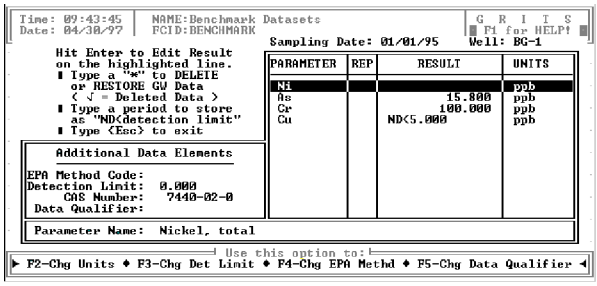
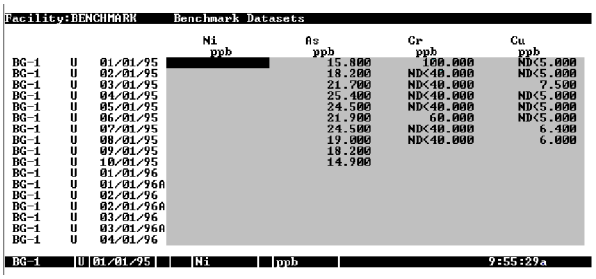
CHAPTER 10
GRITS SAGE

10.1 INTRODUCTION

The **GRITS SAGE** module offers the user a data entry alternative to the **GRITS Database** module. **GRITS Database** and **GRITS SAGE** are both editors for the same **GRITS/STAT** database files (See Section 3.1.1). **GRITS SAGE** allows you to edit your ground water data in a spreadsheet-like fashion that allows you to see multiple wells, sampling dates and parameters on the screen at the same time. Figure 10-1 shows the same **GRITS/STAT** database files being edited in **GRITS Database** module and **GRITS SAGE**.



The PROGRAM DATA EDITOR in **GRITS Database** (Section 3.5.1) shows one sampling date and one well at a time.



The Spreadsheet screens in **GRITS SAGE** shows multiple sampling dates and wells.

Figure 10.1. The PROGRAM DATA EDITOR in **GRITS Database** and the **GRIT SAGE** Well, Date x Parameter Spreadsheet for the **BENCHMARK** Facility.

GRITS SAGE also offers a relatively straight forward ASCII Import option. Unlike the Make a Results Template and Read a Results Template options in **GRITS Database** (See Section 3.5.2), the Flat ASCII Import option of **GRITS SAGE** does not require Facility, Sampling Dates, Wells and Parameters to be entered prior to importing and does not require Lotus® 1-2-3. The ASCII file accepted by the Flat ASCII Import option may be created with a simple editor (i.e., MS® DOS EDIT) or a commercially available spreadsheet program (i.e., Microsoft® Excel).

Reports in **GRITS SAGE** were created with Concentric® R&R Report Writer. R&R users may freely modify the existing reports to suit their needs.

10.2 STARTING GRITS SAGE

Follow the steps below to launch the **GRITS SAGE** module.

1. Start **GRITS/STAT 5.0** (See Section 2.4).

2. Use the up and down arrow keys to highlight the GRITS SAGE option of the GRITS Main Menu and press <**Enter**>. The GRITS SAGE Data System Main Menu should appear on your screen as shown in Figure 10-2.

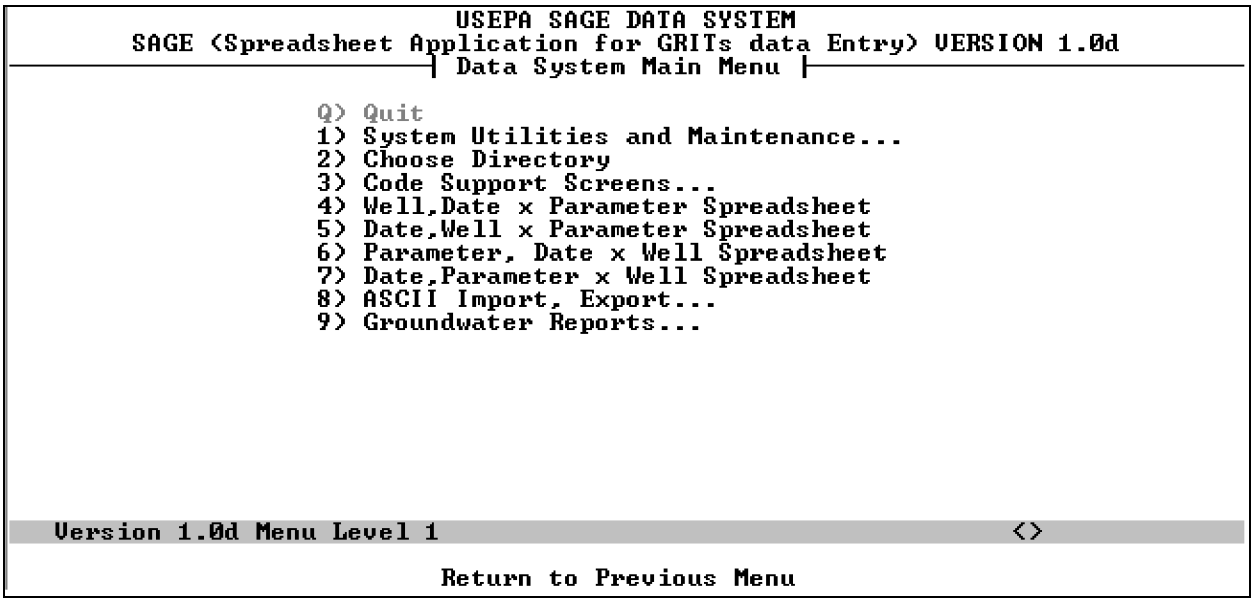


Figure 10-2. The GRITS SAGE Data System Main Menu.

GRITS SAGE may also be launched directly from the MS-DOS prompt. This is useful if you are running on a PC with low conventional memory. Note that the GRITS Main Menu (Figure 2-5) costs approximately 20KB of conventional memory to run. To start **GRITS SAGE** form the MS DOS prompt follow the steps below.

1. At the MS DOS prompt use the CD command to switch to the \GRITS500\GRITSAGE directory on your hard drive.

   Type <**CD \GRITS500\GRITSAGE**> and press <**Enter**>.

   Your DOS prompt should look like this:

   C:\GRITS500\GRITSAGE>_

2. Type <**SAGE**> and press the <**Enter**> key. The GRITS SAGE Data System

Main Menu should appear on your screen (Figure 10-2).

10.3 THE GRITS SAGE MENU

The **GRITS SAGE** menu tree is shown in Figure 10-3. Menu items in **GRITS SAGE** may be executed by using the up and down arrow keys to highlight the desired item and pressing **<Enter>**. You may also execute a menu item by pressing the item's trigger key. Trigger keys are underlined in Figure 10-3.

Menu Item	**Action or Lower Menu**	**Section**
Q) Quit	Exit **GRIT SAGE.**	
1) System Utilities and Maintenance	Q) Quit	
	C) Clean Up Databases	Section 10.10
	D) Create Empty GRITS Databases	Section 10.5
2) Choose Directory	Select a data directory.	Section 10.4
3) Code Support Screens...	Q) Quit	
	1) Facility Information	Section 10.8.2
	2) Wells Database	Section 10.8.3
	3) Parameters Database	Section 10.8.4
	4) Sampling Events Database	Section 10.8.5
	5) Master Parameter List	Section 10.8.6
	6) Well Casing Types	Section 10.8.7
	7) Well Log Codes	Section 10.8.8
	8) Units Code Support	Section 10.8.9
	9) EPA Method Codes	Section 10.8.10
4) Well, Date x Parameter Spreadsheet		Section 10.6
5) Date, Well x Parameter Spreadsheet		Section 10.6
6) Parameter, Date x Well Spreadsheet		Section 10.6
7) Date, Parameter x Well Spreadsheet		Section 10.6
8) ASCII Import, Export...	Q) Quit	
	1) SAGE ASCII Export	Section 10.7.1.3
	2) SAGE ASCII Import	Section 10.7.1.5
	3) Flat ASCII Import	Section 10.7.2.3
	4) Flat ASCII Export	Section 10.7.2.4
9) Groundwater Reports...	Q) Quit	
	1) Select Printer	Section 10.9.1

	2) Parameter, Date x Well Report	Section 10.9.3
	3) Well, Date by Parameter Report	Section 10.9.4
	4) Summary Statistics by Well (%ND<100)	Section 10.9.5
	5) Results by EPA Method Code	Section 10.9.6

Figure 10-3. The **GRITS SAGE** Menu tree.

10.4 SELECTING A DATA DIRECTORY

Prior to working on ground water data in **GRITS SAGE** you should check the currently selected data directory. The data directory in **GRITS SAGE** is independent of the data directory used by the other **GRITS/STAT** modules. Selecting a data directory in **GRITS Database** (See Section 3.3) *does not* set the data directory for **GRITS SAGE**. Follow the instructions below to select the data directory for **GRIT SAGE**.

1. Use the up and down arrow keys to highlight the Choose Directory option of the Data System Main Menu (Figure 10-2) and press <**Enter**>. The Data Directory Selection dialog appears on your screen as shown in Figure 10-4.

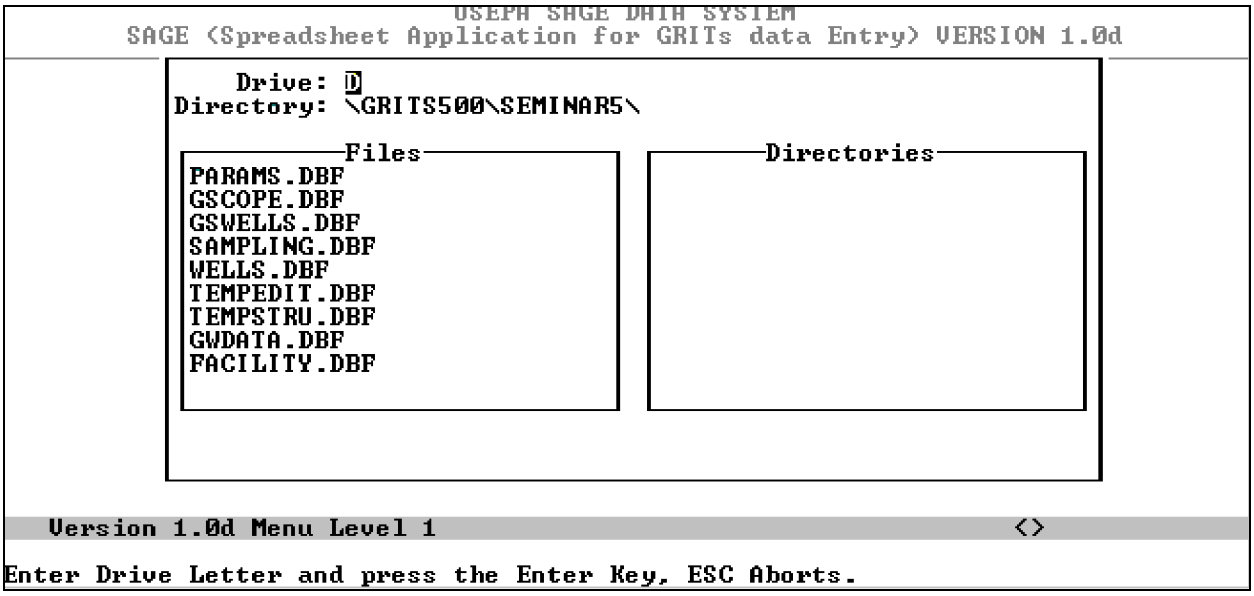


Figure 10-4. The Data Directory Selection dialog.

2. The currently selected data directory is shown next to the Directory prompt (\GRITS500\SEMINAR5\ in Figure 10-4). If the desired data directory is already selected press <**Esc**>.

