15 Disk Files

Users of the online data service have access to data files containing text information, data and graphics. These files can come from two different sources. The first source of such files is the data base modules which will store data retrievals or graphical displays as disk files at the option of the user. These files are stored in disk space allocated to users of a given authorization code. The second source of data file accessible to the user is the anonymous FTP area which contains documents, computer program sources, and miscellaneous data bases not accessible from the online data base retrieval modules.

This chapter describes in detail the various options available for accessing these disk files. All of these options are activated by first selecting the FILES menu item in the master menu. The FILES options are given in the illustration below. Users without full authorization, that is those using the GUEST authorization code, do not have access to these options.

User-generated data files are purged after five days; graphics files after two days.

Files Option Selection Menu

NNDC Online Data Service

Full Use Authorization **DEC-VT Terminal** **132 by 24**

DATA BASES **UTILITIES** **FILES** **PROBLEM** **HELP** **LOGOUT**

DIRECTORY	-	Display a list of user created files,
VIEW	-	Display contents of a user created file,
SEND	-	Transmit user created files to another computer,
DELETE	-	Delete user created files,
CODES	-	Download computer program source code,
DOCUMENTS	-	Download online data service and other documentation,
LIBRARIES	-	Download complete nuclear data libraries,
DONE	-	Return to the master menu,
LOGOUT	-	Terminate access to the online data service.

15.1 User-Generated Files

User-generated disk files contain either data or graphic information. The format of the data files depends on the data base from which the information was retrieved and the user selected output format. All graphic data files are in PostScript format. The user has four options for accessing these files, DIRECTORY, VIEW, SEND, and DELETE. In all cases, the user is asked to supply a file specification. If the specification is blank, all files will be selected. The file specification may contain multiple character wildcards (*) or single character wildcards (%). Some examples are

```
U237.ENSDF          *.PS          U*.EN%%
```

All files matching the input file specification are displayed in a scrolling window. If no matching files are found, a message is displayed.

15.1.1 DIRECTORY

The DIRECTORY option simply displays the names, sizes and creations dates of the user generated files matching the input criteria in a scrolling window. The user can navigate through the list with the FORWARD, BACKWARD, START, or END menu items when the list is too large to fit into a single window. When finished, selecting the DONE menu item will return the user to the FILES menu.

15.1.2 VIEW

The VIEW option allows the user to look at the contents of one or more files which have been generated. After entry of the file selection criteria, the names, sizes and creation dates of the files matching the selection criteria are displayed in a scrolling window as with the DIRECTORY option output. However, there are three menu items which allow for the selection of one or more files to be displayed on the user's terminal. The selecting the CHOOSE menu item allows the user to choose files to be processed preserving any prior selections. By selecting the ALL or NONE menu item, the user can also select files with all files initially selected or all files initially not selected, respectively.

Video In video mode, the current file is highlighted. Use the UP_ARROW and DOWN_ARROW keys to make another file current. Use the RETURN key to toggle between selected and unselected status for a the current file. A selected file is displayed as underlined bold-characters. An unselected file is displayed in normal characters. When all desired files have been selected, press the X-key to exit from the selection mode.

Sequential In sequential mode, all files are displayed in the scrolling window with a sequence number for unique file identification. For selected files, the sequence number is preceded by an asterisk. In selection mode, the user is asked to select files one at a time by entering the file's sequence number. A negative number will unselect that file. A blank or zero will terminate the selection mode.

The scroll window menu returns again on exit from the selection process. One can once again select CHOOSE, ALL or NONE to modify the list of selected files. Select the DONE menu option when ready to VIEW the selected files.

Each file is displayed one at a time in a scrolling window. The specification for the file being displayed is given in the window header. The normal scrolling window menu of FORWARD, BACKWARD, START, and END can be used to view the file. Records which are more than 80-characters long are broken at the eightieth character and displayed on two lines with the second line indented. To go on to the next selected file, select the DONE menu option. To interrupt the option before all files have been viewed, select the QUIT menu option.

