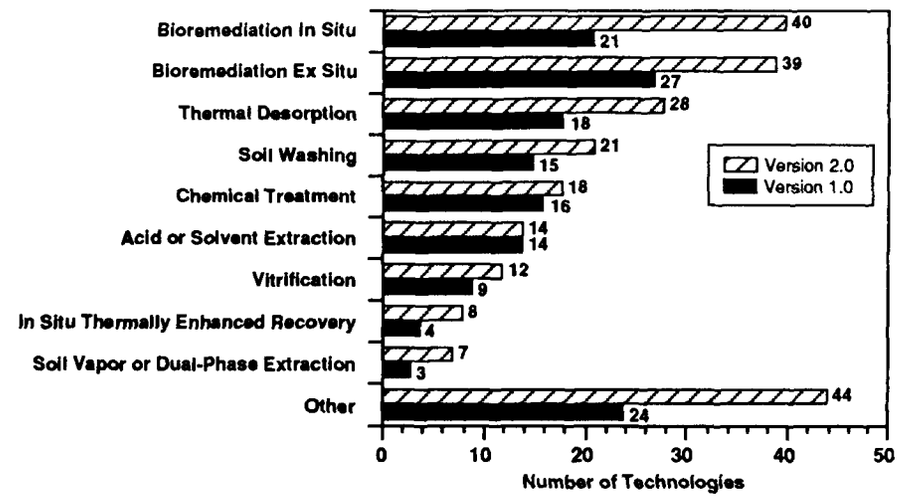
Database Links Technology Vendor to the Remediation Professional

The U.S. Environmental Protection Agency (EPA) is pleased to announce the first annual update of the Vendor Information System for Innovative Treatment Technologies (VISITT). This database has been developed by the Technology Innovation Office (TIO) in the Office of Solid Waste and Emergency Response (OSWER) as part of a broad effort to promote the use of innovative treatment technologies for the cleanup of soil and ground water contaminated by hazardous and petroleum waste. VISITT is designed to capture current information on the availability, performance, and cost of innovative treatment to remediate contaminated waste sites.

VISITT is available on diskettes compatible with personal computers that use DOS operating systems. VISITT 2.0 contains detailed information on 231 technologies offered by 141 developers and vendors. Exhibit 3 lists the number of technologies in each category by stage of development—bench, pilot, and full scale. VISITT gives these companies an opportunity to market their capabilities and enables federal, state, and private-sector environmental professionals to screen innovative technologies for application to specific sites. VISITT also identifies vendors that perform treatability studies and provide cleanup services.

EPA already is preparing for VISITT 3.0. All vendors of innovative technologies are invited to submit technology information for the update. Instructions for submitting information are given on page 2 of this bulletin.

Exhibit 1: VISITT Technology Trends



Source: U.S. EPA, VISITT Database, May 1993

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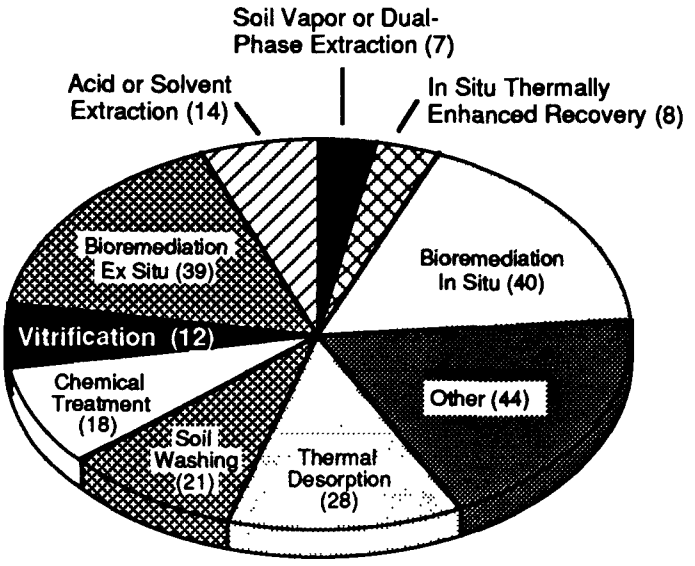
Exhibit 2: Major Technology Types



