		Activate		
		Activate		
PROGRAM ACTIVATE		Activate		
VERS. 2000-1 (APRIL 2000)	*INITIAL VERSION.	Activate		
	*OPTIONAL INPUT PARAMETERS	Activate		
	*CORRECTED ERROR - FIRST RECORD AFTER			
(012.0 _001)	MF=10 WAS MISSING.	Activate		
	*ADDED INCLUDE TO DEFINE COMMON	Activate		
	*INCREASED MAX. POINTS FROM 100,000	Activate		
	TO 1,000,000.	Activate		
	10 1,000,000.	Activate		
A sime all advances to 2004		Activate		
	Acknowledgement 2004			
	Currently almost all improvements to this code are based upon			
	-	Activate		
	o report problems. This feedback	Activate		
	code, and ALL users are encouraged	Activate		
to report problems.		Activate		
		Activate		
-	rsion of this code based on user	Activate		
feedback including,		Activate		
	that the first record of the section	Activate		
after an	inserted MF=10 was missing.	Activate		
		Activate		
OWNED, MAINTAINED AND DISTR	IBUTED BY	Activate		
		Activate		
THE NUCLEAR DATA SECTION		Activate		
INTERNATIONAL ATOMIC ENERGY	AGENCY	Activate		
P.O. BOX 100		Activate		
A-1400, VIENNA, AUSTRIA		Activate		
EUROPE		Activate		
		Activate		
ORIGINALLY WRITTEN BY		Activate		
		Activate		
DERMOTT E. CULLEN		Activate		
UNIVERSITY OF CALIFORNIA		Activate		
LAWRENCE LIVERMORE NATIONAL	LABORATORY	Activate		
L-159				
P.O. BOX 808		Activate		
LIVERMORE, CA 94550		Activate		
U.S.A.		Activate		
TELEPHONE 925-423-7359		Activate		
E. MAIL CULLEN1@LLNL.GOV		Activate		
WEBSITE HTTP://WWW.LLNL.		Activate		
		Activate		
AUTHORS MESSAGE		Activate		
		Activate		
	IS THE LATEST PUBLISHED DOCUMENTATION			
	THE COMMENTS BELOW SHOULD BE CONSIDERED			
	CLUDING ALL RECENT IMPROVEMENTS. PLEASE			
READ ALL OF THESE COMMENTS	DEFORE IMPLEMENTATION.	Activate		
		Activate		
	ATTEMPTING TO DEVELOP A SET OF COMPUTER			
	AN EASILY BE IMPLEMENTED ON ANY ONE	Activate		
	ERS. IN ORDER TO ASSIST IN THIS PROJECT			
	OU WOULD NOTIFY THE AUTHOR OF ANY	Activate		
	COMPILER DIAGNOSTICS, OPERATING PROBLEMS OR SUGGESTIONS ON HOW TO			
	ULLY, IN THIS WAY FUTURE VERSIONS OF			
THIS PROGRAM WILL BE COMPLE	Activate			
COMPUTER.		Activate		
		Activate		
PURPOSE		Activate		
		Activate		
	CREATE FILE 10 ACTIVATION CROSS	Activate		
SECTIONS BY COMBINING FILE	3 CROSS SECTIONS AND FILE 9 MULTIPLIERS	Activate		
		Activate		
IN THE FOLLOWING DISCUSSION	FOR SIMPLICITY THE ENDF/B TERMINOLOGY	Activate		
	FOR SIMPLICITY THE ENDF/B TERMINOLOGY ED. IN FACT THE ACTUAL MEDIUM MAY BE	Activate Activate		
	ED. IN FACT THE ACTUAL MEDIUM MAY BE			
ENDF/B TAPEWILL BE US	ED. IN FACT THE ACTUAL MEDIUM MAY BE	Activate		
ENDF/B TAPEWILL BE US	ED. IN FACT THE ACTUAL MEDIUM MAY BE	Activate Activate		

IT IS ASSUMED THAT THE FILE 3 AND 9 DATA HAVE BEEN LINEARIZED	Activate
BEFORE THIS CODE IS USED - FILE 3 AND 9 DATA CAN BE LINEARIZED	Activate
USING PROGRAM LINEAR.	Activate
	Activate
IT IS ASSUMED THAT THE FILE 9 MULTIPLIERS ARE FAIRLY SMOOTH VERSUS ENERGY, AND THAT THE ACTIVATION CROSS SECTIONS FOR FILE 10 CAN BE	Activate Activate
DEFINED AT EXACTLY THE SAME ENERGIES AS THE FILE 3 CROSS SECTIONS,	
AND THAT THESE NEED MERELY BE MULTIPLIED BY THE FILE 9 TO DEFINE	Activate
THE FILE 10 ACTIVATION CROSS SECTIONS.	Activate
	Activate
ENDF/B FORMAT	Activate
	Activate
THIS PROGRAM ONLY USES THE ENDF/B BCD OR CARD IMAGE FORMAT (AS	Activate
