NOTE TO USER

The fifth release of the Vendor Information System for Innovative Treatment Technologies (VISITT) database (Version 5.0) contains information that the U.S. Environmental Protection Agency (EPA) collected from vendors through July 1996. VISITT database updates are released annually so that VISITT remains a dynamic tool in linking remediation professionals with the evolving innovative technology field. EPA strongly encourages you to register as a VISITT user. As a registered user, you will receive announcements of new software and data releases and other relevant innovative technology information from EPA's Technology Innovation Office.

To register as a VISITT user, do one of the following:

- 1) Complete the VISITT registration information on the VISITT Home Page at **www.prcemi.com/visitt** or on the EPA's Cleanup Information (CLU-IN) Bulletin Board System (BBS) at 301-589-8366.
- 2) Send the following information by facsimile to (513) 489-8695:
 - Name
 - Organization
 - Address
 - Telephone number
 - Indication that this request is to order the VISITT software or to register as a VISITT user only
- 3) Mail the information to:

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

DISCLAIMER

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

VISITT USER COMMENTS

The U.S. Environmental Protection Agency welcomes comments from VISITT users. Your comments will allow us to improve future system updates. Please use this form to offer any comments you may have concerning VISITT, including its usefulness, contents, useability, or hardware requirements. If you are available to discuss your comments with the VISITT System Operator, please include your name and telephon number, or e-mail address.

Please mail, fax, or e-mail your comments to:

VISITT System Operator 1593 Spring Hill Road

Suite 300

Vienna, VA 22182 Fax: (703) 287-8910

E-mail: cassidt@prcemi.com

THIS PAGE INTENTIONALLY LEFT BLANK

CONTENTS

Section	1			<u>Page</u>
1.0	INTRO	DUCTI	ON	. 1
	1.1	VISIT	Γ Contents	. 1
		1.1.1 1.1.2	General Vendor Information	
	1.2 1.3		Γ Capabilities	
2.0	INSTA	LLATIO	ON	. 5
	2.1 2.2	-	Requirements	
		2.2.1 2.2.2	Installing Downloaded VISITT Files	
	2.3 2.4		on Installation Errors and Their Solutions	
3.0	STANI	DARD C	OPERATIONS	. 11
	3.1	Searchi	ing for Records	. 11
		3.1.1 3.1.2 3.1.3	Building Query	. 12
		3.1.4	Treated Criteria	
	3.2	Perform	ning a Search	. 15
		3.2.1 3.2.2	Preparing for a Search	
	3.3	Printing	g the Results of a Search: How To Use the Print Operation	. 16
		3.3.1 3.3.2 3.3.3 3.3.4 3.3.5	Print Look-Up Tables Report Options Window Print Selection Window Print Preview Printing Parameters Window	. 17. 18. 19
	3.4 3.5		ng the Key Terms From a Query With the "Clear Criteria" Command	

4.0	MAIN MENU OPTIONS				
	4.1 Waste/Technology / Vendor 4.2 Site	25			
	4.3.1 Technologies by Scale Of Development 4.3.2 Contaminant Group(s) Treated 4.3.3 Industries and Site Types Addressed	27			
	4.4 Features 4.5 Registration 4.6 Quit	28			
5.0	THE VENDOR INFORMATION RECORD				
	TABLES				
<u>Table</u>	<u>P</u>	age			
1 2 3 4 5	Troubleshooting Installation Errors 7. Troubleshooting System and Operation Errors 8. Print Parameter Information and Commands 20. Overview of Main Menu Items 23. Other Information Options 30.				
	FIGURES				
Figure 2.1 2.2 2.3 3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8 3.9 4.1 4.2 4.3 4.4 4.5 4.6	Installation Screen 1 Installation Screen 2 Editing Config.sys General Vendor Information and Look-Up Table Potentially Could Be Treated or Actually Treated Option Window And/Or Logic Window Vendor/Technology List Print Look-Up Tables Report Options Window Print Selection Window Print Preview Printing Parameters Window Main Menu Options Search by Waste/Technology/Vendor: Submenu and Look-Up Table Sample Query by Waste/Technology/Vendor Search by Site: Submenu and Look-Up Table Sample Query by Site Category	6 10 11 14 14 15 17 17 18 19 23 24 25 25 26			
4.7 5.1	Features Submenu27Registration Submenu28General Vendor Information Screen29				

1.0 INTRODUCTION

The Technology Innovation Office (TIO) of the U.S. Environmental Protection Agency (EPA) Office of Solid Waste and Emergency Response (OSWER) has developed the Vendor Information System for Innovative Treatment Technologies (VISITT) to provide current information on innovative treatment technologies for the remediation of contaminated sites. VISITT contains technology information submitted by developers, manufacturers, and suppliers of innovative treatment technology equipment and services. This database provides a means for innovative technology vendors to make their products and capabilities known to state, Federal, and private sector professionals. You can use VISITT to screen technologies that may be appropriate for cleanup of the nation's hazardous waste sites or to gain additional information about those technologies.

EPA believes that VISITT offers an unprecedented opportunity for users like you to screen innovative technologies for engineering feasibility and to identify those vendors that provide treatability studies and cleanup services. Innovative technologies are undergoing rapid change and improvement, making it difficult to maintain current information on their developmental status and commercial availability. VISITT plays an important role in the further expansion of this market by improving the access of remediation professionals to innovative technologies and their vendors.

Since its release in June 1992, VISITT has been distributed, on request, to more than 12,000 users in 76 countries. After four years of development, the number of technologies in VISITT has grown to almost 350, offered by more than 200 vendors.

1.1 VISITT Contents

VISITT contains information on innovative treatment technologies for the remediation of contaminated sites. For this database, innovative technologies are defined as those for which a lack of performance and cost data precludes their routine use to clean up sites. Examples of innovative technologies include thermal desorption and soil vapor extraction. Technologies in VISITT address the treatment of soil, sludge, solids, and natural sediments, both above ground and in place (in situ), dense non-aqueous phase liquids (DNAPL); and light non-aqueous phase liquids (LNAPL). Also included are methods of treating ground water in situ and of treating the off-gas generated by innovative treatment systems. Incineration, solidification-stabilization, and methods of treating aqueous waste above ground are not considered innovative and are not included in VISITT. Containment technologies, technologies that treat routinely generated industrial wastes, and technologies that measure or monitor wastes also are not included.