15.1.3 SEND

The SEND option allows the user to transmit one or more files which have been generated to another computer. Five protocols are available for transmitting the file. The table below shows these protocols and availability from the NNDC and NDS online services.

	NNDC	NDS
INTERNET	x	x
OPEN	x	x
KERMIT	x	

After entry of the file selection criteria, the names, sizes and creation dates of the files matching the selection criteria are displayed in a scrolling window as with the DIRECTORY option output. However, there are three menu items which allow for the selection of one or more files to be transmitted. Selecting the CHOOSE menu item allows the user to choose files to be processed preserving any prior selections. By selecting the ALL or NONE menu item, the user can also select files with all files initially selected or all files initially not selected, respectively.

The file selection process is identical to that described in the VIEW option above. When selection has been completed, the user is given a menu to select the method of transmission. As indicated above, the methods available are different in the different online services. The same transmission method is used for all selected files. You must select the SEND option for each different transmission mode desired.

An input form is displayed for each file to be transmitted using the selected mode. Displayed above the form is the name of the file being transmitted, the number of records and the number of bytes contained in the file. The form has been initialized with any default information. This default information is initially based on the machine code and account name specified for file transfer for the user's authorization code. This information can be temporarily or permanently modified using the CUSTOMIZE option (see Section ??). Any successful file transmission will reset the default values for the remainder of the session. Defaults for password and file directory are set in this manner. The destination file name is always initialized to the source file name.

INTERNET

This file transfer method uses the TCP/IP standard file transfer protocol via FTP. At the present time, only ASCII file transfer is permitted from the online service. For the security conscious, this method requires transmission of a password over the networks. Another method for transfer without sending a password on the network, OPEN, is described below. A typical video display for INTERNET file transfer follows.

```
NNDC Online Data Service
FILES   SEND

SEND    CSISRS_PLOT.PS;1          Records=875       Bytes=35028

                  INTERNET Destination Information
  Machine Code    bnlnd2.dne.bnl.gov
  Account Name    RYAN
  Password        XXXXXX
  Directory
  File Name       CSISRS_PLOT.PS
  OK/QUIT         OK

    Enter the user name or account name in proper format.

          For example:    WILLIAMS  or  P1387,  etc.

Use the UP- and DOWN-ARROWS to move between fields.
```

If the default file transmission parameters need to be changed, select the fields and enter the changes before selecting "OK" to initiate the file transfer. The INTERNET node designation should be entered in the Machine Code field. Either the alphanumeric form (BNLND2.DNE.BNL.GOV) or the numeric form (130.199.112.132) are acceptable. The user Account Name and Password should conform to the requirements of the receiving computer. If there is no password, leave that field blank. The directory and file names must conform to the conventions of the operating system on the receiving computer. For VMS operating systems, use a period (.) to separate directory levels; for UNIX use a slash (/); and for DOS use a backslash (\). A blank directory indicates that the default directory is to be used.

File transmission is initiated by selecting the OK/QUIT field and pressing RETURN with OK in the field. The success or failure of the transmission is indicated. Failure is most likely caused by a bad transmission parameter or by the receiving computer being down or having inadequate free disk storage. If QUIT is selected in the OK/QUIT when a RETURN is entered, the file will not be transmitted. A prompt window will appear asking whether to continue to process the next file or whether to skip processing any remaining file selections.