   To change the currently shown data directory type the letter of the drive the desired data directory is on and press <**Enter**>. A list of all directories on the

drive is built and displayed in a list box under Directories as shown in Figure 10-5.

> **Note:** Depending upon the size and content of your hard drive, scanning the directories may take a few moments.

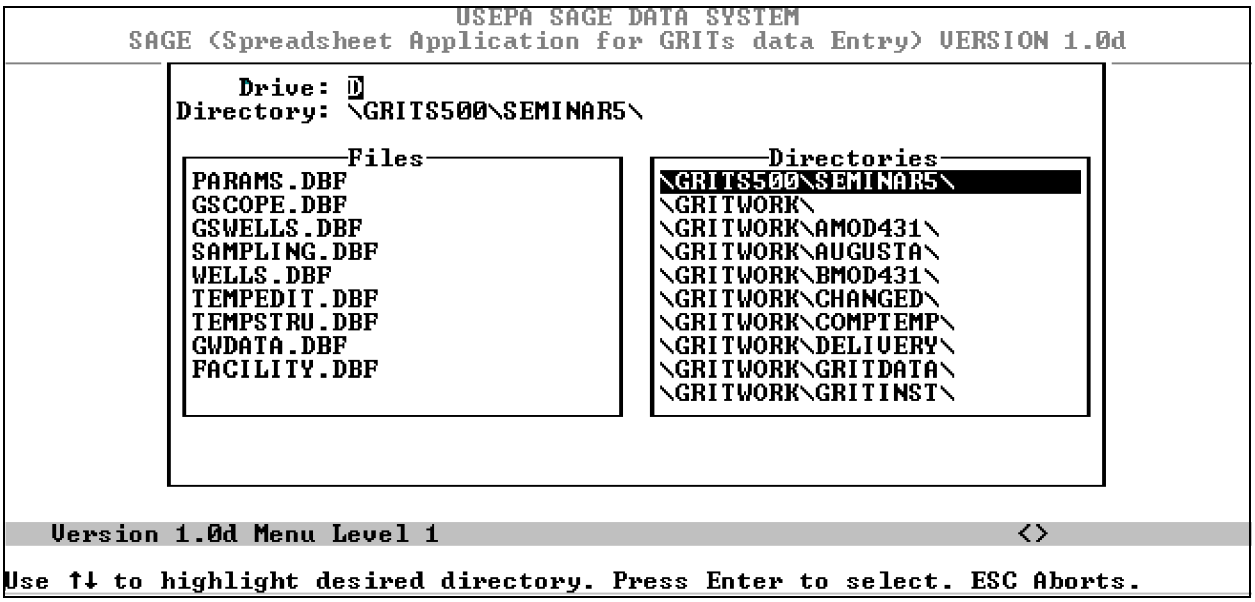


Figure 10-5. The Data Directory Selection dialog after directories on the hard drive have been scanned.

3. Use the up and down arrow keys to highlight the desired directory and press **<Enter>**.

10.5 CREATING A NEW DATA DIRECTORY

The Create Empty GRITS Databases option of the System Utilities and Maintenance menu may be used to create a new **GRITS/STAT** data directory. To create a new data directory follow the steps below.

1. From the GRITS SAGE Data System Main Menu use the up and down arrow keys to highlight the System Utilities and Maintenance option and press **<Enter>**. The System Utilities and Maintenance Menu appears on your screen as shown in Figure 10-6.

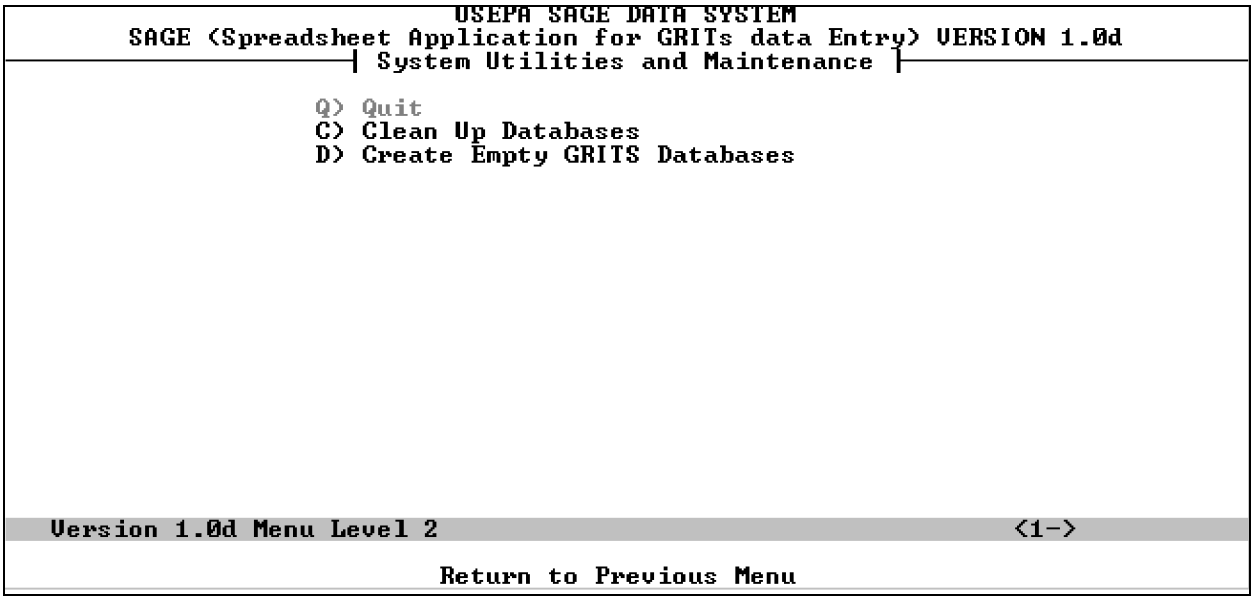


Figure 10-6. The System Utilities and Maintenance Menu.

2. Use the up and down arrow keys and highlight the Create Empty GRITS Databases option and press <**Enter**>. The NEW DATA DIRECTORY dialog appears on your screen. (Figure 10-7).

Figure 10-7. The NEW DATA DIRECTORY dialog.

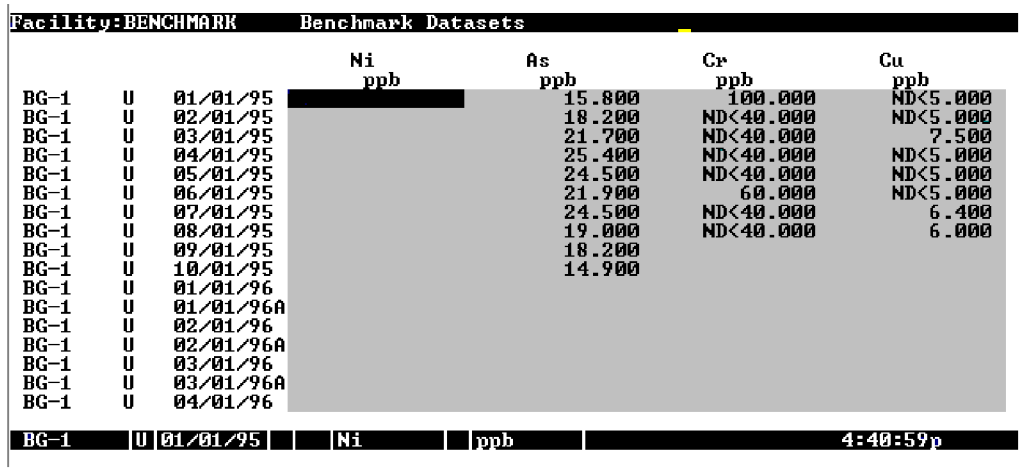
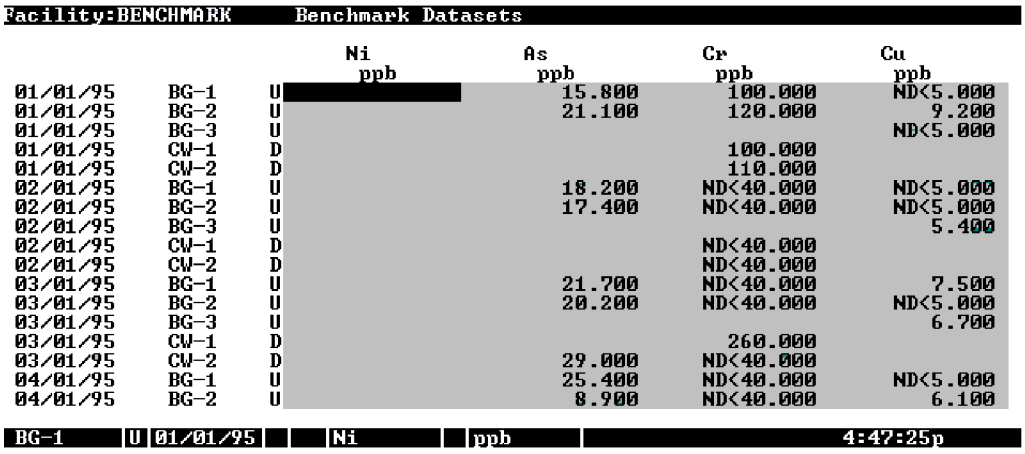
3. Enter a valid MS-DOS directory name and press <**Enter**>. A new directory will be created on your hard drive and an empty set of **GRITS/STAT** database files (Section 3.1.1) will be placed in the newly created directory. The newly created directory is automatically set as the currently selected data directory.

> **Example:** A new data directory is desired for the XYZ Landfill. At the Directory Name prompt type:
>
> **<C:\XYZLAND> <Enter>.**

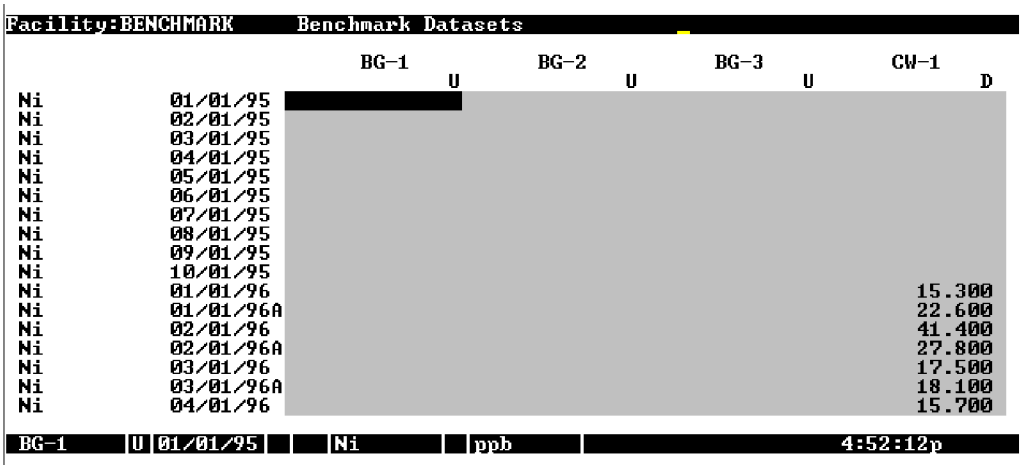
10.6 GRITS SAGE SPREADSHEETS

GRITS SAGE offers four spreadsheet views of the data in the **GRITS/STAT** database files. All four spreadsheets work the same and use the same key strokes for navigation and editing. The

only difference between the four spreadsheet screens is the way in which the rows and columns are ordered. The four spreadsheet screens are shown in Figure 10-7.