The information contained in VISITT is drawn from EPA's Vendor Information Form 5.0 (EPA Form 542-R-96-002) as that information was assembled and submitted by the innovative treatment technology vendor. This form has been reproduced in VISITT 5.0 as the Vendor Information Record. EPA's authority to collect this information is found in Section 311 of the Superfund Amendments and Reauthorization Act of 1986 (SARA) (42 USC 9601 *et. seq.*). EPA also received approval to collect this information from the Office of Management and Budget (OMB) under the Paperwork Reduction Act (OMB #2050-0114). Each record contains the engineering specifications and performance data that vendors disclose about their technologies. The information is grouped into two major sections: (1) General Vendor Information and (2) Other Information Options.

1.1.1 General Vendor Information

The **General Vendor Information** section supplies the vendor's name and address, the technology type and trade name, the status of the technology's application (bench, pilot, or full scale), indication whether a vendor is participating in EPA's Superfund Innovative Technology Evaluation (SITE) Program, trademark and patent information, a contact name and phone number, electronic mail and home page addresses, the vendor's Standard Industrial Classification (SIC) code, and whether or not a vendor is classified as a "small" business.

1.1.2 Other Information Options

The **Other Information Options** section provides descriptions of the technology and available performance information:

- Description
- Highlights
- Limitations
- Other Comments
- Waste Applications
- Representative Projects
- Estimated Price Range
- Technical References
- Bench-Scale Information
- Pilot-Scale Information
- Full-Scale Information
- Process Flow Diagram

1.2 VISITT Capabilities

VISITT allows you to:

- Obtain summary information on innovative technologies that treat the wastes you select or that have been employed at specific sites
- Identify vendors by treatment technology type and by trade name, site name, and location
- Learn about technologies employed at cleanup sites, or about vendors that have conducted treatability studies on specific wastes, or about cleanups at particular sites
- Learn about project-specific cost and performance data
- View a process flow diagram of a technology
- Choose a visual display of successive record screens on your monitor
- Scroll through a vendor's information record page by page, using menu selections
- Print entire records to a standard or laser printer or direct entire records to a DOS file
- Print selectively the portion of a single record in which you are interested
- Print selectively the portion of the records in which you are interested from all the vendor records identified through your query

The print commands help you create a more permanent document for your use after you have searched VISITT for the exact information you want to consider. VISITT has been designed to save you time and effort by selecting only the information that you want to consider -- you need not sift through countless printed records containing vendor and technology information; the search capabilities of the VISITT system will do the sifting for you and provide you with a specific and condensed summary of available information on innovative treatment technologies. By enabling you to print information from all the records you identified in your query, VISITT facilitates comparison among technologies.

Because VISITT is menu-driven, you will not need training to begin using the program. However, this user manual serves as a reference for such routine procedures as data querying, site and technology matching, and report printing. Instructions also are provided in the manual for software installation and software maintenance. **HELP** windows are provided throughout the system.

1.3 Contents of This Manual

Chapter 1 discusses background information on VISITT and outlines the VISITT user manual. Chapter 2 shows you how to install VISITT on your personal computer (PC) or network and how to use the standard VISITT features and commands. It also gives you some tips for troubleshooting errors that may occur during installation and use of VISITT. Chapter 3 shows you how to select criteria for searches, perform searches, and print the information that VISITT retrieves for you. Chapter 4 explains VISITT's main menu options, and Chapter 5 provides a brief description of the contents of the Vendor Information Record.

THIS PAGE INTENTIONALLY LEFT BLANK

2.0 INSTALLATION

VISITT Version 5.0 should be installed as a new database, replacing Version 4.0 altogether. You may choose to leave VISITT Version 4.0 on your hard drive; however, it is recommended that you remove Version 4.0 to free disk space. It also is recommended that you create a backup copy of the installation software disks, store the original disks in a safe place, and use the backup disks for installation. (NOTE: VISITT also may be installed on a local area network (LAN) as a multiuser system.)

2.1 System Requirements

The VISITT system software requires an IBM-compatible computer running MS-DOS 3.3 or higher and at least 640K of RAM. You should have at least 9 megabytes of free disk space, and the file handles statement (FILES=n) for at least 60 (n=60) should be included in your Config.sys file. Note that the VISITT installation program automatically changes the Config.sys configuration if the file handles statement is less than 60. A VGA monitor is needed to view the process flow diagram. For optimum performance, your environment space should be greater than 1024K.

2.2 System Installation

The VISITT database files can be downloaded from on-line resources or can be received on diskettes.

2.2.1 Installing Downloaded VISITT Files

After downloading the VISITT files from an on-line source, the following steps will install the VISITT database onto a computer.

- **Step 1:** Copy the downloaded file (**VISITT50.EXE**) to an empty directory.
- **Step 2:** In a Windows environment, double click on the file **VISITT50.EXE** and the files will self-extract in the directory. In a DOS environment, type **VISITT50** at the directory prompt where the downloaded file is located and press **<Enter>**.
- **Step 3:** Close all Windows applications and type **VISITT** at the directory prompt where the VISITT files are located and press **<Enter>**.

2.2.2 VISITT Diskette Installation

The installation program creates a directory on your computer's hard drive and copies the program files into that directory. To start the installation program:

- **Step 1:** Insert the diskette labeled DISK 1 of 2 into the appropriate source drive of the computer and, at the DOS prompt, type the **drive letter** designating your source drive and press **Enter>** (for example, **A:<Enter>**).
- Step 2: At the letter prompt for the designated drive, type INSTALL and then press < Enter>.

- **Step 3:** The system will prompt you to specify the drive on which you want to install VISITT (refer to Figure 2.1). The system defaults to drive C:. If you wish to install VISITT on your C drive, simply press **<Enter>**. Otherwise, type the letter of the designated drive followed by a colon (for example, **D:**) and press **<Enter>**.
- **Step 4:** The system also allows you to specify the directory in which you want to install VISITT (refer to Figure 2.2). The system defaults to the \VISITT directory. If you wish to install VISITT in this directory, press **Enter>**. Otherwise, type the name of the desired directory and press **Enter>**. VISITT will be installed on the hard drive and directory you specified.
- **Step 5:** You will be prompted to insert the second of the two 3-1/2" disks. Having done so, press any key to continue.
- **Step 6:** You must now reboot your system, either by turning your computer off and on, or by pressing the <**Ctrl>**, <**Alt>**, and <**Del>** keys simultaneously.