Source: U.S. EPA, VISITT Database, May 1993

Exhibit 3. Summary of Technology Types and Stages of Development

Technology Types	Bench Scale	Pilot Scale	Full Scale	Total Technologies
Acid Extraction	1	2	1	4
Adsorption—In Situ	0	1	1	2
Air Sparging—In Situ Ground Water	0	0	4	4
Bioremediation—In Situ Ground Water	4	2	11	17
Bioremediation—In Situ Lagoon	0	0	2	2
Bioremediation—In Situ Soil	2	2	9	13
Bioremediation—Not Otherwise Specified	1	0	5	6
Bioremediation—Slurry Phase	4	4	10	18
Bioremediation—Solid Phase	1	2	18	21
Bioventing	0	2	6	8
Chemical Treatment—Dechlorination	1	0	1	2
Chemical Treatment—Other	2	4	7	13
Chemical Treatment—In Situ Ground Water	0	3	0	3
Delivery/Extraction Systems	0	0	5	5
Dual-Phase Extraction—In Situ Soil/Ground Water	0	0	4	4
Electrical Separation	1	2	0	3
Magnetic Separation	0	1	0	1
Materials Handling/Physical Separation	1	2	3	6
Off-Gas Treatment	2	2	6	10
Pneumatic Fracturing	0	0	2	2
Pyrolysis	0	1	0	1
Slagging—Off-Gas Treated	0	0	1	1
Soil Flushing—In Situ	1	1	1	3
Soil Vapor Extraction	0	0	3	3
Soil Washing	4	3	14	21
Solvent Extraction	2	4	4	10
Thermal Desorption—General	0	2	2	4
Thermal Desorption—Off-Gas Treated	0	4	20	24
Thermally Enhanced Recovery—In Situ	1	4	3	8
Vitrification—General	1	3	0	4
Vitrification—Off-Gas Treated	0	3	5	8
Total	29	54	148	231

Update Offers New Reports and Software

VISITT 2.0 features fully automated installation and includes new functions that make it easier to extract information and compare technologies and vendors. VISITT retains the menu-driven design that allows the user to search the extensive technology information for particular applications and technology types. The user, for example, can enter a waste description to identify innovative technologies in the system that treat such wastes. The user also can locate specific sites at which vendors may have conducted treatability studies or cleanups.

Once the database has identified the technologies and vendors that meet the user's requirements, the user can review such information as available equipment, performance data, and experience. Printing options include printing all the technology information for a given vendor or only those data fields of particular interest to the user. Version 2.0 enhancements enable the user to specify a particular data field, such as performance, and, in one step, print or save to a file performance data from all the vendor records identified in the user's search. VISITT 2.0 also provides a print preview that gives the number of pages in the report and allows the user to scroll through the information on the screen before printing. Another software improvement allows the user to limit a search to those vendors that claim to have actual experience in treating a particular contaminant or to expand the search to vendors that indicate potential applications.

How to Submit Information for VISITT 3.0

Suppliers, manufacturers, and vendors of innovative treatment technologies who want to submit information for consideration should place their names on the vendor mailing list by calling the VISITT hotline at (800) 245-4505 or (703) 883-8448. Questionnaires will be mailed this summer.

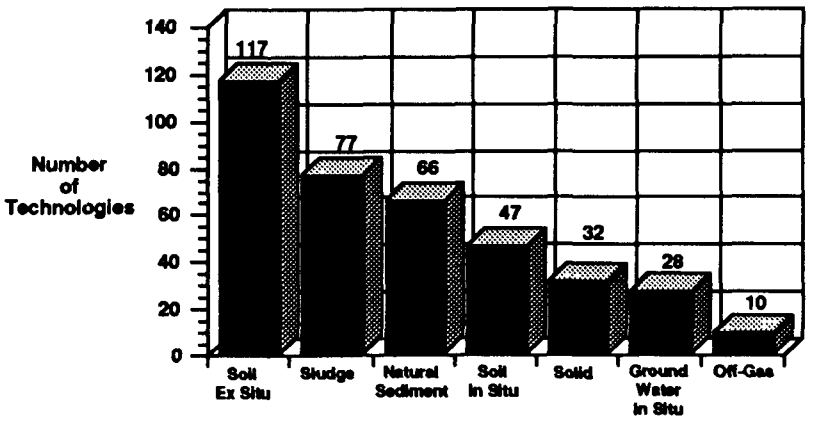
VISITT 2.0 Grows to 231 Innovative Technologies