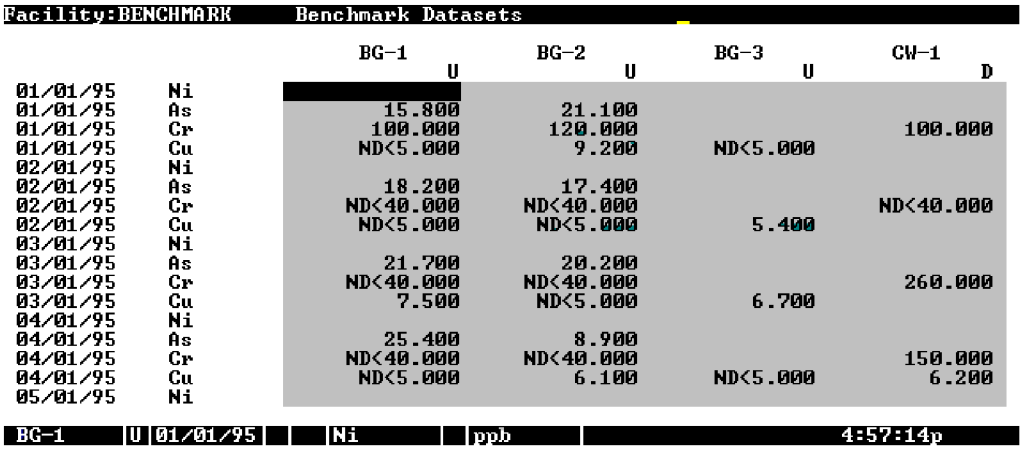
Well, Date x Parameter	 Rows are sorted by Well, then Date. Parameters form the columns.
Date, Well x Parameter	 Rows are sorted by Date, the Well. Parameters form the columns.

Parameter, Date x Well



Rows are sorted by Parameter, then Sample Date. Wells form the columns.

Date, Parameter x Well



Rows are sorted by Sample Date, then Parameter. Wells form the columns.

Figure 10-7. The GRITS SAGE Spreadsheet screens.

10.6.1 OPENING A SPREADSHEET

A **GRITS SAGE** spreadsheet contains data for one facility. To open a **GRITS SAGE** spreadsheet for an existing facility follow the steps below. Note that data originally entered in **GRITS Database** may be accessed this way. To start a new spreadsheet see Section 10.6.2.

1. Select the data directory that contains the facility data you wish to edit (See Section 10.4).

2. Use the up and down arrow keys to highlight one of the four spreadsheets on the Data System Main Menu and press <**Enter**>. The spreadsheet should appear on

your screen (Figure 10-7).

3. If the desired facility does not appear next to the Facility prompt at the top of the spreadsheet hold the <**Alt**> key down and press <**F**>. The Facility prompt becomes active.

4. Type all or part of the FCID of the desired facility and press <**Enter**>. If you do not type in the full FCID a pop-up list of facilities available in the currently selected data directory will appear on your screen as shown in Figure 10-8.

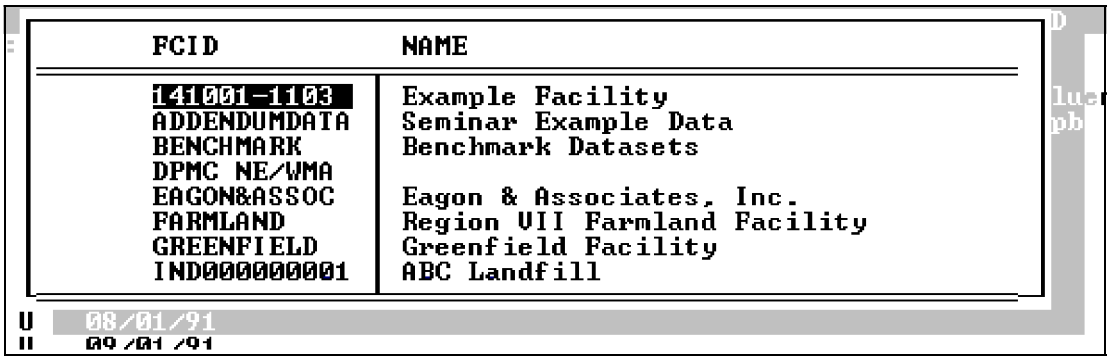


Figure 10-8. Pop-up list of facilities in the \GRITS500\SEMINAR5 directory.

5. Use the up and down arrow keys to highlight the desired facility and press <**Enter**>. The data for the newly selected facility will appear in the spreadsheet.

> **Note:** To force the facility pop-up list to appear hold the <**Alt**> key down and press <**F**>. Hold the <**Ctrl**> key down and press <**Y**>. Press <**Enter**>.

10.6.2 STARTING A NEW SPREADSHEET

A new spreadsheet may be started directly from any of the four spreadsheet screens. To start a new spreadsheet follow the steps below. Starting a new **GRITS SAGE** spreadsheet is equivalent to using the FILE DATA ENTRY MENU (Section 3.5) in **GRITS Database** to add Facility, Sampling Dates, Parameters and Wells.

1. If you wish to create a new data directory follow the steps in Section 10.5. If you do not create a new data directory the new spreadsheet will be saved in the **GRITS/STAT** database files in the currently selected data directory.

2. Start one of the four spreadsheet screen (Figure 10-7). To start a spreadsheet screen use the up and down arrow keys to highlight one of the spreadsheet options on the Data System Main Menu (Figure 10-2) and press <**Enter**>.

3. Press <**Insert**>. The Add Pop-up Menu appears on your screen as shown in Figure 10-9.

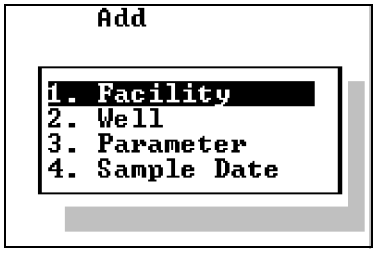


Figure 10-9. The Add Pop-up Menu

4. Use the up and down arrow keys to highlight the Facility option and press <**Enter**>. The NEW FACILITY dialog appears on your screen (Figure 10-10).

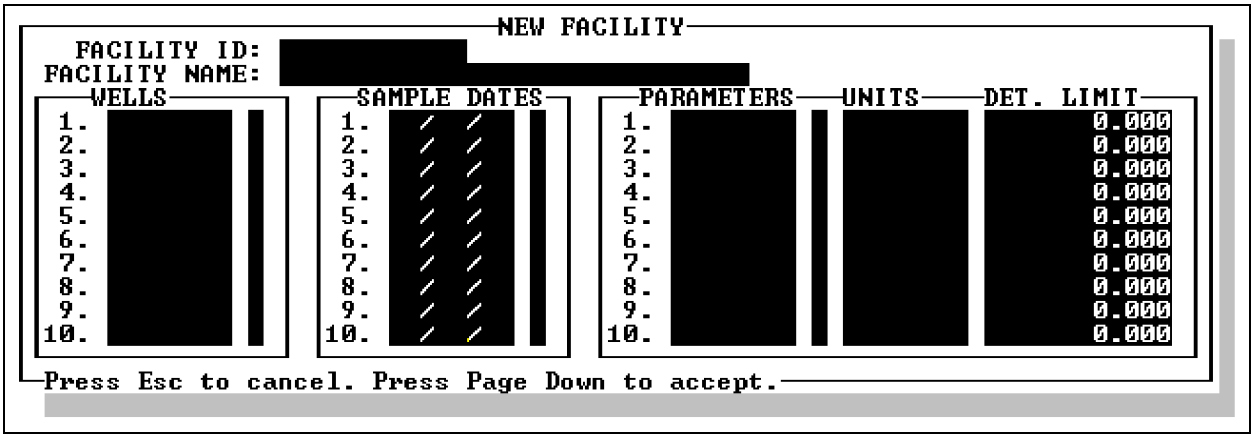
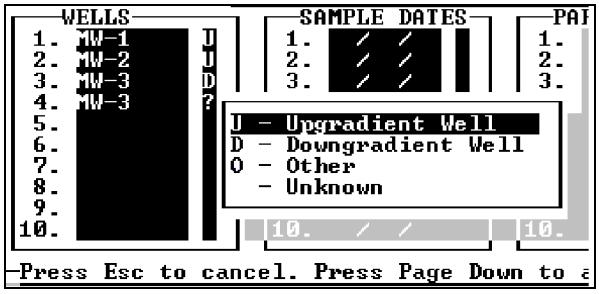
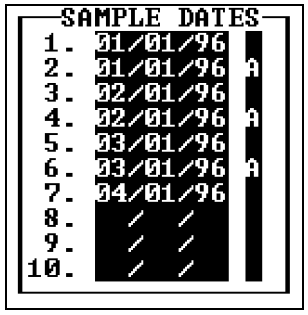


Figure 10-10. The NEW FACILITY dialog.

5. The NEW FACILITY dialog allows you to enter up to ten wells, ten sample dates and ten parameters. If more wells, sample dates or parameters are required they may be added individually through the Add Pop-up Menu (Figure 10-9) after completing the entries in the NEW FACILITY dialog. Table 10-1 details the entries in the NEW FACILITY dialog. The navigation, editing and toggle keys in Table 3-3 are available in the in the NEW FACILITY dialog.

Entry	**Description**
FACILITY ID	The FACILITY ID or FCID is the standard, unique RCRA facility identification code, If this is not a RCRA facility, you may enter other standard codes that uniquely identify the facility.

FACILITY NAME	Enter the name of the facility. If this is a permitted facility use the name on the permit.
WELLS  *Figure 10-11*. Well Gradient Pop-up.	Enter up to 10 wells. Each well entry consists of a Well ID and Well Gradient. Each Well ID should uniquely define a Well at the Facility. The Well Gradient entry for each Well is validated against the Well Gradient Pop-up (Figure 10-11). Valid Well Gradient code are: <**U**> Upgradient Well <**D**> Downgradient Well <**O**> Other < > Unknown or not specified If an invalid entry is made the Well Gradient Pop-up will appear. Use the up and down arrow keys to highlight the desired Well Gradient and press <**Enter**>.
SAMPLE DATES  *Figure 10-12*. Sample Dates and Duplicate Codes column of the NEW FACILITY dialog.	Enter up to 10 Sample Dates. Each Sample Date entry consists of a Sample Date and Duplicate Code. Valid Duplicate Codes are: <**A**> Duplicate A <**B**> Duplicate B <**C**> Duplicate C <**D**> Duplicate D <**W**> CME A <**X**> CME B <**Y**> CME C <**Z**> CME D < > Not a Duplicate