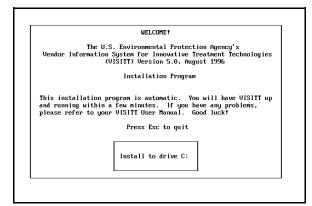


Figure 2.1: Installation Screen 1

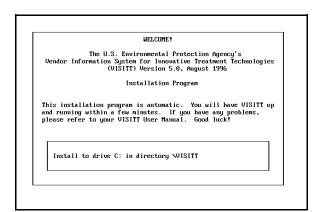


Figure 2.2: Installation Screen 2

Example of an Installation

If you are installing from the A: drive and want your VISITT application in your hard disk C: drive, your source drive will be **A:** and your target drive will be **C:**. You would then type the following:

A: Press **<Enter>**

INSTALL

The installation program will guide you through the remainder of the installation process.

After VISITT has been installed, follow the procedure described below when you wish to run VISITT:

- **Step 1:** Type the drive letter designating the drive where VISITT is installed, followed by a colon (for example, **C:**) and press **<Enter>**.
- **Step 2:** At the prompt, type **VISITT** to run the program (for example, **C:VISITT**) and press **<Enter>**.

2.3 Common Installation Errors and Their Solutions

Some errors may occur during the installation of VISITT; the errors will be displayed on the screen. Table 1 below provides a summary of the errors most likely to occur during installation procedures and some suggested solutions.

Table 1: Troubleshooting Installation Errors

Message	Reason	Solution
"Sorry; VISITT recommends at least 490K of free memory to start."	There is not enough RAM in the PC or you may be running another software package, such as Windows, WordPerfect, DOS shells, Norton shells, PC Tools, or menu utilities, at the time of installation.	At the DOS prompt type MEM and press <enter></enter> . If the largest executable program size is less than 490K, shut off other software. Reboot your PC, and repeat the installation procedure for VISITT.
"Incompatible DOS version"	VISITT requires MS-DOS 3.3 or higher to run.	Update your DOS version.

Message	Reason	Solution
"Not enough disk space"	VISITT recommends at least 9 megabytes of free disk space before installation.	Free some disk space by removing files from your hard drive.
"Conducting necessary setupplease wait."	User has DOS 6.0 or higher. The Config.sys file must be amended to delete "No EMS Highscan."	Deactivate the "No EMS Highscan" line in the Config.sys file by typing REM at the beginning of that line.
"Code 2 Corruption detected (LAN): Network request not supported."	Files have been corrupted by the installation process, operation of other software packages, or corrupted diskettes.	Delete all .NTX files in the VISITT directory, or turn off other software programs, such as Windows, DOS shells, or WordPerfect, or order new diskettes.

2.4 Troubleshooting System Errors

Errors may occur during normal operation of VISITT. To ensure proper operation of the system, VISITT 5.0 checks your system for a minimum of 60 file handles in your Config.sys file and will change the Config.sys file automatically if the file handles statement is less than 60. VISITT 5.0 also checks the system for sufficient disk space. Table 2 below shows several possible errors that may occur, provides the reasons why some errors may arise, and offers suggestions on the best approach to rectifying the problems.

Table 2: Troubleshooting System and Operation Errors

Operating Problem	Reason	Suggested Solution
Program won't run after installation.	There is not enough RAM in the PC.	Turn off other software programs, such as Windows, WordPerfect, DOS shells, Norton shells, PC Tools, or menu utilities, while using VISITT. Reboot your PC and try to enter VISITT from the DOS prompt. If the problem persists, check your PC to make sure that it has at least 640K of RAM.
After typing VISITT to run the program, an error message appears that reads, "System Error. Consult Your Computer Support Personnel."	An internal error in the VISITT program has occurred.	Determine the nature of the error from the explanation provided in the VISITT directory's Error.txt file. Either follow the instructions listed below, or show the explanation of the error to your computer support personnel.
The technology displayed on the General Vendor Information screen retrieved from the database is different from the technology you selected during the "Select Search Criteria" operation.	VISITT database files are corrupted.	At the VISITT directory (e.g., C:\VISITT), type DEL *.NTX , press <enter></enter> , and re-execute the program.

Operating Problem	Reason	Suggested Solution
You are running out of disk space when printing.	VISITT requires a minimum of 1 megabyte of free disk space to run the reports (larger reports will require more disk space).	Free some disk space by deleting unnecessary files.
The error message tells you that there is an inconsistency in the database.	System data files need to be reindexed.	Press ESC >. At the prompt, type DEL *.NTX , and re-execute the system.
The error message tells you that you have a VM Integrity Failure.	The function that you are trying to conduct is too complex for either your PC or for the system.	Re-execute the system and limit the complexity of your operations. This can be accomplish by limiting the number of times you scroll through the representative project information.

You can determine the exact type of error that has occurred by following these steps to gain access to the ERROR.TXT files:

- **Step 1:** At the DOS prompt, type **TYPE ERROR.TXT** and press **<Enter>**.
- **Step 2:** The latest system error will be described in one or more lines of text.
- **Step 3:** VISITT's installation program automatically checks and changes your Config.sys file; however, if the statement "file handles" has been changed since installation, and if the initial system error message tells you to "Check your Config.sys file," you might be able to solve the problem by performing the following procedures. Access to the Config.sys files depends on the DOS version that is resident on your computer. If you do not know what version of DOS you are using, type **VER** and press **<Enter>**. If you are operating your system under DOS version 5.0 or higher, you might be able to solve the problem by taking the following steps:
 - Step 3(a): At the DOS prompt, type EDIT.
 - **Step 3(b):** Press **<Enter>**.
 - **Step 3(c):** Simultaneously press **<Alt><F>** to access the File option.
 - Step 3(d): Press <O> to open a file.
 - Step 3(e): Type CONFIG.SYS.
 - **Step 3(f):** Using the $\uparrow \downarrow$ keys, move the cursor to the line containing FILES = n.
 - **Step 3(g):** If n < 60, change the n to 60.
 - **Step 3(h):** Simultaneously press **<Alt><F>**, followed by **<S>** to save the changes.

- **Step 3(i):** Type **<X>** to exit the DOS edit function and re-execute VISITT.
- **Step 3(j):** You must reboot your computer, either by turning your computer off and on or by simultaneously pressing **<Ctrl><Alt>**. Now try to run the system.
- Step 4: If you are running under DOS version 4.0 or lower:
 - **Step 4(a):** At the DOS prompt, type **CD**\ and press **<Enter>**.
 - **Step 4(b):** At the DOS prompt, type **TYPE CONFIG.SYS** and press **<Enter>**.
 - **Step 4(c):** Find the line that reads FILES=n. If n < 60, you must edit your config.sys. If $n \ge 60$, the number of the file handles is sufficient, and you can quit this routine.
 - **Step 4(d):** To edit the config.sys file, type **EDLIN C:\CONFIG.SYS** at the DOS prompt (refer to Figure 2.3).
 - Step 4(e): At the asterisk (*), type the letter L and press < Enter>.
 - **Step 4(f):** At the next asterisk, type the number (for example, $1, 2, 3, \ldots$) corresponding to the line FILES=n and press **Enter>**.
 - **Step 4(g):** At the next asterisk, type **FILES=60**, and press **<Enter>**.