(continued from page 1)

information provided by vendors indicates that nearly 65 percent of the innovative technologies in VISITT 2.0 are commercially available at full scale, up from 40 percent in VISITT 1.0. The names and addresses of each vendor in the system are listed by technology on pages 4, 5, and 6 of this bulletin. Analyses of the numbers of technologies that treat various media and contaminants are provided in Exhibits 4 and 5.

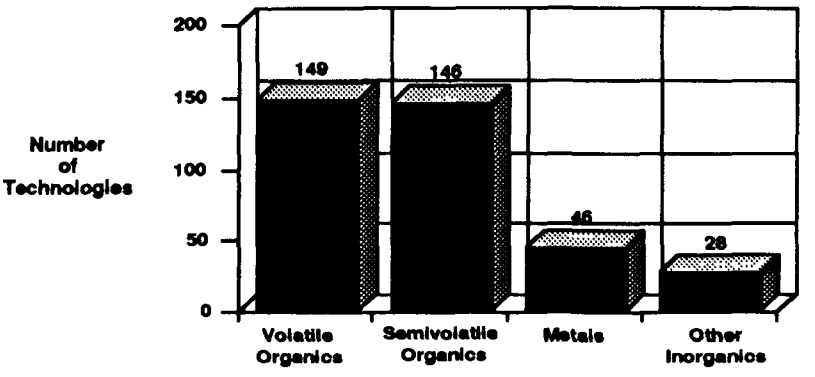
The basic information provided on each technology includes the vendor name, address, and phone number; a description of the technology and its highlights and limitations; and the contaminant and waste or media treated. Performance and cost data are provided for 70 percent of the technologies, and more than 50 percent of the listings include project experience information and literature references. Many vendors also provide data on available hardware and capacity, as well as treatability study capabilities. Performance data, project information, and literature citations can be used to substantiate a vendor's claims.

Exhibit 4: Media Treated



Source: U.S. EPA, VISITT Database, May 1993

Exhibit 5: Contaminants Treated



Source: U.S. EPA, VISITT Database, May 1993

VISITT Contains Data Supplied by Vendors

VISITT contains information provided to EPA by vendors, suppliers, and manufacturers of innovative remediation technologies. A vendor completes a questionnaire called the *VISITT Vendor Information Form* and submits it to EPA for consideration and review.

EPA first reviews the technology for eligibility. The innovative remediation technologies that are eligible for inclusion in VISITT 2.0 are listed in Exhibit 3. Other innovative technologies may be added as they are submitted. Technologies not included in VISITT are established treatment technologies for contaminated soil and ground water: incineration, solidification/stabilization, and above ground groundwater treatment technologies. Also not included are technologies applicable only to industrial waste streams, such as waste minimization methods.

Secondly, EPA reviews the contents of the form for clarity and completeness to enhance the usefulness of the information. Data, such as units of measurement, is standardized as much as possible to allow comparisons among vendors and technologies. EPA works with the vendor to correct any deficiencies before the information is loaded in the database. *It is important to note that submissions are vendors' claims; EPA does not review or certify the accuracy or veracity of the information.*

Hardware and Software Requirements for the VISITT Database

VISITT 2.0 is offered on three 5 1/4-inch or two 3 1/2-inch floppy disks, accompanied by a user manual. The database requires a personal computer with at least 640K of RAM (random access memory), an operating system of DOS Version 3.3 or higher (that is, IBM or IBM-compatible), and four megabytes of hard disk storage. The database is compiled and requires no other software to operate. VISITT is compatible with most printers and local area networks (LANs). EPA, through PRC Environmental Management Inc., offers technical assistance to correct any hardware or software problems associated with installing or using VISITT.