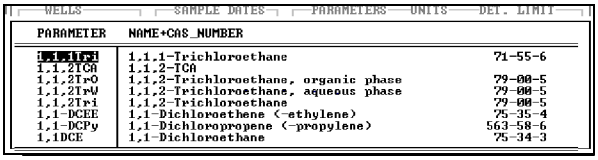
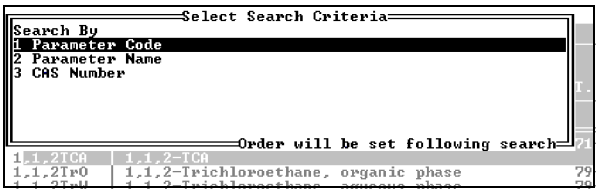
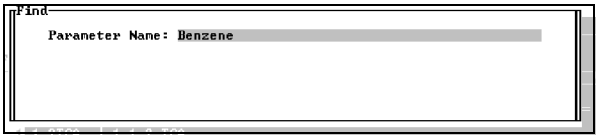
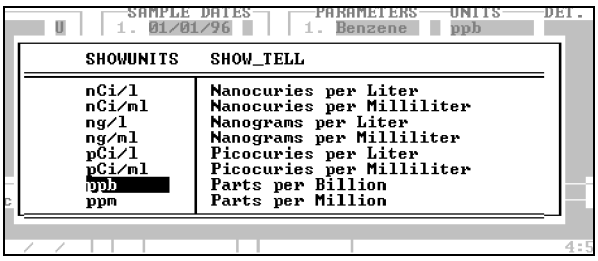
PARAMETERS	Enter up to 10 Parameters. Each parameter entry consists of a Parameter Code, Replicate Code, Units and Default Detection Limit.
 *Figure 10-13*. The Master Parameter List pop-up.	Parameters Codes are validated against the Master Parameter List. If an invalid Parameter Code is entered the Master Parameter List pop-up (Figure 10-13) appears on your screen. Use the <↑>, <↓>, **<Page Up>** and **<Page Down>** keys to highlight the desired parameter. Parameters may also be located in the Master Parameter List pop-up with a search. Press **<F5>** for the Select Search Criteria dialog (Figure 10-14). The Master Parameter List pop-up may be searched by one of the following: Parameter Code Parameter Name CAS Number
 *Figure 10-14*. The Select Search Criteria dialog.	Use the up and down arrow keys to highlight the desired search criteria and press **<Enter>**. The Find dialog appears on your screen (Figure 10-15). Type in the Parameter information you are looking for and press **<Enter>**. The closest parameter in the Master Parameter List pop-up will be highlighted. Use the up and down arrow keys to refine the search if necessary.
 *Figure 10-15*. The Find dialog for the Parameter Name search criteria.	When the desired parameter is highlighted press **<Enter>**. Type in the Replicate Code (if any) and press **<Enter>**. Type in the Units that observations are to be recorded in and press **<Enter>**. Units are validated against the Units pop-up list (Figure 10-16). Use the up and down arrow keys to highlight the desired measurement units and press **<Enter>**.
 *Figure 10-16*. The Units pop-up list.	Type in the Detection Limit and press **<Enter>**.

Table 10-1. NEW FACILITY dialog entries.

6. Use the up and down arrow keys to navigate between entries. When you have completed data entry in the NEW FACILITY dialog press **<Page Down>**. The new spreadsheet is setup and ready for data entry. Figure 10-17 shows entries in the NEW FACILITY dialog and the resulting spreadsheet that appear after the

<Page Down> key is pressed.

> **NOTE:** Spreadsheets created in one of the four spreadsheet screens will automatically work in all **GRITS SAGE** spreadsheet screens. For example a spreadsheet were created under the Well, Date x Parameter spreadsheet is automatically available in the other three spreadsheet screens. Also, a facility setup in **GRITS SAGE** may be edited in **GRITS Database** and vice-versa.

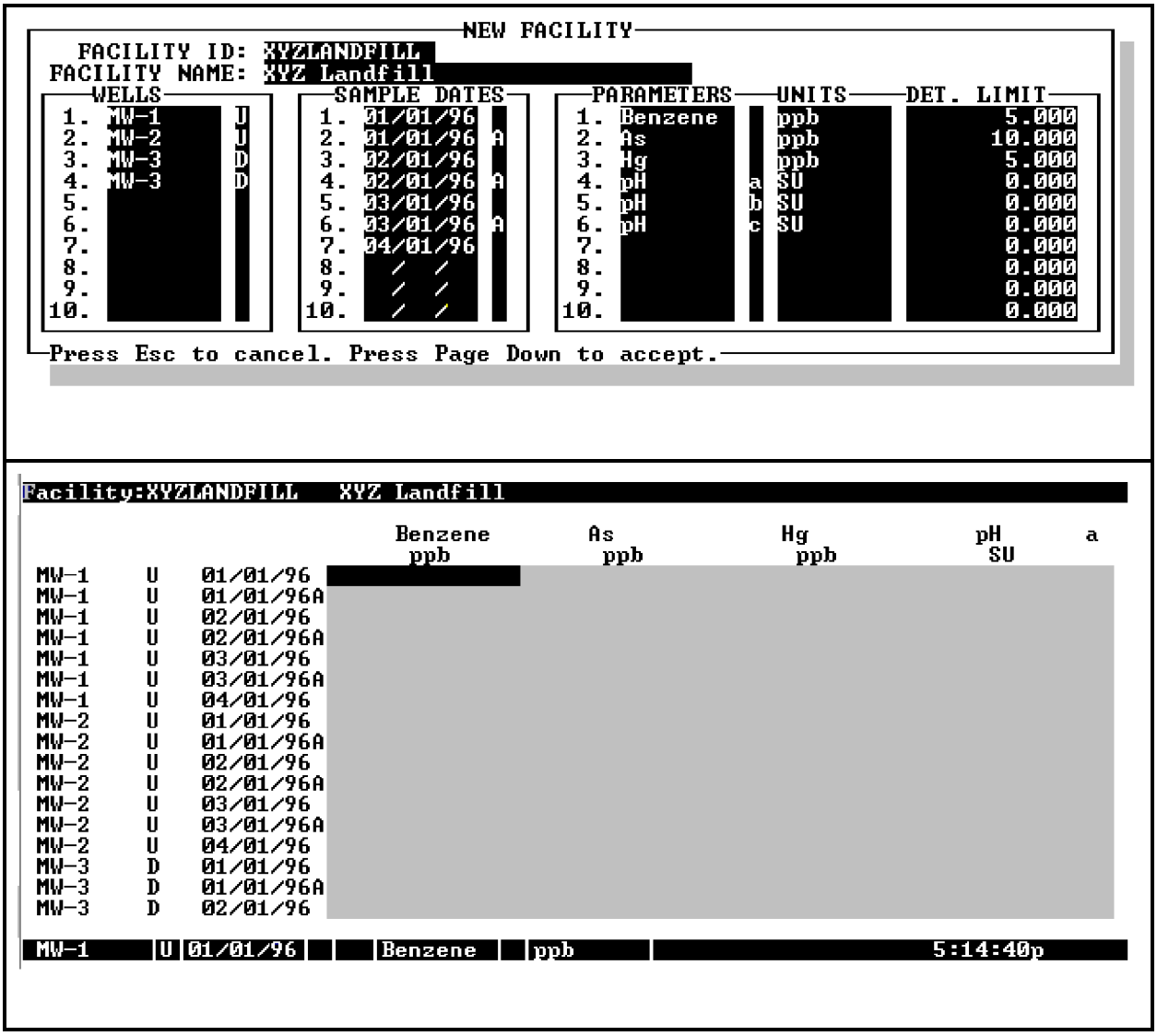
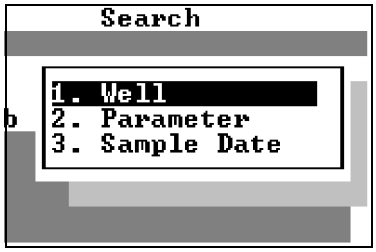


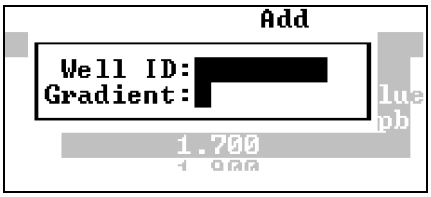
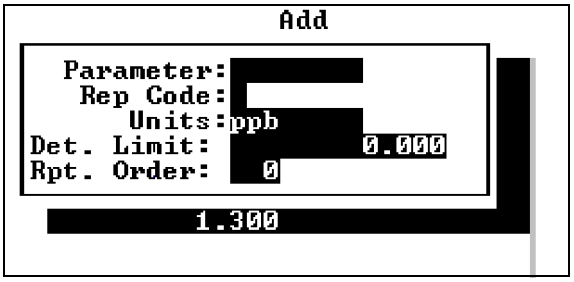
Figure 10-17. The NEW FACILITY dialog and resulting spreadsheet.

10.6.3 SPREADSHEET DATA ENTRY

Table 10-2 lists the spreadsheet editing and navigation keys.

Navigation Keys	Description
<↑>	Move to the cell above.
<↓>	Move to the cell below.
<→>	Move to the cell to the right.
<←>	Move to the cell to the left.
<Page Up>	Move one page up.
<Page Down>	Move one page down.
<F5>	Search. The Search option will jump to a specified well, date or parameter in the spreadsheet. Follow the instructions below: 1. Press **<F5>**. The Search Criteria pop-up list appears as shown in Figure 10-18.  *Figure 10-18*. The Search Criteria pop-up list. Highlight the desired search criteria and press **<Enter>**. A pop-up Find dialog will appear on your screen. Type in the Well, Parameter or Sample Date that you wish to go to in the spreadsheet and press **<Enter>**. The cell will move to the first row and column that matches the search criteria.
Editing Keys	**Description**
<Enter>	Toggles editing on and off for currently highlighted cell.
<Delete>	Deletes the observation in the current cell.

<Alt> <Delete>	Deletes a spreadsheet row or column. Use the Navigation Keys to move to a cell in the row or column you wish to delete. Hold the **<Alt>** key down and press **<Delete>**. A pop-up menu will appear and list the Well ID, Sample Date and Parameter for the current cell. Highlight the Well ID, Sample Date or Parameter you wish to delete and press **<Enter>**.

<Insert>	Add a new Facility, Well, Sample Date or Parameter Press **<Insert>**. The Add Pop-up Menu appear on your screen (Figure 10-9). The Add Pop-up Menu allows you to add a new Facility, Sample Date, Well or Parameter. Use the up and down arrow keys to highlight the item you wish to add and press **<Enter>**. Follow the instructions below. **Facility** Follow the instructions in Section 10.6.2. **Well** The Add Well dialog appears on your screen as shown in Figure 10-19.  *Figure 10-19.* The Add Well dialog. Type the Well ID and Gradient of the well you wish to add. Press **<Enter>** after typing the Gradient. The new well will be added to the spreadsheets and the Wells Database. **Parameter** The Add Parameter dialog appears on your screen as shown in Figure 10-20.  *Figure 10-20.* The Add Parameter dialog. The Parameter is validated by the Master Parameter List pop-up (Figure 10-13 in Table 10-1). Specify the Parameter, Replicate Code, Measurement Units, Detection Limit and Report Order of the parameter you wish to add. The Report Order is a numeric entry that sets the ordering of the Parameters in the spreadsheet screens and reports. Press <Enter> after typing in the Ret. Order. The new parameter will be added to the spreadsheets and the Parameters Database.

<Shift> <↑>	Highlight a block of cells for Cut, Copy and Paste operations.
<Shift> <↓>	
<Shift> <←>	
<Shift> <→>	
<Shift> **<Delete>**	Cut the currently highlighted cells to the **GRITS SAGE** clipboard.
<Shift> <+>	Copy the currently highlighted cells to the **GRITS SAGE** clipboard.
<Shift> **<Insert>**	Paste the contents of the **GRITS SAGE** clipboard to the current cell location.