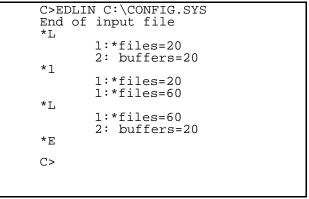


Figure 2.3: Editing Config.sys

- **Step 4(h):** At the next asterisk, type the letter **E** and press **<Enter>**.
- **Step 4(i):** You must reboot your computer, either by turning your computer off and on or by simultaneously pressing **Ctrl><Alt>**. Now try to run the system.
- **Step 5:** If the previous steps do not work, describe the error to your computer support personnel.

3.0 STANDARD OPERATIONS

There are four distinct operations in the VISITT system: "Select Search Criteria," "Perform Search," "Clear Search Criteria," and "Print." Each of the four operations always will perform in the same manner, regardless of the search category in which you want to perform an operation. VISITT is structured so that any search category can be narrowed to a more specific topic through its "Select Search Criteria" submenu and through each search criterion's look-up table items.

3.1 Searching for Records

"Select Search Criteria" allows you to specify and select parameters of a search relative to a search category. This operation allows you to select specific technologies, locations, vendors, wastes, or contaminants to limit the search to only the information that is useful to you.

Each search category -- Waste/Technology/Vendor and Site -- has its own unique set of parameters that are displayed in a submenu of the search category. From the submenu, you may select one or several limits on the search operation. You can use the parameters either to expand or to restrict the scope of your search.

3.1.1 Building Query

Figure 3.1 illustrates the "Select Search Criteria" screen and its major features: (1) the search category, (2) the search criteria submenu, and (3) the search criterion look-up table. These components establish the parameters of the query you use to search for records.

The search category shown in Figure 3.1 -- Waste/Technology/Vendor -- has a search criteria submenu. Each search criterion that you select from the submenu to help you focus your information search has a search criterion look-up table unique to that search criterion. From the look-up table, you will select items referred to in VISITT as search values.



Figure 3.1: General Vendor Information and Look-Up Table

In Figure 3.1, the search category **Waste/Technology/Vendor** has a search criteria submenu composed of eleven criteria: **Contaminant Group**, **Contaminant Data**, **Media**, **Waste Source**, **Technology Type**, **Scale**, **Vendor Name**, **Trade Name**, **State/Province**, **Country**, and **Business Size**. The search criterion **Contaminant Group** has been selected to start building a search, and the search criterion look-up table **Contaminant Groups** appears to the right of the submenu. The look-up table contains search values relevant to the search criterion.

3.1.2 Selecting Key Terms for the Query

To obtain the innovative treatment technology information in VISITT through a search of the database, you first must choose a number of search values that will help VISITT obtain the specific types of information you want to examine. This process is known as building a query.

You can build a query by following these steps:

Step 1: Choose a Search Category

Choose a search category from the main menu by moving the highlight with the ↑↓ keys and pressing **<Enter>**, or just press the first letter of the desired option. The "Search by ..." screen will appear.

Step 2: Select Search Criteria

The "Search by ..." screen features a menu of three operations. "Select Search Criteria" will automatically be highlighted. Press **Enter>.** The search criteria submenu will appear.

Step 3: Choose a Search Criterion

Select a search criterion from the submenu by moving the highlight with the 11 keys to a criterion. Press **Enter>**.

Step 4: Choose Potentially Could Be Treated or Actually Treated Option

When choosing a search value from the **Contaminant Group**, **Media**, or **Waste Source** search criteria, you must select "ACTUALLY Treated Only," or "POTENTIALLY Could Be Treated or ACTUALLY Treated" to specify whether you want to build a query based on values that vendors actually have treated at a site or in a laboratory or values that actually have been treated or potentially could be treated (values not necessarily proven to have been treated). Highlight the desired specification with the 11 keys and press **Enter**>. The selected search criterion look-up table will appear to the right of the search criteria submenu. For more information on this option, refer to Section 3.1.3 below.

Step 5: Choose Search Values

Select a search value from the look-up table by moving the highlight with the <code>↑↓</code> keys to the position that features the value you want to include in your search or just press the first letter of the desired value. Press **<Enter>** to select that value. When the search value has been selected, a small check mark will appear in the right-hand margin of the look-up table. Press **<Esc>** to exit the look-up table.

Additional search values:

Step 6: Choose Additional Search Values and Selection Logic

Select as many search values as you wish from a look-up table. If you make multiple selections from a look-up table, VISITT will automatically set the selection logic to "OR." This "OR" logic broadens your search to cover as many instances as exist in the database in which one or more of the search values match a technology record.

If you wish to create a query that searches for a technology that addresses a unique combination of search criteria from the same look-up table or several different look-up tables, you must use the "AND" logic. "AND" logic will narrow or focus your search considerably. However, logic that is too selective (too many search values linked by "AND") may fail to identify any technologies that meet your criteria.

To select "AND" logic, you must exit the look-up table from which you have made your first search value selection by pressing **Esc**. You may choose either (a) to reenter the submenu look-up table by pressing **Enter**> once again or (b) to enter a different submenu look-up table. In either case, VISITT will produce the And/Or Logic Window and prompt you to choose the logic you want to use in your search. Highlight "AND" and press **Enter>** to select "AND" logic (for an illustration of logic selection and an example of the logic process, see Section 3.1.4 below).

Step 7: Remove Search Values

If you decide that you do not want to include a search value that you have just selected, move the highlight with the †↓ keys to that value or just the first letter of the selected value. Press **Enter>** once again. You thus will deselect the search value, and the check mark will be removed from the right-hand margin of the look-up table. This operation will remove the search value from the set of search parameters you are creating.

Step 8: Load Selected Criteria

You may now load these selected criteria into the "Select Search Criteria" screen by pressing **<Esc>.** This operation will allow you to "back out" of the look-up table and return to the submenu, where you can select more criteria and their search values to complement your data search. If you are satisfied with the search parameters that you have chosen, press **<Esc>** to "back out" of the submenu to the "Select Search Criteria" operation screen.