EPA is studying the feasibility of offering VISITT on line through an existing electronic bulletin board, such as EPA's ATTIC (Alternative Treatment Technology Information Center) or CLU-IN, TIO's own bulletin-board system.

List of Vendors by Technology

Inclusion in the U.S. Environmental Protection Agency's Vendor Information System for Innovative Treatment Technologies (VISITT) does not mean that the EPA approves, recommends, licenses, certifies, or authorizes the use of any of the technologies. Nor does the EPA certify the accuracy of the data. This listing means only that the vendor has provided information on a technology that EPA considers to be eligible for inclusion in this database.

ACID EXTRACTION

Cognis, Inc.
(707) 575-7155

IT Corporation
(615) 690-3211

Lockheed Corp.
(702) 897-3628

ADSORPTION - IN SITU

Dynapore, Inc.
(804) 672-3464

Environmental Fuel Systems, Inc.
(210) 796-7767

AIR SPARGING - IN SITU GROUND WATER

Environmental Resource Services
(402) 896-8879

Groundwater Technology, Inc.
(609) 587-0300

IEG Technologies Corp.
(704) 357-6090

Terra Vac, Inc.
(714) 979-8900

BIOREMEDIATION - IN SITU GROUND WATER

ABB Environmental Services, Inc
(617) 245-6606

Battelle Pacific Northwest Laboratories
(509) 376-7855

Billings & Associates, Inc.
(505) 345-1116

Chester Environmental
(412) 825-9600

Cognis, Inc.
(707) 576-6204

Ecology Technologies International, Inc.
(602) 985-5524

Electrokinetics, Inc.
(504) 388-3992

Environmental Resource Services
(402) 896-8879

EODT Services, Inc.
(615) 483-4251

GAIA Resource, Inc.
(312) 329-0368

Geo-Microbial Technologies, Inc.
(918) 535-2281

Groundwater Technology, Inc.
(510) 671-2387

IT Corporation
(615) 690-3211

Microbial Environmental Services, Inc.
(515) 276-3434

Remediation Technologies, Inc.
(919) 967-3723

Waste Stream Technology, Inc.
(716) 876-5290

Yellowstone Environmental Science, Inc. (406) 586-3905

BIOREMEDIATION - IN SITU LAGOON

Ecology Technologies International, Inc.
(602) 985-5524

Praxair, Inc. (formerly Union Carbide)
(914) 789-3034

BIOREMEDIATION - IN SITU SOIL

ABB Environmental Services, Inc.
(617) 245-6606

B & S Research, Inc.
(218) 984-3757

Billings & Associates, Inc.
(505) 345-1116

Chester Environmental
(412) 825-9600

Ecology Technologies International, Inc.
(602) 985-5524

Geo-Microbial Technologies, Inc.
(918) 535-2281

Hydrosystems, Inc.
(703) 471-9580

In-Situ Fixation, Inc.
(602) 821-0409

Kemron Environmental Services, Inc.
(404) 636-0928

Microbial Environmental Services, Inc.
(515) 276-3434

SBP Technologies, Inc.
(904) 934-9282

University of Oklahoma
(405) 325-3174

Waste Stream Technology, Inc.
(716) 876-5290

BIOREMEDIATION - NOT OTHERWISE SPECIFIED

Bioremediation Technology Services, Inc.
(209) 984-4963

Chempete, Inc.
(708) 879-3900

Clyde Engineering Service
(504) 362-7929

EPG/Haecon, Inc.
(708) 437-8001

ESE Biosciences, Inc.
(919) 872-9686

Sybron Chemicals, Inc.
(609) 893-1100

BIOREMEDIATION - SLURRY PHASE

Battelle Pacific Northwest Laboratories
(509) 376-7855

Biogee International, Inc.
(713) 578-3111

Bogart Environmental Services, Inc.
(615) 754-2847

Cognis, Inc.
(707) 575-7155

Ecology Technologies International, Inc.
(602) 985-5524

Eimco Process Equipment Company
(801) 526-2082

Encore Environmental
(614) 263-9287

EODT Services, Inc.
(615) 483-4251

Geo-Microbial Technologies, Inc.
(918) 535-2281

HydroSystems, Inc.
(703) 471-9580

IT Corporation
(615) 690-3211

OHM Corp.
(419) 424-4932

Praxair, Inc. (formerly Union Carbide)
(914) 789-3034

Remediation Technologies, Inc.
(602) 577-8323

SBP Technologies, Inc.
(904) 934-9282

Waste Stream Technology, Inc.
(716) 876-5290

Yellowstone Environmental Science, Inc.
(406) 586-3905

BIOREMEDIATION - SOLID PHASE

ABB Environmental Services, Inc.
(617) 245-6606

Alvarez Brothers
(512) 576-0404

Arctech, Inc.
(703) 222-0280

B&S Research, Inc.
(218) 984-3757

Biogee International, Inc.
(713) 578-3111

BIOREMEDIATION - SOLID PHASE (cont'd.)