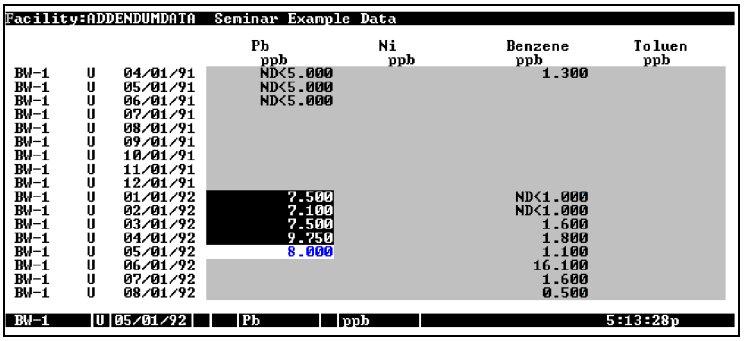
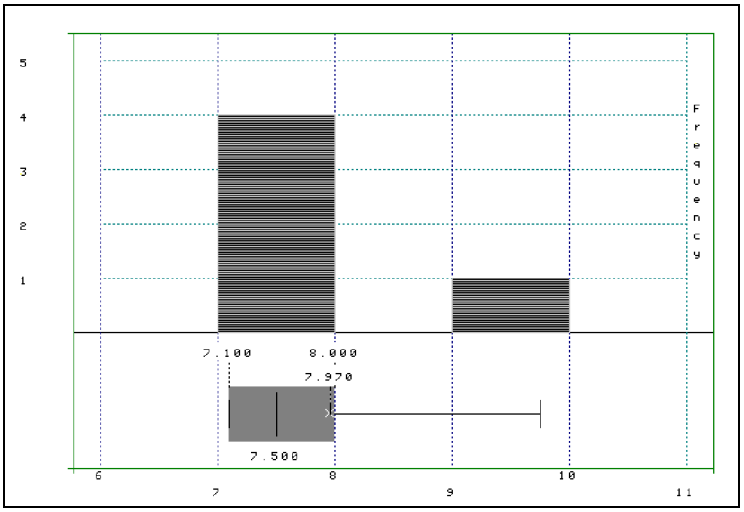
<Alt> <H>	Creates a combined Histogram-Box Plot from the data in the **GRITS SAGE** clipboard. Follow the instructions below. 1. Highlight the block of cells that you want to produce a combined Histogram-Box Plot on by holding the **<Shift>** key down and pressing the arrow keys (Figure 10-22).  *Figure 10-22*. Lead data from well BW-1 for sample dates 1/1/92 to 5/1/92 is highlighted. 2. Hold the **<Shift>** key down and press the <+> key to copy the highlighted data to the **GRITS SAGE** clipboard. 3. Hold the **<Alt>** key down and press **<H>**. The combined Histogram-Box Plot appears on your screen as shown in Figure 10-23.  *Figure 10-23*. The combined Histogram-Box Plot. 4. Press **<Enter>** to return to the spreadsheet screen.

Table 10-2. Spreadsheet navigation and editing keys.

10.7 ASCII IMPORT/EXPORT FILES

The ASCII Import, Export option of the GRITS SAGE Data System Menu supports importing and exporting two ASCII file formats:

SAGE ASCII File
Flat ASCII File

Both ASCII file formats can easily be created with a simple text editor (i.e., MS DOS EDIT) or an off-the-shelf spreadsheet (i.e., Microsoft® Excel). The ASCII Import, Export Menu (Figure 10-24) contains options to export ground water data from the **GRITS/STAT** database files to the two ASCII file formats and import data into the **GRITS/STAT** database files from the two ASCII file formats.

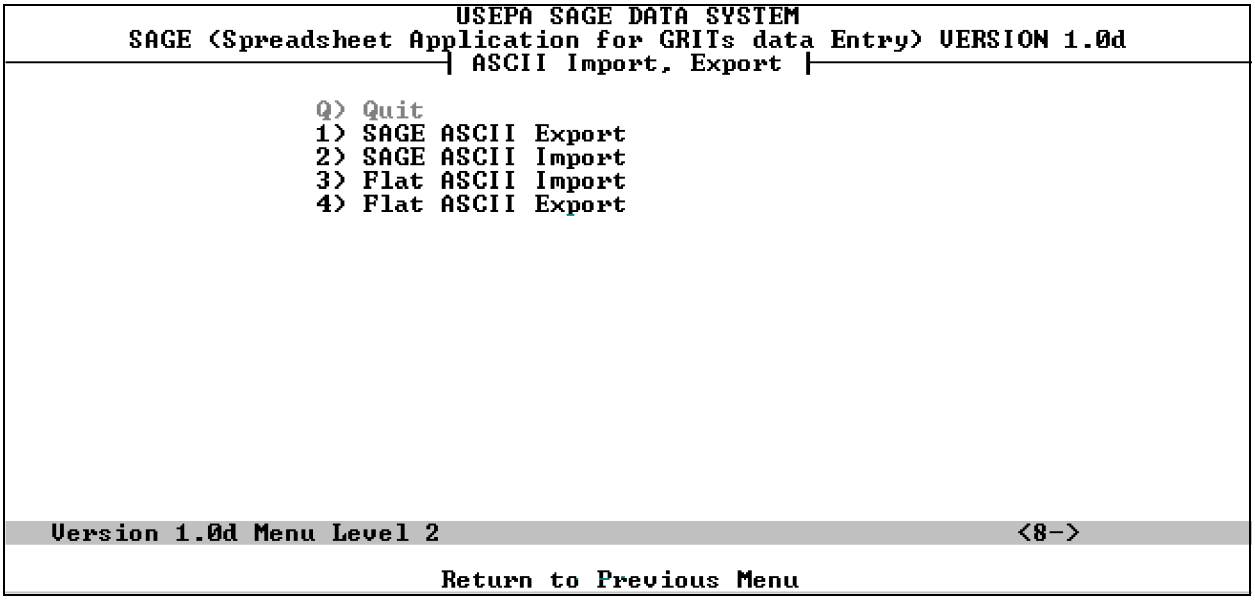


Figure 10-24. The ASCII Import, Export Menu.

Unlike the Make a Results Template (Section 3.5.2.1) and Read a Results Template (Section 3.5.2.2) options of **GRITS Database**, the ASCII Imports in **GRITS SAGE** do not require that facility information, wells, sample dates and parameters be entered prior to importing. A Facility can be created in an ASCII file and the **GRITS SAGE** importing routines will create the proper entries in the **GRITS/STAT** databases.

10.7.1 GRITS SAGE ASCII IMPORT/EXPORT

The SAGE ASCII file is imported and exported by the SAGE ASCII Export and SAGE ASCII Import options of the ASCII Import, Export Menu (Figure 10-24). The format of the SAGE ASCII file is shown in Figure 10-25. The SAGE ASCII file is limited to observations from one parameter, but, the SAGE ASCII file format is useful for performing further analysis in

commercial spreadsheet packages.

Note: The Flat ASCII file (Section 10.7.2) is more flexible than the SAGE ASCII file for importing data and permits multiple parameters in the same ASCII file.

"FCID:",	*FCID*			
"NAME:",	*Facility Name*			
"PARAMETER:",	*Parameter Code*			
"REP CODE:",	*Replicate Code*			
"UNITS:",	*Units*			
"DETECTION LIMIT:",	*Default Detection Limit*			
"ACL:",	*ACL*			
"MCL:",	*MCL*			
"DATE"	**"DUP CODE"**	*Well ID 1*	*Well ID 2*	...
"GRADIENT:",	" ",	*Gradient 1,*	*Gradient 2,*	...
Date 1	*Dup Code 1,*	$Obs_{Well1,Date1}$,	$Obs_{Well2,Date1}$,	
Date 2	*Dup Code 2,*	$Obs_{Well1,Date2}$,	$Obs_{Well2,Date2}$,	
Date 3	*Dup Code 3,*	$Obs_{Well1,Date3}$,	$Obs_{Well2,Date3}$,	
...	...	...	...	...

Figure 10-25. The SAGE ASCII import file.

The SAGE ASCII import file requires the use of keywords (i.e. **FCID:**, **NAME:**, **PARAMETER:**, etc.). The required keywords are shown as bold in Figure 10-25.

10.7.1.1 Creating a SAGE ASCII file with MS DOS EDIT

A SAGE ASCII file can be easily created with the MS DOS EDIT utility. The instructions in this section assume a basic knowledge of the MS DOS EDIT utility. For more detailed information on the MS DOS EDIT utility consult your MS DOS Manual.

1. From the DOS prompt start the MS DOS EDIT utility. Type:

   <EDIT> <Enter>

   The MS DOS EDIT utility should appear on your screen as shown in Figure 10-

26.

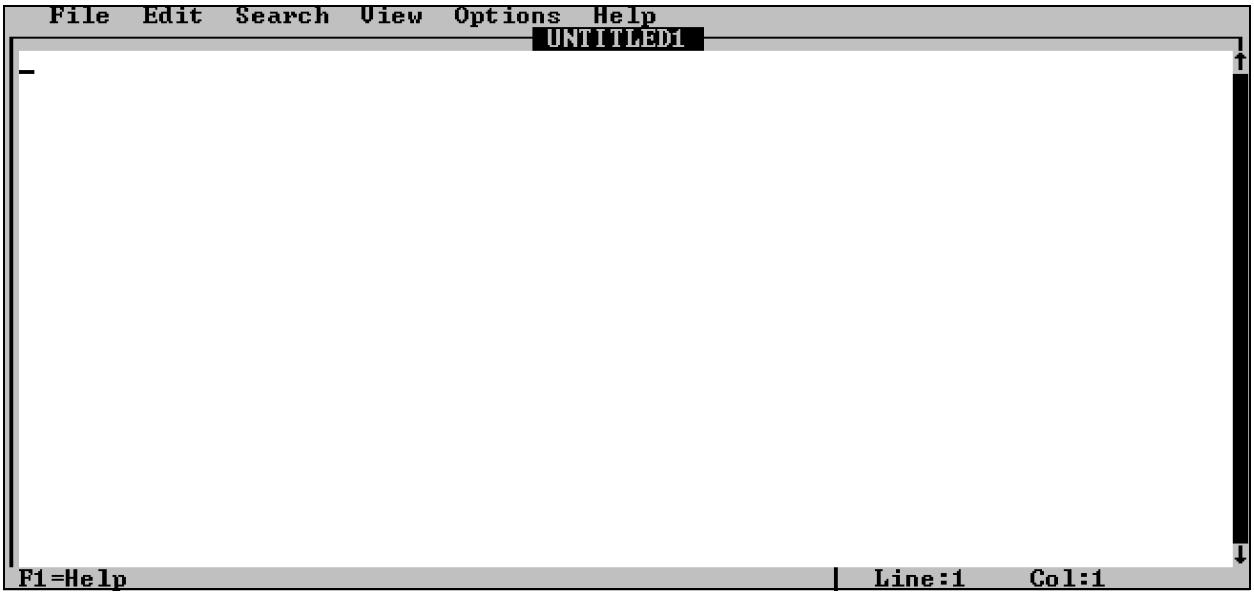


Figure 10-26. The MS DOS EDIT Utility.

2. Type in the contents of the SAGE ASCII file. Use Figure 10-25 as a template. Enclose the keywords and data in quotes (“”). Separate entries with commas (,). Figure 10-27 shows the SAGE ASCII file for Benzene from the ground water report for ABC Landfill (Figure 3-2).