Step 9: Lock Selected Criteria

If you are satisfied with the search parameters shown on the "Select Search Criteria" operation screen, move the highlight with the 11 keys to "Perform Search" on the horizontal menu and press **Enter>** or press the letter **P**. To begin the search of the database, please refer to Section 3.2.

Step 10: Clear Selected Criteria

If you are dissatisfied with the search parameters shown on the "Select Search Criteria" operation screen, move the highlight with the 11 keys to "Clear Criteria" on the horizontal menu and press **Enter>** or press the letter **C**. Begin again at Step 1 to reconstruct your search.

3.1.3 Focusing a Query by Specifying Potentially Could Be Treated or Actually Treated Criteria

When choosing a search value from the **Contaminant Group**, **Media**, or **Waste Source** search criteria, you may limit your search to include only those technologies for which vendors have specified that they *actually* have treated your selected **Contaminant Group**, **Media**, or **Waste Source**. You can expand your search to also include those technologies for which vendors have specified that they *actually* have treated or *potentially* could treat your selected **Contaminant Group**, **Media**, or **Waste Source**.

When choosing a search value from the Contaminant Group, Media, or Waste Source search criteria, you must select "ACTUALLY Treated Only" or "POTENTIALLY Could Be Treated or ACTUALLY Treated" (refer to Figure 3.2) to specify whether you want to build a query based on values that vendors actually have treated at a site or in a laboratory or one based on values that actually have been treated or potentially could be treated (values not necessarily proven to have been treated). Highlight the desired specification with the 11 keys and press **<Enter>**. The selected search criterion look-up table will appear to the right of the search criteria submenu.



Figure 3.2: Potentially Could Be Treated or Actually Treated Option Window

3.1.4 Focusing a Query With And/Or Logic

Choosing the type of logic employed in your search allows you to focus or expand the search criteria, so that you can obtain the exact type of vendor and technology records you want. This logic value allows you to search for a technology that treats **Soil** and **Sludge** media, for example, or to search for a technology that treats **Halogenated Volatiles** or **Polychlorinated Biphenyls** (**PCB**).

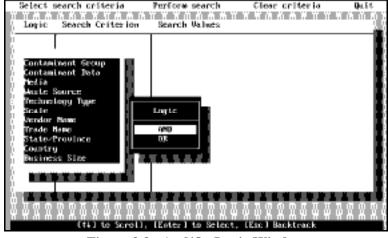


Figure 3.3: And/Or Logic Window

Whenever you begin building your query by selecting search values from

more than one type of search criterion, VISITT will allow you to decide which type of logic you want to employ by prompting you to make a selection from the And/Or Logic Window (refer to Figure 3.3). "AND" allows you to narrow the search to a unique set of search values that you specify. "OR" allows you to broaden your search to cover as many instances as exist in the database in which one or more of the search values match a technology record.

Example of And/Or Logic in a Search or Query

You decide to search for a technology that treats any one of a set of specific wastes. The **Or** logic will be engaged automatically as you select contaminants from the look-up table. If you want to find a technology that treats any one of those specific wastes while they are situated in a certain medium -- in ground water, for example -- you will select the **Media** search criterion from the submenu.

As you do so, VISITT will prompt you for And/Or logic. If you select **Or** logic, VISITT will obtain records that match only your contaminant search values and only your media search values -- but the technologies retrieved from the database may not address both sets of search values in combination.

Selecting **And** logic, on the other hand, allows you to retrieve those technologies that address both sets of search values in combination, that is, those technologies that treat halogenated volatiles in ground water in situ.

"OR" is the default logic selection: if you do nothing, VISITT will insert "OR" as the logic discriminator when making your search and retrieving your records.

"AND" is a selected logic: if you wish to select "AND" you must choose it when prompted to do so by VISITT when you select search criteria and search values.

3.2 Performing a Search

The "Perform Search" command initiates the actual search through the VISITT database for the information you previously specified through the "Select Search Criteria" operation.

When you initiate this operation, VISITT will provide you with a list of innovative technology vendors and their treatment technologies (refer to Figure 3.4) that correspond to the set of search criteria that you had specified earlier. (The technologies are organized by technology type and, within type, by developmental status, that is, bench scale, pilot scale, and full scale.)

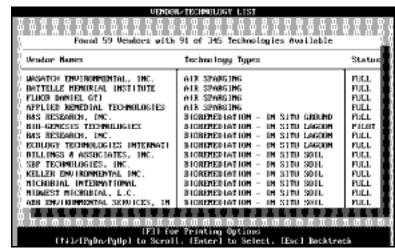


Figure 3.4: Vendor/Technology List

3.2.1 Preparing for a Search

If you have not already selected a set of search parameters through the "Select Search Criteria" operation, please refer to Section 3.1.2 before proceeding.

If you have built your search query by selecting specific search criteria and search values by following the steps outlined in Section 3.1.2, you are now ready to perform a search.

3.2.2 Performing a Search

Performing a search to retrieve vendor information records is simple.

- **Step 1:** Select "Perform Search" by moving the highlight across the menu of the "Search by ..." screen to "Perform Search" and press **Enter>** or press the letter **P**. The Vendor/Technology List will appear.
- **Step 2:** Select a specific vendor and technology from the list with your ↑↓ keys and press **<Enter>**. At this point, the **General Vendor Information** record that you selected will be displayed.
- **Step 3:** When you are finished viewing the information about a selected vendor and treatment technology, press **<Esc>** and you will return once again to the Vendor/Technology List. If you would like to view the records of another vendor and its associated treatment technology, select another line item with the ↑↓ keys and press **<Enter>** to view the complete records of another vendor and its innovative treatment technology. If you wish to perform another search, press **<Esc>** and move the highlight across the menu to "Clear Criteria" and press **<Enter>** or press the letter **C**.

3.3 Printing the Results of a Search: How To Use the Print Operation

Version 5.0 provides you with printing capabilities that make it easy to print information on vendors and technologies found through your query and to examine the technologies in relation to each other. In addition, VISITT 5.0 provides you with a print preview option (refer to Section 3.3.4) that enables you to scroll through the selected print data on the screen before printing.

Use the <F3> key to access the print features in the system. Whenever the <F3> printing option can be used in VISITT, its availability will be noted at the bottom of the screen, along with several other options relevant to that screen or record. Printing is available for look-up tables, statistical summaries, the vendor and technology lists, and specific vendor information.