Bioremediation, Inc.
(503) 624-9464

Chester Environmental
(412) 825-9600

Cognis, Inc.
(707) 575-7155

Ecology Technologies International, Inc.
(602) 985-5524

Geo-Microbial Technologies, Inc.
(918) 535-2281

Groundwater Technology, Inc.
(510) 671-2387

IT Corporation
(615) 690-3211

Microbial Environmental Services, Inc.
(515) 276-3434

Mycotech Corp.
(406) 782-2386

OHM Corp.
(419) 424-4932

Remediation Technologies, Inc.
(602) 577-8323

Roy F. Weston, Inc.
(215) 344-3762

SBP Technologies, Inc.
(404) 498-6666

Waste Stream Technology, Inc.
(716) 876-5290

BIOVENTING

ABB Environmental Services, Inc.
(617) 245-6606

Battelle Pacific Northwest Laboratories (509) 376-9428

Engineering-Science, Inc.
(303) 831-8100

Environmental Resource Services
(402) 896-8879

Groundwater Technology, Inc.
(609) 587-0300

IT Corporation
(615) 690-3211

Mittelhauser Corp.
(708) 369-0201

Terra Vac, Inc.
(714) 979-8900

CHEMICAL TREATMENT - DECHLORINATION

A.L. Sandpiper Corp.
(614) 486-0405

SDTX Technologies, Inc.
(518) 734-4483

CHEMICAL TREATMENT - OTHER

Arctech, Inc.
(703) 222-0280

Davy Research and Development Ltd. (England)
(44) 642-6071

Eli Eco Logic International, Inc.
(519) 856-9591

EM&C Engineering Associates
(714) 957-6429

Etus, Inc.
(407) 321-7910

G.E.M., Inc.
(501) 337-9410

High Voltage Environmental Applications
(305) 253-9143

Integrated Chemistries, Inc.
(612) 636-2380

IT Corp.
(615) 690-3211

Synthetica Technologies, Inc.
(510) 523-3000

Viking Industries
(615) 890-1018

CHEMICAL TREATMENT - IN SITU GROUND WATER

EnviroMetal Technologies, Inc.
(519) 824-0432

Geochem, Inc.
(303) 988-8902

Intera, Inc.
(512) 346-2000

DELIVERY/EXTRACTION SYSTEM

Drilex Systems, Inc.
(713) 937-8888

Horizontal Wells, Inc.
(813) 995-8777

Millgard Environmental Corp.
(313) 261-9760

Novaterra, Inc.
(310) 328-9433

Questar, Inc.
(419) 865-2001

DUAL-PHASE EXTRACTION

Billings & Associates, Inc.
(505) 345-1116

Dames & Moore
(215) 657-7134

OHM Corp.
(510) 256-6100

Terra Vac, Inc.
(714) 979-8900

ELECTRICAL SEPARATION

Electro-Petroleum, Inc.
(215) 687-9070

Electrokinetics, Inc.
(504) 388-3992

Water and Slurry Purification Process
(303) 650-5674

MAGNETIC SEPARATION

S.G. Frantz Company, Inc.
(609) 882-7100

MATERIALS HANDLING/ PHYSICAL SEPARATION

Canonie Environmental Services Corp.
(303) 290-8336

Microfluidics Corporation
(617) 969-5452

Onsite - Ofsite Inc./Battelle PNL
(818) 303-2229

Portec, Inc.
(605) 665-8770

Recra Environmental, Inc.
(716) 691-2600

Waste-Tech Services, Inc.
(303) 279-9712

OFF-GAS TREATMENT

Alcoa Separations Technology, Inc.
(412) 826-3710

BECO Engineering Company
(412) 828-6080

Bohn Biofilter Corp.
(602) 621-7225

Ecology Technologies International, Inc.
(602) 985-5524

EG&G Corp.
(914) 246-3401

EPS Environmental, Inc.
(201) 368-7902

M.L. Energia, Inc.
(609) 799-7970

Membrane Technology & Research, Inc.
(415) 328-2228

Purus, Inc.
(408) 955-1000

PNEUMATIC FRACTURING

Accutech Remedial Systems, Inc.
(908) 739-6444

Terra Vac, Inc.
(714) 979-8900

PYROLYSIS

Bio-Electrics, Inc.
(816) 474-4895

SLAGGING - OFF-GAS TREATED

Horsehead Resource Development Co., Inc.
(412) 773-2289

SOIL FLUSHING - IN SITU

Bio-Electrics, Inc.
(816) 474-4895

Horizontal Wells, Inc.
(813) 995-8777

Scientific Ecology Group, Inc.
(412) 247-6255

SOIL VAPOR EXTRACTION

AWD Technologies, Inc.
(301) 948-0040

Mittelhauser Corp.
(708) 369-0201

Terra Vac, Inc.
(714) 979-8900

SOIL WASHING

A.C.T.E.I., Inc.
(514) 975-2234

Alternative Remedial Technologies Inc.
(813) 264-3506

SOIL WASHING (cont'd.)