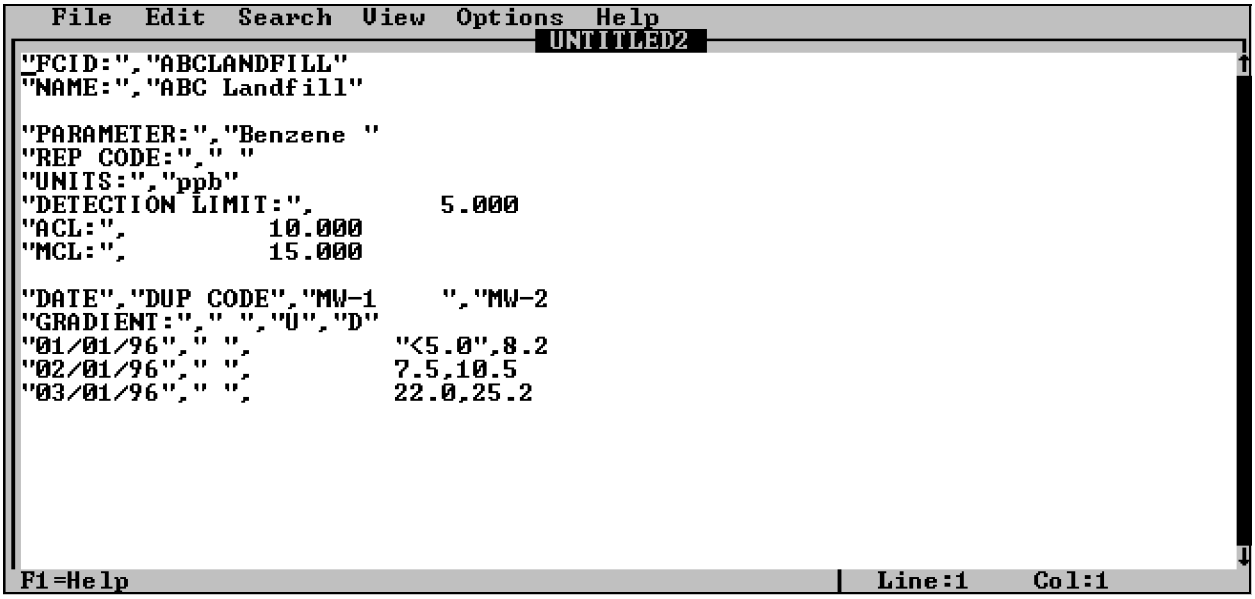


Figure 10-27. The SAGE ASCII file for Benzene from the ground water report in Figure 3-2.

Note that Nondetects are preceded with a less-than sign (<) and enclosed in quotes.

3. Hold the **<Alt>** key down and press **<F>**. The File pull-down menu should appear as shown in Figure 10-28.

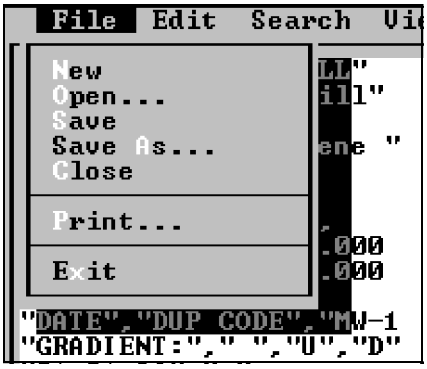


Figure 10-28. The MS DOS EDIT File pull-down menu.

4. Press **<S>** to execute the Save option of the File pull-down menu. The Save As dialog appears on your screen as shown in Figure 10-29.

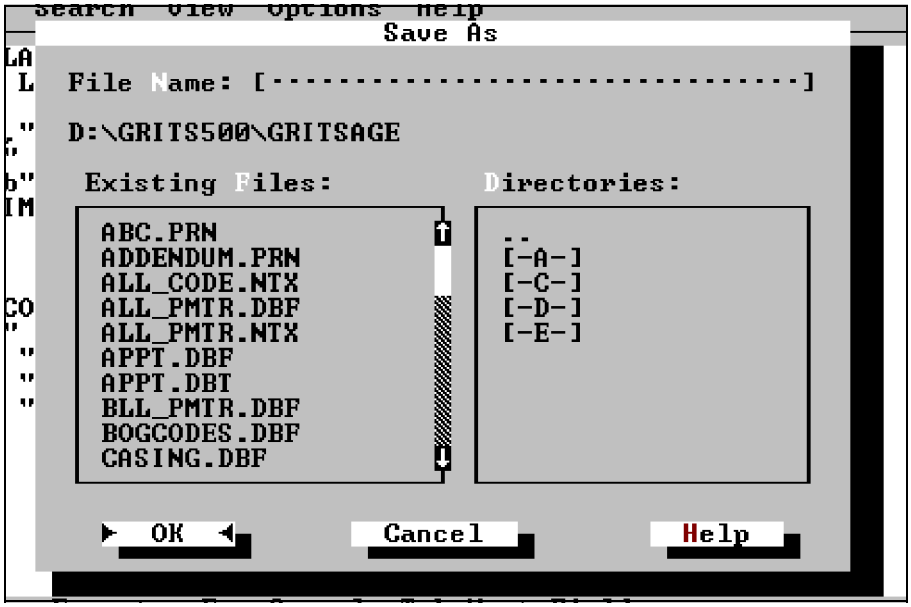


Figure 10-29. The MS DOS EDIT Utility Save As dialog.

5. Type in a legal MS DOS filename and press **<Enter>**.

6. Hold the **<Alt>** key down and press **<F>**. The File pull-down menu will appear. Press **<X>** to exit the MS DOS EDIT Utility.

10.7.1.2 Creating the SAGE ASCII file with Microsoft® Excel

The SAGE ASCII file can be created with most off the shelf spreadsheet packages. Instructions are presented in this section are for Microsoft® Excel, however, a similar process should work in other commercial spreadsheets. The instructions below assume a basic knowledge of Microsoft® Excel. For more detailed information consult your spreadsheet software manual.

1. Start Microsoft® Excel. Double-click the Excel icon  . A blank Excel worksheet should appear on your screen as shown in Figure 10-30.

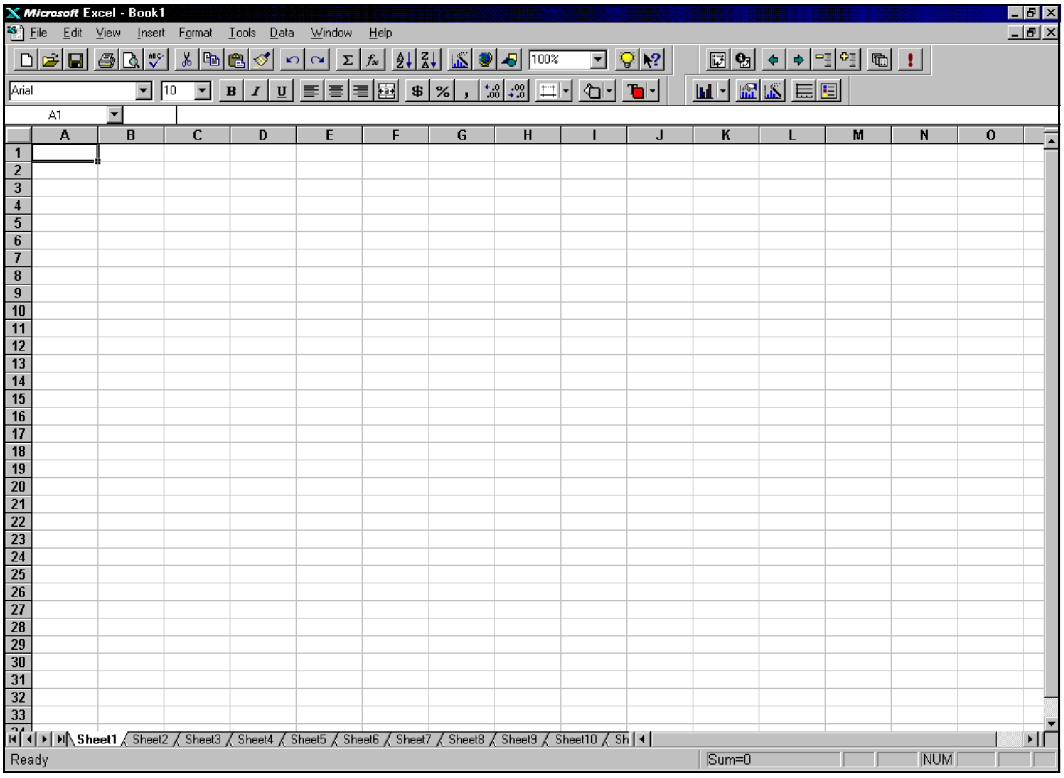


Figure 10-30. A blank Microsoft® Excel spreadsheet.

2. Type in the contents of the SAGE ASCII file. Use Figure 10-25 as a template.

Figure 10-31 shows the Benzene data from the ground water report in Figure 3-2.

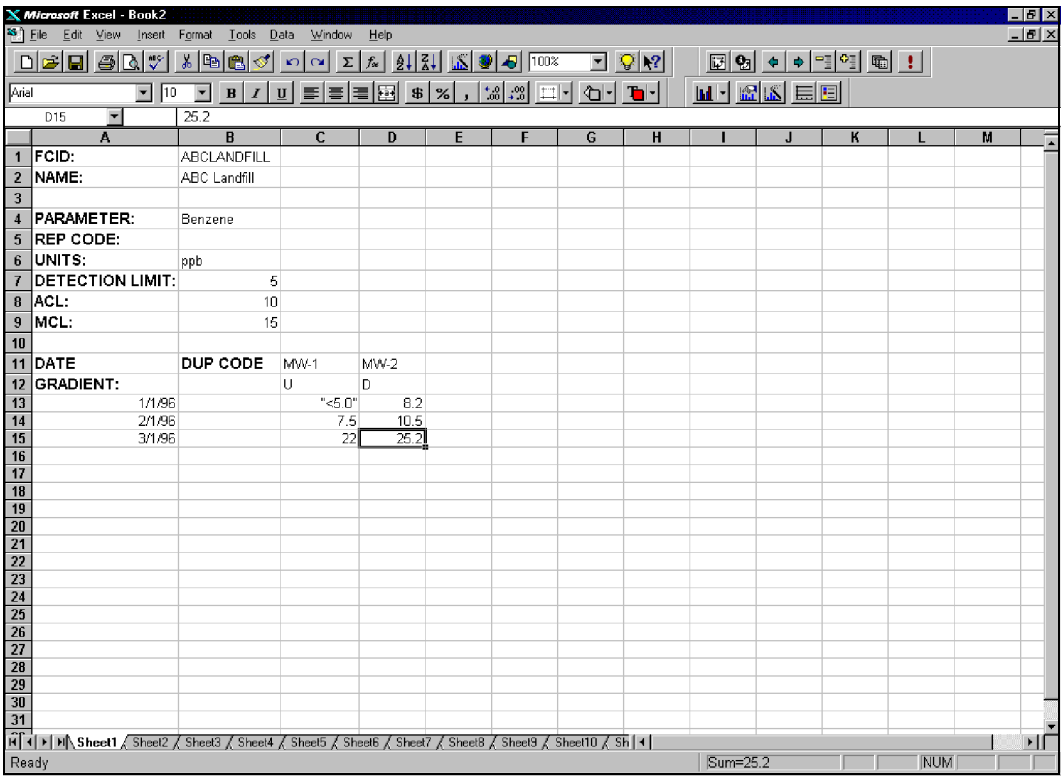


Figure 10-31. The SAGE ASCII file for Benzene from the ground water report in Figure 3-2.

3. Hold the **<Alt>** key down and press **<F>**. The File pull-down menu should appear as shown in Figure 10-32.

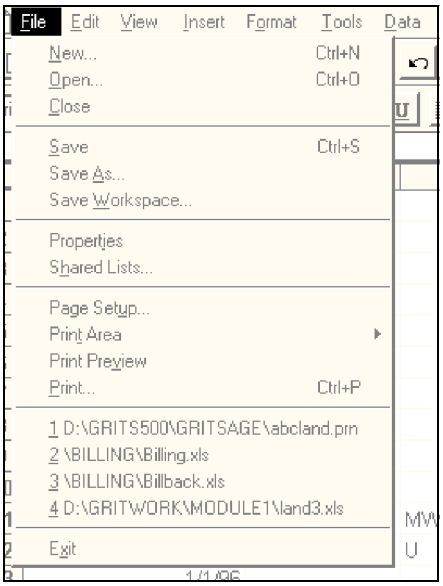


Figure 10-32. The File pull-down menu in Microsoft® Excel.