3.3.1 Print Look-Up Tables

If you want to print the information found in the look-up tables (refer to Figure 3.5), such as **Contaminant Groups**, **Technology Types**, or **Vendor Names**, press <**F3**>, and follow the printing operations explained in Sections 3.3.4 and 3.3.5.



Figure 3.5: Print Look-Up Tables

3.3.2 Report Options Window

Printing at the Vendor/Technology List screen allows you to print information from more than one vendor record, using the Report Options Window (refer to Figure 3.6). Printing at this stage allows you to obtain information from all the vendor records that have been found through your query.

Pressing **<F3>** when you are positioned at the Vendor/Technology List will produce the Report Options window. In the Report Options window, you are given a list of information options:

- Vendor/Technology List
- Descriptive Information
- Estimated Price Range
- Representative Projects
- Technical References



Figure 3.6: Report Options Window

- Waste Applications
- Bench-Scale Information
- Pilot-Scale Information
- Full-Scale Information
- All Information

You may select one option from the list for each printing job or select the **All Information** option to print all data. To print the Vendor/Technology List, highlight **Vendor/Technology List** and press **<Enter>**, or just press the letter **V**, and then follow the printing operations described in Sections 3.3.4 and 3.3.5. Printing the Vendor/Technology List will give you the complete

list (as shown on the screen) of vendors, technologies, and their respective scales of development for the technologies found in your search.

If you want to print descriptive information for all the technologies found through your query, highlight **Descriptive Information** and press **Enter>** or press the letter **D**, and then follow the printing operations described in Sections 3.3.4 and 3.3.5. The **Descriptive Information** option includes the technology description, highlights, limitations, and other comments found in **Other Information Options** on the **General Vendor Information** screen discussed in Section 3.3.3.

To print the information from any of the other information options in the Report Options window, highlight the desired option and press **Enter>**, or just press the first letter of the desired option, and then follow the printing operations explained in Sections 3.3.4 and 3.3.5. VISITT Version 5.0 does not provide an option to print the process flow diagram.

Example of Print Report Options

You want to compare the performance data for all the soil washing technologies in VISITT. You begin by selecting the search category **Technology** and the search value **Soil Washing**. After establishing your search criteria and performing your search, VISITT will provide you with a Vendor/Technology List. At this point, press **<F3>** and the print Report Options window will appear. Highlight **Representative Projects** and press **<Enter>** or press the letter **R**. Follow the printing operations explained in Sections 3.3.4 and 3.3.5, and VISITT will provide you with a printout of all the representative projects with associated performance data for all the soil washing technologies in VISITT.

3.3.3 Print Selection Window

Pressing the print key **<F3>** when you are positioned at the **General Vendor Information** screen will allow you to select between two choices: (1) printing only the information on the highlighted selection from **Other Information Options** or (2) printing all the information available about the selected vendor.

To print all options except for the process flow diagram, simply press the **<F3>** key while the **General Vendor Information** screen is displayed. The Print Selection window (refer to Figure 3.7) will appear and prompt you to choose between printing the highlighted option or printing the full record. Highlight "Print All Options" with the ↑↓ keys, and press **<Enter>**. Your printout will be sent to the screen for a print preview. To obtain a hard copy, follow the printing operations explained in



Figure 3.7: Print Selection Window

Sections 3.3.4 and 3.3.5. VISITT 5.0 does not provide the option to print the process flow diagram.

To print a highlighted information option, first highlight one of the 12 **Other Information Options** displayed at the bottom of the **General Vendor Information** screen. Next, press **<F3>** to generate the Print Selection Window. Highlight "Print Highlighted Option" with the 11 keys and press **<Enter>**. The Print Preview screen will appear.

3.3.4 Print Preview

After you have chosen the data that you want to print and before VISITT sends the data to the printer or a file, the system provides you with a print preview (refer to Figure 3.8). After activating a printing process with the <F3> key, VISITT will take a moment to prepare for the print preview. Print previews that require extended time to compile will be accompanied by a percentage bar indicator that will inform you when the print preview will be ready. The print preview displays the desired information on consecutive screens that you can view by scrolling with the 11 keys. This option allows you to view the printout data on the screen.



Figure 3.9: Printing Parameters Window



Figure 3.8: Print Preview

3.3.5 Printing Parameters Window

Pressing <F3> while in print preview generates a window that allows you to select or modify three of the four printing operation parameters, as shown in Figure 3.9: "Estimated Number of Pages," "Current Output," "Ready," and "Cancel." "Estimated Number of Pages" estimates the number of pages in the printout. You cannot modify the number of pages in the printout, but if the estimated number of pages in the printout will require more time to print than you would like, you can abort the print operation using "Cancel." "Current Output" designates the destination of your print operation -- either a DOS file or a printer. Sending your output to a DOS file allows you to create reports in other software packages, such as Word or WordPerfect. (NOTE: You may need to cleanup some data when you transport text from a DOS file to other software packages such as WordPerfect. Steps one through four below describe a recommended method for importing DOS files from VISITT to WordPerfect.) "Ready" allows you to start a print operation, and "Cancel" allows you to stop it. Table 3 below provides definitions of the components and instructions for selecting the printing operation parameters.

Use the following steps when importing DOS files from VISITT to WordPerfect:

- Step 1: After entering WordPerfect (5.0 or 5.1), simultaneously press <Ctrl> <F5>.
- Step 2: Press <1> for "DOS Text".
- Step 3: Press <3> for "Retrieve (CR/LF to [SRt] in HZone)".
- Step 4: Type the disk drive, directory, and file name of the DOS text file that you specified while in VISITT. This process will take out unnecessary hard returns, but you will have to delete extra spaces in the text.

Table 3: Print Parameter Information and Commands

Printing Operation Parameter	Instructions
"Estimated Number of Pages"	Estimates the number of pages in the printout.
"Current Output"	Allows you to specify the destination for your print command. You may send your information to a printer or to a DOS file. Move the highlight with the <code>↑↓</code> keys to "Current Output" and press <enter>. A window will appear on your screen, asking you to choose between a printer or a DOS file. Highlight your choice with the <code>↑↓</code> keys, and press <enter>. If you choose a DOS file as the destination, VISITT will prompt you to enter as the destination a file name of as many as eight characters, plus a three-character file extension. This file automatically will be placed in the VISITT directory on your PC or network. When you've specified a file name, press <esc>.</esc></enter></enter>
''Ready''	Sends the desired printout to your current output.
"Cancel"	Returns you to the previous screen (pressing <esc> also will perform this operation).</esc>

3.4 Clearing the Key Terms From a Query With the "Clear Criteria" Command

The "Clear Criteria" command allows you to remove all the search criteria and search values, and any And/Or Logic and Potentially Could Be Treated or Actually Treated criteria you described during the "Select Search Criteria" operation.