B&W-Nuclear Environmental Services, Inc.
(804) 948-4610

Benchem, Inc.
(412) 361-1426

Bergmann USA
(615) 452-5500

Bio-Recovery Systems, Inc.
(505) 523-0405

Biotrol, Inc.
(612) 448-2515

Canonie Environmental Services Corp.
(303) 290-8336

Divesco, Inc.
(601) 932-1934

Flo Trend Systems, Inc.
(713) 699-0152

Geochem, Inc.
(303) 988-8902

Hydrosystems, Inc.
(703) 471-9580

Lockheed Corp.
(702) 897-3628

Northwest Enviroservice, Inc.
(206) 762-1190

Nukem Development
(713) 520-9494

OHM Corporation
(510) 256-6100

On-Site Technologies, Inc.
(408) 371-4810

Scientific Ecology Group, Inc.
(412) 247-6255

Warren Spring Laboratory (England)
(043) 874-1122

Waste-Tech Services, Inc.
(303) 279-9712

Westinghouse Remediation Services, Inc.
(404) 299-4694

SOLVENT EXTRACTION

ART International, Inc.
(201) 627-7601

CF Systems Corporation
(617) 937-0800

Dehydro-Tech Corporation
(201) 887-2182

EM&C Engineering Associates
(714) 957-6429

Geo-Microbial Technologies, Inc.
(918) 535-2281

Grutsch Environmental, Inc.
(219) 844-5419

Nukem Development
(713) 520-9494

Resources Conservation Company
(301) 596-6066

SRE, Incorporated
(201) 661-5192

Terra-Kleen Corporation
(405) 728-0001

THERMAL DESORPTION - GENERAL

Rust Remedial Services, Inc.
(708) 281-1511

Texarome, Inc.
(512) 232-6079

Western Research Institute
(307) 721-2443

Westinghouse Remediation Services, Inc.
(404) 299-4721

THERMAL DESORPTION - OFF-GAS TREATED

Ariel Industries
(615) 894-1957

Carson Environmental
(310) 478-0792

Cleansoils, Inc.
(612) 639-8811

Conteck Environmental Services, Inc.
(612) 441-4965

CSE, Inc.
(612) 636-7760

DBA, Inc.
(510) 447-4711

Enviro-Klean Soils, Inc.
(206) 888-9388

Hazen Research, Inc.
(303) 279-4501

Hrubetz Environmental Services, Inc.
(214) 363-7833

IT Corporation
(615) 690-3211

Kalkaska Construction Service, Inc.
(616) 258-9134

Mittelhauser Corp.
(708) 369-0201

OBG Technical Services, Inc.
(315) 437-6400

Remediation Technologies, Inc.
(508) 371-1422

Roy F. Weston, Inc.
(215) 430-7423

Rust Remedial Services, Inc.
(708) 513-4578

Seaview Thermal Systems
(215) 654-9800

Separation and Recovery Systems, Inc.
(714) 261-8860

Soil Purification, Inc./ASTEC
(706) 861-0069

Soiltech ATP Systems, Inc.
(303) 290-8336

Southwest Soil Remediation, Inc.
(602) 577-7680

Thermotech Systems Corporation
(407) 290-6000

Waste-Tech Services, Inc.
(303) 279-9712

THERMALLY ENHANCED RECOVERY-IN SITU