OPEN

Special FTP accounts have been set up on the NNDC and the NDS computers from which users can "get" files which have been produced during an online data service session. The account names are NDCONL at NNDC and NDSONL at IAEA/NDS. These accounts have no password and are read only. Retrieving a file from this account does not require transmission of any password over the INTERNET. Selected files are copied one at a time from the user's storage to this "open" storage. The user may change the file name in the OPEN area as illustrated below. If a file with the same name including version number exists already in the OPEN area, it is replaced. Since it is expected that the user will retrieve these files as soon as his current session is finished, the files are deleted six hours after creation.

```
                         NNDC Online Data Service
FILES   SEND
---------------------------------------------------------------------
SEND    XRAY.WATER;1              Records=2572       Bytes=350280

                      COPYing file to the OPEN Area

  New File Name : [XRAY.H2O                  ]
```

KERMIT

This file transfer method uses the SEND option of the KERMIT protocol for file transfer. It is available only in the NNDC online service. This capability has been maintained primarily for those users who continue to access the service *via* modem; however, it may also be used with network connections. The INTERNET file transfer method is preferred and the future availability of KERMIT at NNDC can not be guaranteed. Use of this file transfer method requires a terminal emulator which supports at least the RECEIVE option of the KERMIT protocol (*e.g.*, MS-DOS KERMIT 3.11 or Microsoft Windows Terminal). There are no additional input requirements for the service. A typical video display for KERMIT file transfer follows.

```
                         NNDC Online Data Service
FILES   SEND

SEND    CF252.ADECAY;1              Records=2572      Bytes=350280

                     KERMIT SENDing to user's computer

        Escape to local and RECEIVE.
```

Upon seeing the message “Escape to local and RECEIVE”, follow the method required by the local terminal emulator to do this. Two examples are:

MS-DOS KERMIT 3.11	
Alt-x	Hold down the Alt key and press the x key
MS-Kermit> receive	Receive the file from the online data service
MS-Kermit> connect	Get back to the service when the file is transferred

MS Windows Terminal		
Settings	Binary Transfers	Select Kermit
Transfers	Receive Binary File	Specify local file name and directory

The progress of the file transfer will be monitored and displayed by the local KERMIT.

Upon completion of the file transfer a prompt window will appear asking whether to continue to process the next file or whether to skip processing any remaining file selections.

15.1.4 DELETE

The DELETE option allows the user to delete one or more files which have been stored in the user's disk storage. After entry of the file selection criteria, the names, sizes and creation dates of the files matching the selection criteria are displayed in a scrolling window as with the DIRECTORY option output. However, there are three menu items which allow for the selection of one or more files to be displayed on the user's terminal. The selecting the CHOOSE menu item allows the user to choose files to be processed preserving any prior selections. By selecting the ALL or NONE menu item, the user can also select files with all files initially selected or all files initially not selected, respectively.

The file selection process is identical to that described in the VIEW option above. When file selection has been completed, the files are processed one at a time. A confirmation window appears for each selected file until each file has been processed. If the response is YES, then the file is deleted; if NO the file is not deleted.

15.2 Data Center Supplied Files

The NNDC and NDS store in computerized format a number of documents, computer programs and non-searchable data collections. This collection is continually being revised and augmented. These files are available for retrieval and transmission from the online service as well as from the FTP anonymous account. The selected files are transmitted as described above in the SEND option. A single selection may imply more than one related file. In such cases the file selection list will include each of theses files. Should the user not wish to transmit all of the related files, individual file selection can be done at the transmission prompt for each file.

15.2.1 CODES

The CODES option allows selection and downloading of computer code source programs maintained and distributed the data center. Four categories of computer codes are currently offered. They are all related to processing of ENDF and ENSDF format data files. The user must select one of these categories from the first menu presented in this option.

ENSDF_ ANALYSIS	-	Programs to process ENSDF format files and produced derived physics results.
ENSDF_UTILITY	-	Programs to check, list and plot files in ENSDF format.
ENDF_ PREPRO	-	Programs to process ENDF format files including plotting, pointwise and doppler broadened data files, and general utilities maintained by Dermott Cullen (LLNL).
ENDF_UTILITY	-	Programs to check, list and plot and ENDF format data file.