To remove all the search criteria from your screen, highlight the "Clear Criteria" command and press <Enter> or press the letter C.

3.5 Quit

The ''Quit'' categories.	operation lets you exit t If you already are in th	he search operations porte e main menu, this option	tion of the VISITT system allows you to exit VIS	m and return to main m ITT and return to DOS	enu search

THIS PAGE INTENTIONALLY LEFT BLANK

4.0 MAIN MENU OPTIONS

The VISITT main menu options displayed horizontally on your screen provide you with search category options, as well as your reports, features, registration, and quit options (refer to Figure 4.1). Table 4 describes the main menu options.

The first two main menu options, the VISITT search categories, allow you to search through VISITT for specific information by Waste/Technology/ Vendor and Site. Within these two search categories, there are submenus that identify specific parameters, or limits, you can place on the search. The search categories and submenu parameters that offer you the ability to fine-tune your search for information, are discussed in more detail below.



Figure 4.1: Main Menu Options

Table 4: Overview of Main Menu Options

Category	Description
Waste/ Technology/ Vendor	The Waste/Technology/Vendor category allows you to retrieve records of treatment technologies that address a specific type of waste technology, or vendor. The Waste/Technology/Vendor category's submenu has eleven selections Contaminant Group, Contaminant Data, Media, Waste Source, Technology Type, Scale, Vendor Name, Trade Name, State/Province, Country, and Business Size that help you narrow your search.
Site	The Site category allows you to obtain the records of specific types of treatment technologies based on the sites for which the vendors have provided project data. The Site category's submenu has nine selections Site Name, Cleanup Type, State/Province, Country, Equipment Scale, Waste Source, Media, Contaminant Data, and Regulation/Statute/Organization that help you narrow your search.
Reports	This main menu option allows you to obtain a quick summary of the number of technologies in the VISITT database by scale of development for each technology type, the contaminant groups treated by the technologies, and the number of waste sources treated by the technologies.
Features	This main menu option provides you with a brief overview of the VISITT system features, describing the system functions and generally how to navigate through the database.
Registration	This main menu option allows you to print a registration form that you can use to register as a VISITT user, if you have not already done so. By registering, you will be notified of VISITT updates.
Quit	This main menu option allows you to exit VISITT and return to DOS.

Waste/Technology/Vendor

4.1

This search category allows you to retrieve records of vendors or treatment technologies. The search parameters are contained in look-up tables accessible through the Waste/ Technology/Vendor search category submenu (refer to Figure 4.2). To view this submenu and its search criteria -- Contaminant Group, Contaminant Data, Media, Waste Source, Technology Type, Scale, Vendor Name, Trade Name, State/Province, Country, and Business Size:

Move the highlight with the ↑↓ keys along the main menu to Waste/Technology/Vendor and press <Enter> or press the letter W. (If you decide that the items in the submenu are not appropriate for your search, simply press <Esc> to return to the main menu.)



Figure 4.2: Search by Waste/Technology/Vendor: Submenu and Look-Up Table

Example of a Search Using the Waste/Technology/Vendor Search Category

If you are interested in looking up all the technologies available for treating **Soil (in situ)** contaminated with **Halogenated Volatiles** for **Industrial Landfills**:

Select **Contaminant Group** from the submenu, press **<Enter>**, specify the "POTENTIALLY Could Be Treated or ACTUALLY Treated" option, and select **Halogenated Volatiles** from the **Contaminant Group** look-up table. Press **<Esc>**.

Then select **Media** from the submenu, press **<Enter>**, specify And/Or logic, specify the "POTENTIALLY Could Be Treated or ACTUALLY Treated" option, and select **Soil** (**in situ**) from the **Media** look-up table. Press **<Esc>**.

Then select **Waste Source** from the submenu, press **<Enter>**, specify both And/Or logic and the "POTENTIALLY Could Be Treated or ACTUALLY Treated" option and select **Industrial Landfills** from the **Waste Source** look-up table. When you have completed your selection process, press **<Esc>** to lock in the search criteria and search values (refer to Figure 4.3).

VISITT will retrieve from the database all the technologies that meet your criteria. You then can view them in turn or select a few to examine at length. (See Section 3.0 of the manual for detailed



Figure 4.3: Sample Query by Waste/Technology/Vendor

4.2 Site

This search enables you to search records of treatment technologies for a site. The search parameters -- Site Name, Cleanup Type, State/Province, Country, Equipment Scale, Waste Source, Media, Contaminant Data, and Regulation/Statute/Organization -- are contained in look-up tables accessible through the Site search category's submenu (refer to Figure 4.4). To view this submenu and its search criteria:

Move the highlight with the ↑↓ keys along the main menu to Site and press <Enter> or press S. (If you do not want the items in the submenu, simply press <Esc> to return to the main menu.)



Figure 4.4: Search by Site: Submenu and Look-Up Table

Example of a Search Using the Site Search Category

If you are interested in a vendor who has done work on a site using a technology at a particular equipment scale -- a **defense contractor** that does **full-scale cleanup**, for example -- and you want to learn if there are any technologies offered by vendors that adhere to the options you have in mind:

Select **Site Name** from the submenu, press **<Enter>**, and select **Defense Contractor** from the **Site Name** look-up table. Press **<Esc>**.

Then select **Cleanup Type** from the submenu, press **<Enter>**, specify the And/Or option, and select **Full-Scale Cleanup** from the **Cleanup Type** look-up table. Press **<Esc>**.

When you have completed your selection process, press **Esc>** to lock in the search criteria and search values (refer to Figure 4.5).

VISITT will retrieve from the database all the information that meet your criteria. You then can view them in turn or select a few records to examine at length. (See Section 3.0 of the manual for detailed instructions on selecting search criteria and performing a search.)

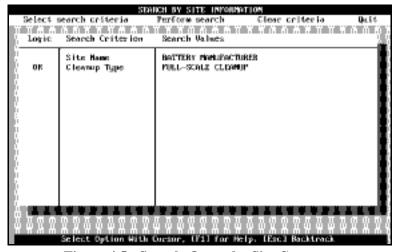


Figure 4.5: Sample Query by Site Category

4.3 Reports

This main menu feature allows you to get a quick summary of the number of technologies in the VISITT database in three areas: Technologies by Scale of Development, Contaminant Group(s) Treated, and Industries and Site Types Addressed. To view the reports, move the highlight along the main menu to Report and press <Enter> or press the letter R. The three reports are displayed on a total of seven consecutive screens.