4. Press the <**A**> key. The Save As dialog appears on your screen as shown in Figure 10-33.

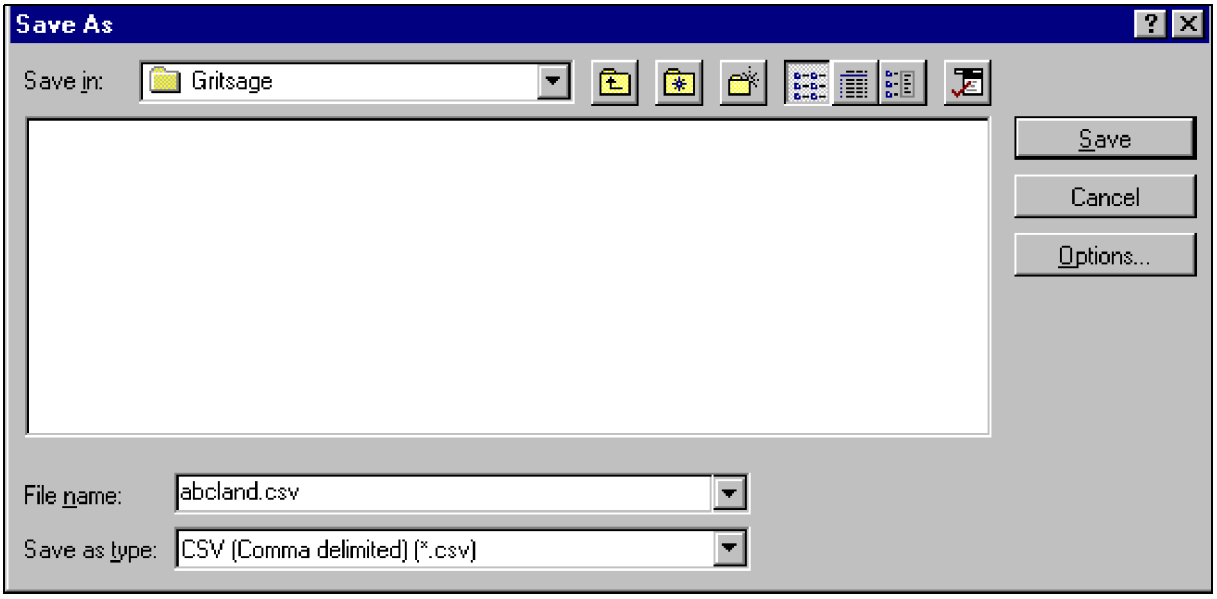


Figure 10-33. The Save As dialog in Microsoft® Excel.

5. Choose the CSV (Comma delimited) (*.csv) option of the Save as type combo-box as shown in Figure 10-33.

6. Enter a valid MS DOS filename in the File name control and press <**Enter**>. The message box shown in Figure 10-33 appears on your screen.

Figure 10-33. Message box that appears in Microsoft® Excel when saving a CSV file.

> ***Note:*** If possible save the CSV file to the \GRITS500\GRITSAGE directory. This will save you time and effort in looking for the file during the SAGE ASCII Import session.

7. Press <**Enter**> or click the OK button. Hold the <**Alt**> key down and press <**F**>. The File pull-down menu appears (Figure 10-32). Press <**X**>. A message box appears on your screen and asks if you want to save your changes. Press <**Enter**> or click the OK button.

10.7.1.3 SAGE ASCII Export

The SAGE ASCII Export option of the ASCII Import, Export menu exports observations for a user-selected parameter to a SAGE ASCII file. This is helpful if you wish to analyze data for a given parameter in an off-the-shelf spreadsheet package.

Follow the instructions below to export **GRITS/STAT** data to a SAGE ASCII file.

1. Use the up and down arrow keys to highlight the ASCII Import, Export... option of the Data System Main Menu (Figure 10-2) and press <**Enter**>. The ASCII Import, Export Menu appears on your screen as shown in Figure 10-24.

2. Use the up and down arrow keys to highlight the SAGE ASCII Export option of the ASCII Import, Export Menu and press <**Enter**>. The ASCII EXPORT dialog (Figure 10-34) appears on your screen.

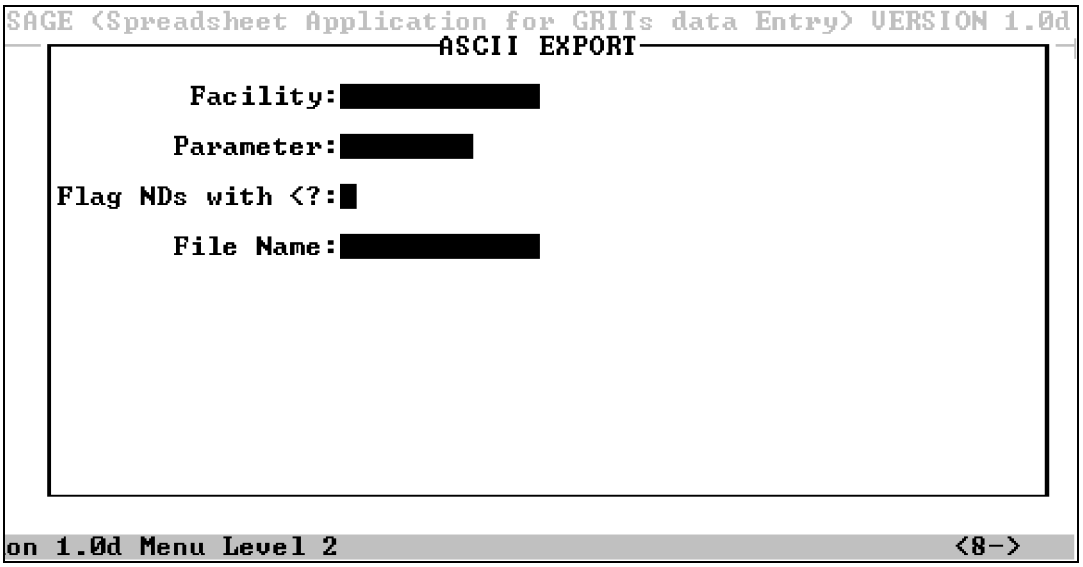


Figure 10-34. The ASCII EXPORT dialog.

3. Press **<Enter>**. A pop-up list of facilities in the currently selected data directory appears on your screen (Figure 10-35). Use the up and down arrow keys to highlight the Facility that you want to export ground water data from and press **<Enter>**. The cursor will advance to the Parameter entry.

If the desired facility does not appear it is probably in another data directory (See Section 10-4).

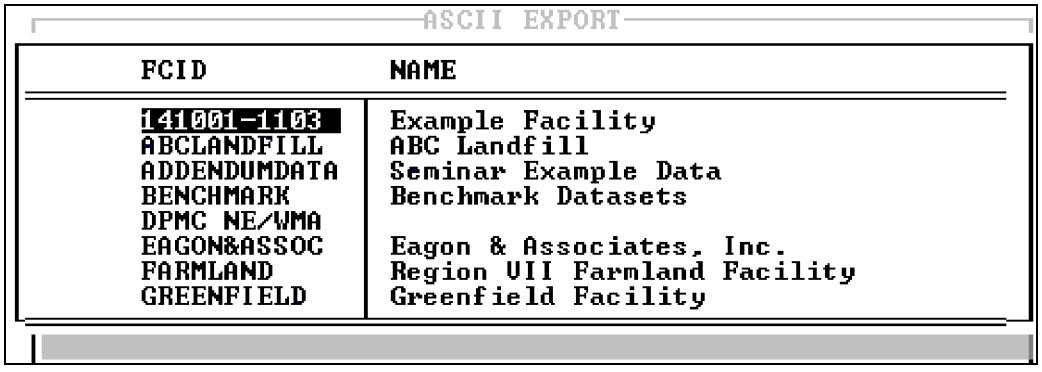


Figure 10-35. The Facility pop-up list for the \GRITS500\SEMINAR5 data directory.

4. Press <**Enter**>. A pop-up list of parameters monitored at the selected facility appears (Figure 10-36). Use the up and down arrow keys to highlight the desired parameter and press <**Enter**>. The cursor will advance to the Flag NDs with<? prompt.

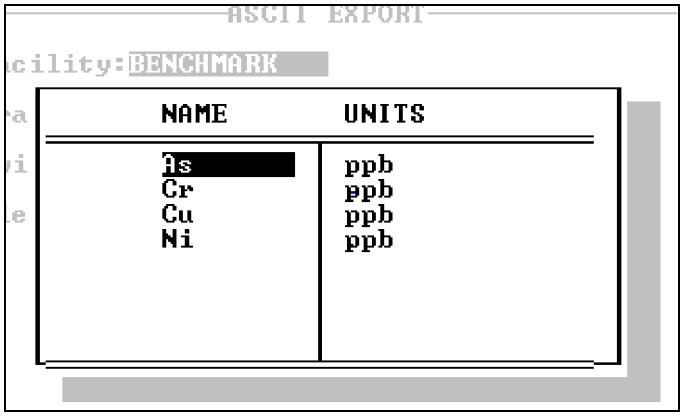


Figure 10-36. The pop-up list of parameters monitored at the BENCHMARK facility.

5. Press <**Enter**>. The pop-up shown in Figure 10-37 appears.

Select the Y - Use < to flag Nondetects in ASCII Export File to export nondetects as "<*DL*" where *DL* is the detection limit used for the observation.

Select the N- Write Nondetects as one-half observation detection limit to export nondetects as ½*DL* where *DL* is the detection limit used for the observation. This is useful if you want to do some number-crunching in another package and want to treat nondetects as observations with a value equal to one-half the observation detection limit. (This is how nondetects are handled in the **GRITS Statistics** modules).

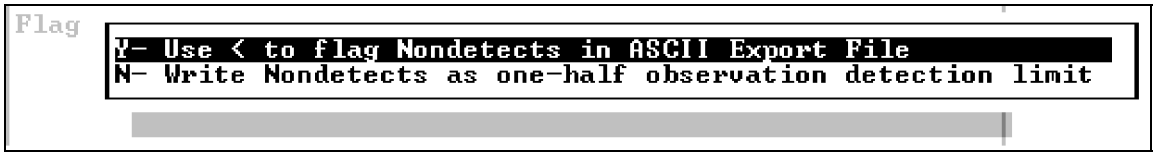


Figure 10-37. The nondetects options for the Flag NDs with <? prompt.

Use the up and down arrow keys to highlight the desired option and press <**Enter**>. The cursor advances to the File Name prompt.

6. Type in a legal MS DOS file name and press <**Enter**>. A SAGE ASCII file is generated in the \GRITS500\GRITSAGE directory.

   Note: Use a CSV, TXT or PRN extension when naming your SAGE ASCII file.

10.7.1.4 Loading a SAGE ASCII file in Microsoft® Excel

This section contains instructions for loading a SAGE ASCII file in Microsoft® Excel Version 7. While the instructions are specific to Excel, there should be a similar procedure in other spreadsheet packages.

1. Start Microsoft® Excel.

2. Hold the <**Alt**> key down and press <**F**> or click the File menu. The File pull-down menu (Figure 10-32) should appear.

3. Press <**O**> or click the Open... option of the File menu. The Open dialog (Figure 10-38) appears on your screen.

   Select the \GRITS500\GRITSAGE folder in the Look in combo-box.

   Select Text Files (*.prn, *.txt, *.prn) in the Files of type: combo-box.

   Double-click the SAGE ASCII file that you want to open. The Text Import Wizard dialog (Figure 10-39) appears on your screen.