Battelle Pacific Northwest Laboratories
(509) 376-0554

Bio-Electrics, Inc.
(816) 474-4895

EM&C Engineering Associates
(714) 957-6429

Hrubetz Environmental Services, Inc.
(214) 363-7833

KAI Technologies, Inc.
(617) 932-3328

Novaterra, Inc.
(310) 328-9433

Praxis Environmental Services, Inc.
(415) 641-9044

VITRIFICATION - GENERAL

B&W Nuclear Environmental Services, Inc.
(804) 948-4610

Bio-Electrics, Inc.
(816) 474-4895

EET Corporation
(615) 691-1223

EM&C Engineering Associates
(714) 957-6429

VITRIFICATION - OFF-GAS TREATED

Battelle Pacific Northwest Laboratories
(509) 376-6576

Electro-Pyrolysis, Inc.
(215) 687-9070

Geosafe Corporation
(509) 375-0710

Retech, Inc.
(707) 462-6522

Stir-Melter, Inc.
(419) 536-8828

Texaco Syngas, Inc.
(914) 253-4003

Vortec Corporation
(215) 489-2255

Western Product Recovery Group, Inc.
(505) 672-9444

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77 West Jackson Boulevard, 12th Floor
Chicago, IL 60604-3590

Ordering VISITT 2.0 is Fast and Easy

VISITT 2.0 is available at no charge. To order the VISITT diskettes and user manual, and to become a registered user, fill out the Order and Registration Form below and mail or fax it to the location indicated. Registered users will receive information on subsequent updates of the system.

The VISITT hotline and software support are provided by PRC Environmental Management, Inc. for the Technology Innovation Office under Contract No. 68-CO-0047. Linda Fiedler is the U.S. EPA project manager.

Special Note to EPA Staff: TIO is working directly with EPA headquarters and Regional offices, EPA laboratories, and EPA libraries to install VISITT on LANs and at workstations. For more information, contact the VISITT hotline.

U.S. EPA Vendor Information System for Innovative Treatment Technologies (VISITT) Version 2.0 Order/Registration Form

Mail to: U.S. EPA/NCEPI
P.O. Box 42419
Cincinnati, OH 45242-0419

Or

Fax to: U.S. EPA/NCEPI
513-891-6685
(Verification only: 513-891-6561)

Please type or print legibly. Allow 3–4 weeks for delivery.

Name _____

Company/Agency _____

Street _____

_____

City _____ State _____ Zip Code _____

Country _____

Telephone Number _____

Diskette size (check one): 3 1/2" _____ 5 1/4" _____

Date Ordered _____

EPA

VISITT 2.0

Vendor Information System for Innovative Treatment Technologies

EPA

United States
Environmental Protection Agency
NCEPI
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