4.3.1 Technologies by Scale of Development

This three-screen report lists the technology types alphabetically and indicates numbers of bench-, pilot-, and full-scale technologies and the total for each technology type.

4.3.2 Contaminant Group(s) Treated

This two-screen report contains a summary of the number of treatment technologies in the VISITT database that can treat specific contaminant groups.

4.3.3 Industries and Site Types Addressed

This two-screen report contains a summary of the number of treatment technologies in the VISITT database that treat wastes generated by specific industrial sources and site types.

Features

4.4

In addition to the search categories located on the main menu, the Features option provides you with a brief overview of the system, describing the contents of the system and the method of navigating through the database. To access the Features option, move the highlight to Features and press <Enter> or press the letter F (refer to Figure 4.6).

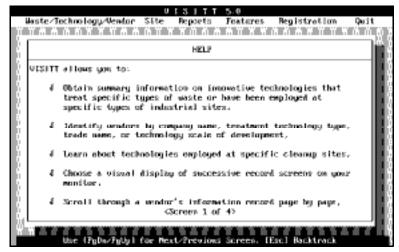


Figure 4.6: Features Submenu

4.5 Registration

In the event that you have obtained VISITT and have not had an opportunity to register as a user, the Registration option allows you to print a blank registration form. To access the Registration option, move the highlight to Registration and press <Enter> (refer to Figure 4.7). To print the registration form, press any key at the Registration Submenu screen. After pressing any key, the system will provide you with the printing parameters window. Follow the procedures explained in Section 3.3.5 to print the form. After you have completed the form, send it by mail or facsimile to the address or number indicated.



Figure 4.7: Registration Submenu

4.6 Quit

The Quit option allows you to exit VISITT and return to DOS.

5.0 THE VENDOR INFORMATION RECORD

The principal unit of information in the VISITT database is called the Vendor Information Record. Each record contains the key words and criteria that match the submenu selection criteria you specify during your "Select Search Criteria" selection operations. The Vendor Information Record has two parts: (1) the General Vendor Information screen and (2) the Other Information Options submenu. Figure 5.1 shows the General Vendor Information screen and its components.

The General Vendor Information screen supplies the vendor's name and address, the technology type and trade name, the status of the technology's application (bench, pilot, or full scale), an indication of whether the technology is included in EPA's Superfund Innovative Technology Evaluation (SITE) program, trademark and patent information, whether or not a vendor is a "small" business, the vendor's SIC code(s), and a contact name and phone number.

The Other Information Options submenu furnishes descriptions of the technology and available performance information (refer to Figure 5.1). The submenu's 12 options are listed below and are described in more detail in Table 5.

- Description
- Highlights
- Limitations
- Other Comments
- Waste Applications
- Representative Projects
- Estimated Price Range
- Technical References
- Bench-Scale Information
- Pilot-Scale Information
- Full-Scale Information
- Process Flow Diagram



Figure 5.1: General Vendor Information Screen

For options with multiple screens, the screen currently being viewed and its position relative to the total number of screens is indicated by the message "Record (or Screen) x of n," where x is the current record (or screen) and n is the total number of records (or screens).

Table 5: Other Information Options

Other Information Option Category	Content
Description	The Description option provides a brief general description of the treatment process. The description includes important operating principles that apply to the technology, the key treatment processing steps, any unique features of the technology, and an indication of whether the full-scale system is or will be batch, continuous, or semicontinuous.
Highlights	The Highlights option provides a description of the principal features of the innovative treatment technology, focusing on such considerations as the technology's treatment niche and its advantages over other technologies.
Limitations	The Limitations option provides a brief description of the key factors that could affect the applicability or the performance of the innovative treatment technology.
Other Comments	The Other Comments option provides a description written by the vendor of the treatment technology's status, capabilities, and experience. This screen allows the vendor to discuss additional aspects of the technology or its demonstrated experience.
Waste Application	The Waste Applications option provides specific information on the wastes or media that the vendor actually has treated or those that the technology can treat, the contaminant groups potentially or actually treated by the technology, and the industrial waste sources or site types that the technology can potentially or actually address.
Representative Projects	The Representative Projects option presents detailed site information about various projects employing the innovative treatment technology. This option provides cost information and performance data; indicates the location of the project, its status, the waste source, the media contaminated, the quantity of medium treated, and the type of site treated; identifies the regulation governing the site cleanup; and provides a name of a contact person outside the company who is familiar with the project.
Estimated Price Range	The Estimated Price Range option provides two screens, one that shows a "ballpark" estimated price range per unit of waste treated and a second that shows a ranking of specific factors that affect the price per unit of waste treated.

Table 5: Other Information Options (continued)

Other Information Option Category	Content
Technical References	The Technical References option allows you to view a list of documents or articles that provide additional information on the technology and capabilities of the vendor. Document numbers, including EPA, National Technical Information Service (NTIS), and patent numbers, are given, if applicable, to help you order the items. Abstracts of many of the references are available in the Alternative Treatment Technology Information Center (ATTIC) system, an online system operated by EPA's Office of Research and Development (703-908-2138).
Bench-Scale Information	The Bench-Scale Information option provides information on the capability of the vendor to conduct treatability studies and the number of studies conducted to date. This screen also provides a memo field that describes bench-scale testing procedures for the technology.
Pilot-Scale Information	The Pilot-Scale Information option provides information on the processes and components of the pilot-scale treatment system, including the pre- and post-processing components. This option also indicates the number of pilot-scale systems planned, in design, under construction, and constructed. This option indicates whether the pilot-scale system is transportable, fixed or in situ and indicates whether the vendor is an equipment manufacturer, a subcontractor for cleanup services, or a prime contractor for full-service remediation.
Full-Scale Information	The Full-Scale Information option provides information on the components of the full-scale treatment system, including the preand post-processing components. This option provides the same information included in the Pilot-Scale Information option, as well as information about the capacity range per hour of the full-scale treatment process and the number of full-scale cleanups using this technology initiated or completed by the vendor. A memo field that describes the equipment and application process also is provided.
Process Flow Diagram	The Process Flow Diagram option allows the user to view the process flow diagram of the vendor's technology, if the vendor has provided such a diagram. If a vendor did not provide a process flow diagram, the Process Flow Diagram option will not appear on the General Vendor Information screen. A VGA monitor is necessary to view the diagrams.