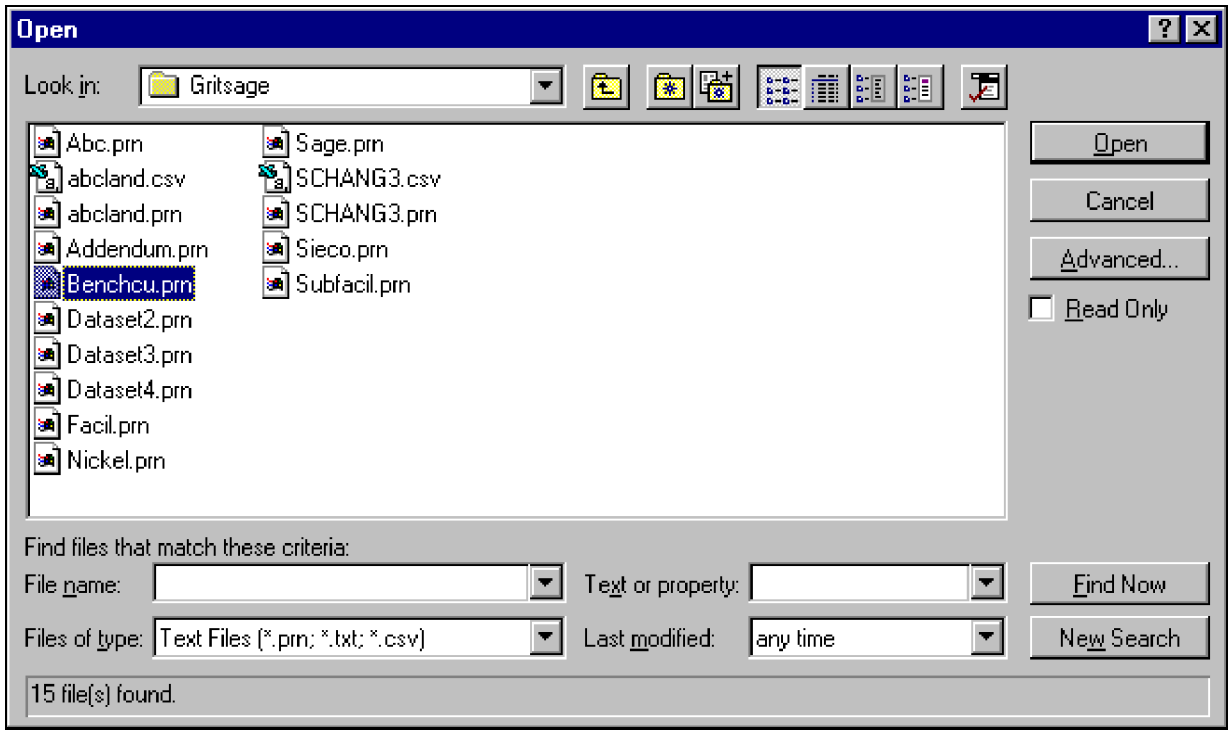


Figure 10-38. The Open dialog in Microsoft® Excel.

4. Click the Delimited radio button in the Original Data Type group box and click the Next > button. Step 2 of the Text Import Wizard dialog will appear on your screen (Figure 10-40).

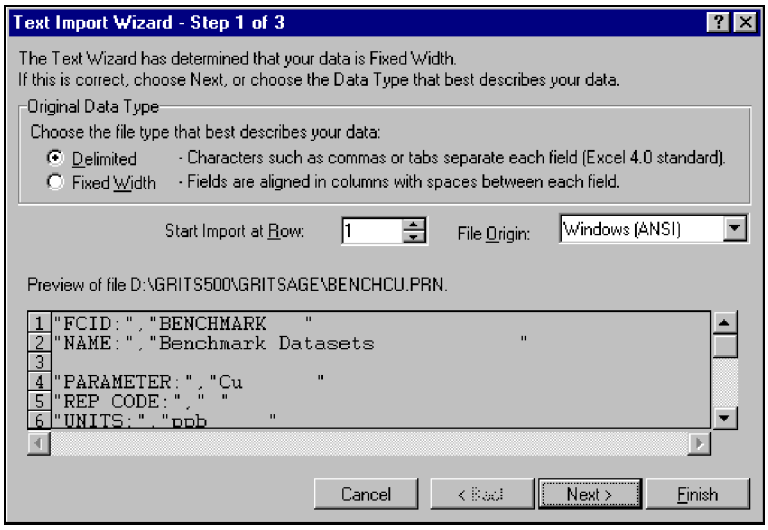


Figure 10-39. Step 1 of the Text Import Wizard dialog.

5. Check the Comma option in the Delimiters group box and click the Finish button. Data from the SAGE ASCII file populates the spreadsheet cells as shown in Figure 10-41.

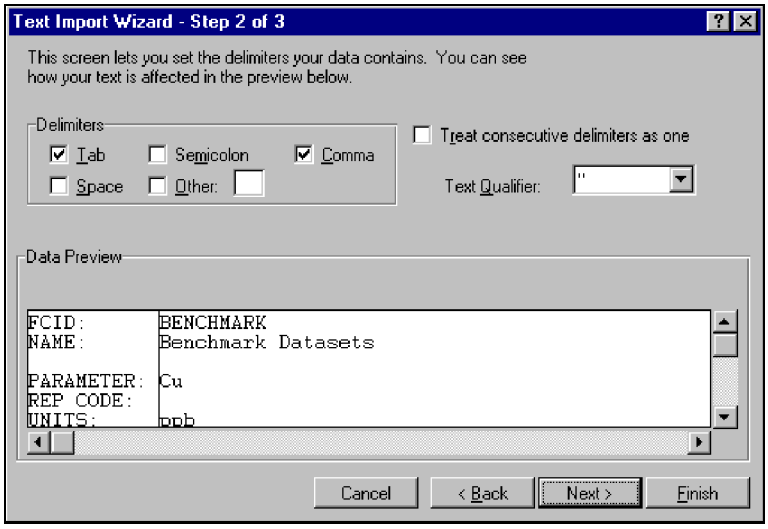
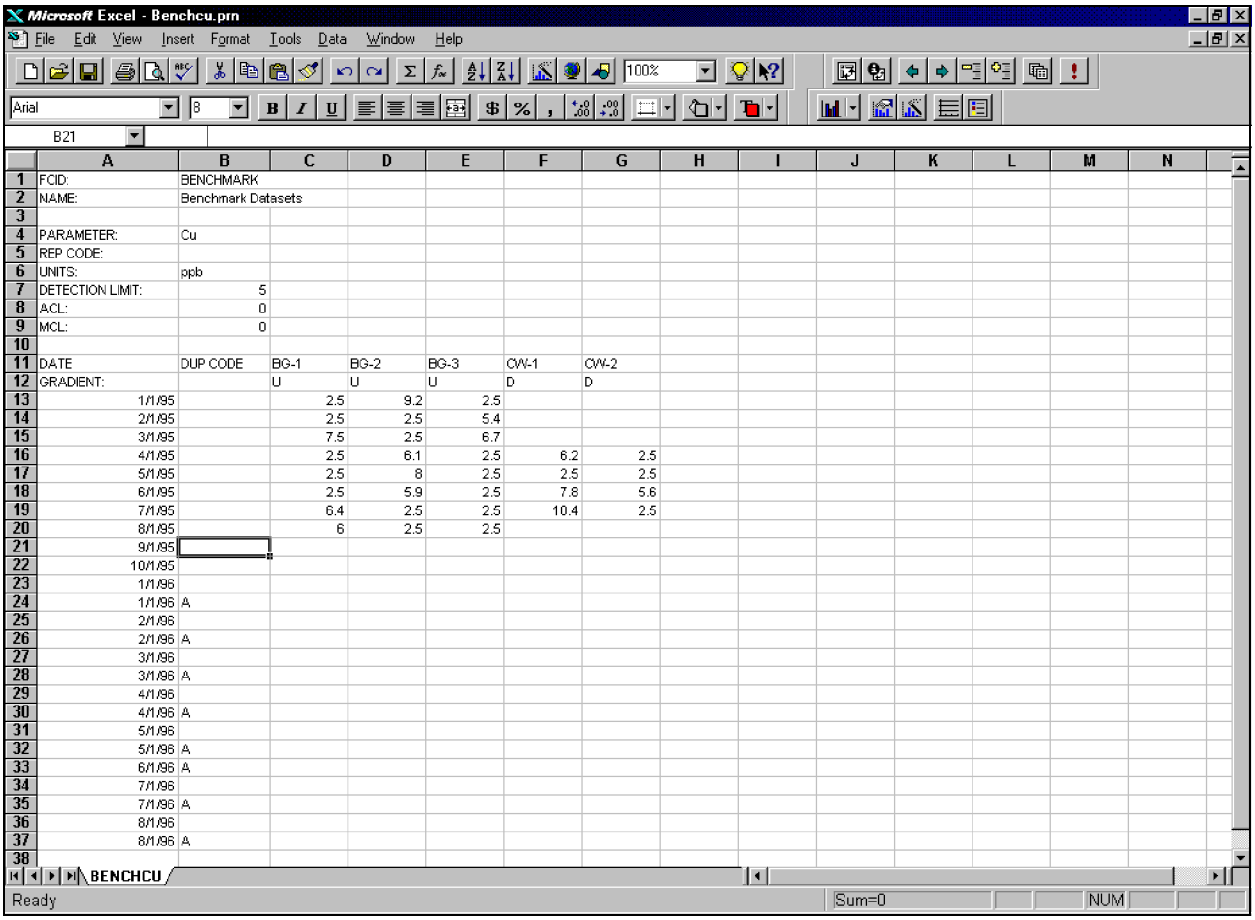


Figure 10-40. Step 2 of the Text Import Wizard.

6. Once the data is loaded in the spreadsheet, it may be analyzed or formatted for publication quality. For instructions on formatting and analyzing data see your spreadsheet's documentation.



	A	B	C	D	E	F	G
1	FCID:	BENCHMARK					
2	NAME:	Benchmark Datasets					
3							
4	PARAMETER:	Cu					
5	REP CODE:						
6	UNITS:	ppb					
7	DETECTION LIMIT:	5					
8	ACL:	0					
9	MCL:	0					
10							
11	DATE	DUP CODE	BG-1	BG-2	BG-3	CW-1	CW-2
12	GRADIENT:		U	U	U	D	D
13	1/1/95		2.5	9.2	2.5		
14	2/1/95		2.5	2.5	5.4		
15	3/1/95		7.5	2.5	6.7		
16	4/1/95		2.5	6.1	2.5	6.2	2.5
17	5/1/95		2.5	8	2.5	2.5	2.5
18	6/1/95		2.5	5.9	2.5	7.8	5.6
19	7/1/95		6.4	2.5	2.5	10.4	2.5
20	8/1/95		6	2.5	2.5		
21	9/1/95						
22	10/1/95						
23	1/1/96						
24	1/1/96	A					
25	2/1/96						
26	2/1/96	A					
27	3/1/96						
28	3/1/96	A					
29	4/1/96						
30	4/1/96	A					
31	5/1/96						
32	5/1/96	A					
33	6/1/96	A					
34	7/1/96						
35	7/1/96	A					
36	8/1/96						
37	8/1/96	A					
38							

Figure 10-41. Data from a SAGE ASCII file loaded in a Microsoft® Excel spreadsheet.

10.7.1.5 SAGE ASCII Import

The SAGE ASCII Import option of the ASCII Import, Export menu is used to import data from SAGE ASCII files into the GRITS Databases in the currently selected directory. To import an existing SAGE ASCII file follow the steps below. For information on creating SAGE ASCII files see sections 10.7.1.1 and 10.7.1.2.

1. At the GRITS SAGE Data System Main Menu (Figure 10-2) use the up and down arrow keys to highlight the ASCII Import, Export... option and press <**Enter**>. The ASCII Import, Export Menu (Figure 10-24) appears on your screen.

2. Use the up and down arrow keys to highlight the SAGE ASCII Import option and press <**Enter**>. The File Selection pop-up appears as shown in Figure 10-42. Table 10-3 describes the key strokes used in the File Selection pop-up for choosing a file to import.