MOST computer programs are available in two versions, one containing only ANSI-77 standard Fortran source code and the other containing source code with VAX/VMS extensions to ANSI-77 Fortran. The next menu allows selection of source code type. In those cases where only on source code is available, then that version will be transmitted irrespective of the source code type selection.

Next a list of programs and documentation for the selected category of computer codes is displayed in a scrolling window from which one or more codes can be selected. In addition to the scrolling menu items, there are three menu items which allow for the selection of one or more codes from the code list. Selecting the CHOOSE menu item allows the user to choose codes to be processed preserving any prior selections. By selecting the ALL or NONE menu item, the user can also select codes with all codes initially selected or all codes initially not selected, respectively.

Computer Code Selection Menu

NNDC Online Data Service

FILES CODES **SELECT_FILES**

ENDF Utility Programs

The following programs are written to process ENDF format evaluated data files. They will process either ENDF-5 or ENDF-6 format files. These files are also available via a standard ftp account (BNLND2.DNE.BNL.GOV).

DOCUMENTATION	-	28-Feb-96	Utility code documentation in PostScript
STANEF 6.10	-	14-Dec-95	Converts ENDF file to standard format
CHECKR 6.10	-	14-Dec-95	ENDF format checking code
FIZCON 6.10.1	-	25-Feb-96	ENDF procedure checking code
PSYCHE 6.10	-	14-Dec-95	ENDF physics checking code
LISTEF 6.10	-	14-Dec-95	Creates summary and annotated listings
PLOTEF 6.10.1	-	28-Feb-96	Plots ENDF data
GETMAT 6.10	-	14-Dec-95	Retrieves ENDF evaluation from a file
INTER 6.10	-	14-Dec-95	Calculates standard cross section values
SETMDC 6-15	-	14-Dec-95	Converts machine dependent code

CHOOSE **ALL** **NONE** **DONE**

CHOOSE - Select one or more items from the list.

The code selection process is identical to that described in the VIEW option above. When selection has been completed, the user is given a menu to select the method of transmission. The same transmission is used for all selected codes. The files associated with the codes selected are then transferred according to the transmission method selected as described under the SEND option above.

15.2.2 DOCUMENTS

The DOCUMENTS option allows selection and downloading of PostScript formatted documents maintained and distributed the data center. Three categories of documents are currently offered. The user must select one of these categories from the first menu presented in this option.

ONLINE	-	Sections of the online service and related documentation.
STRUCTURE	-	Documents on nuclear structure and related data bases.
ENDF	-	Documents relating to the evaluated nuclear data system.
REACTION	-	Documents on nuclear reactions and related data bases.

Next a list of documents for the selected document category is displayed in a scrolling window from which one or more documents can be selected. In addition to the scrolling menu items, there are three menu items which allow for the selection from the document list. Selecting the CHOOSE menu item allows the user to choose documents to be processed preserving any prior selections. By selecting the ALL or NONE menu item, the user can also select documents with all documents initially selected or all documents initially not selected, respectively. The selection and transmission the selected document files then proceeds just as for the CODES option.

15.2.3 LIBRARIES

The LIBRARIES option allows selection and downloading of nuclear data libraries maintained and distributed the data center. These libraries are offered in the form deposited with the data centers. They are not searchable from the online data service. Two categories of libraries are currently offered. The user must select one of these categories from the first menu presented in this option.

IRDF	-	International Reactor Dosimetry File developed by the IAEA Nuclear Data Section.
MASSES	-	The 1995 edition of the Audi-Wapstra atomic mass evaluation.

Next a list of libraries for the selected library category is displayed in a scrolling window from which one or more files can be selected. In addition to the scrolling menu items, there are three menu items which allow for the selection from the file list. Selecting the CHOOSE menu item allows the user to choose files to be processed preserving any prior selections. By selecting the ALL or NONE menu item, the user can also select files with all files initially selected or all files initially not selected, respectively. The selection and transmission the selected library files then proceeds just as for the CODES option.