OPPOSED TO THE BINARY FORMAT) AND CAN HANDLE DATA IN ANY VERSION	Activate
OF THE ENDF/B FORMAT (I.E., ENDF/B-I, II,III, IV, V OR VI FORMAT).	Activate
	Activate
IT IS ASSUMED THAT THE DATA IS CORRECTLY CODED IN THE ENDF/B	Activate
FORMAT AND NO ERROR CHECKING IS PERFORMED. IN PARTICULAR IT IS	Activate
ASSUMED THAT THE MAT, MF AND MT ON EACH LINE IS CORRECT. SEQUENCE	Activate
NUMBERS (COLUMNS 76-80) ARE IGNORED ON INPUT, BUT WILL BE	Activate
CORRECTLY OUTPUT ON ALL LINES. THE FORMAT OF SECTION MF=1, MT=451 AND ALL SECTIONS OF MF=3 MUST BE CORRECT. THE PROGRAM COPIES ALL	Activate
AND ALL SECTIONS OF MF=3 MUST BE CORRECT. THE PROGRAM COPIES ALL OTHER SECTION OF DATA AS HOLLERITH AND AS SUCH IS INSENSITIVE TO	Activate Activate
THE CORRECTNESS OR INCORRECTNESS OF ALL OTHER SECTIONS.	Activate
THE CORRECTRED OF THEORED OF ALL OTHER DECITORD.	Activate
OUTPUT FORMAT	Activate
	Activate
ALL ENERGIES WILL BE OUTPUT IN F (INSTEAD OF E) FORMAT IN ORDER	Activate
TO ALLOW ENERGIES TO BE WRITTEN WITH UP TO 9 DIGITS OF ACCURACY.	Activate
COMPARISON OF THE NORMAL ENDF/B CONVENTION OF 6 DIGITS TO THE 9	Activate
DIGIT OUTPUT FROM THIS PROGRAM DEMONSTRATED THAT FAILURE TO USE	Activate
THE 9 DIGIT OUTPUT CAN LEAD TO LARGE ERRORS IN THE DATA DUE TO	Activate
TRUNCATION OF ENERGIES TO 6 DIGITS DURING OUTPUT.	Activate
	Activate
CONTENTS OF OUTPUT	Activate
	Activate
ENTIRE EVALUATIONS ARE OUTPUT, NOT JUST THE PROCESSED DATA, E.G., ANGULAR AND ENERGY DISTRIBUTIONS ARE ALSO INCLUDED.	Activate Activate
ANGOLAR AND ENERGI DISTRIBUTIONS ARE ALSO INCLUDED.	Activate
DOCUMENTATION	Activate
	Activate
THE FACT THAT THIS PROGRAM HAS OPERATED ON THE DATA IS DOCUMENTED	Activate
BY THE ADDITION OF 3 COMMENT LINES AT THE END OF EACH HOLLERITH	Activate
SECTION IN THE FORM	Activate
	Activate
****************** PROGRAM ACTIVATE (2004-1) ************************************	Activate
FILE 10 ACTIVATION CROSS SECTIONS HAVE BEEN DEFINED BY COMBINING	Activate
FILE 3 CROSS SECTIONS AND FILE 9 MULTIPLIERS. FILE 9 DELETED.	Activate
	Activate
THE ORDER OF SIMILAR COMMENTS (FROM RECENT, SIGMAL AND GROUPIE)	Activate
REPRESENTS A COMPLETE HISTORY OF ALL OPERATIONS PERFORMED ON THE DATA BY THESE PROGRAMS.	Activate Activate
THE DATA DI THESE FROGRAD.	Activate
THESE COMMENT LINES ARE ONLY ADDED TO EXISTING HOLLERITH SECTIONS,	
I.E., THIS PROGRAM WILL NOT CREATE A HOLLERITH SECTION. THE FORMAT	
OF THE HOLLERITH SECTION IN ENDF/B-V DIFFERS FROM THE THAT OF	Activate
EARLIER VERSIONS OF ENDF/B. BY READING AN EXISTING MF=1, MT=451	Activate
IT IS POSSIBLE FOR THIS PROGRAM TO DETERMINE WHICH VERSION OF	Activate
THE ENDF/B FORMAT THE DATA IS IN. WITHOUT HAVING A SECTION OF	Activate
MF=1, MT=451 PRESENT IT IS IMPOSSIBLE FOR THIS PROGRAM TO	Activate
DETERMINE WHICH VERSION OF THE ENDF/B FORMAT THE DATA IS IN, AND	Activate
AS SUCH IT IS IMPOSSIBLE FOR THE PROGRAM TO DETERMINE WHAT FORMAT	
SHOULD BE USED TO CREATE A HOLLERITH SECTION.	Activate
	Activate
REACTION INDEX	Activate
THIS PROGRAM DOES NOT USE THE REACTION INDEX WHICH IS GIVEN IN	Activate Activate
SECTION MF=1, MT=451 OF EACH EVALUATION.	
	Activate
THIS PROGRAM DOES NOT UPDATE THE REACTION INDEX IN MF=1, MT=451.	
	Activate Activate

REQUIRE A CORRECT REACTION INDEX FOR THEIR APPLICATIONS AND IT WAS Activate NOT CONSIDERED WORTHWHILE TO INCLUDE THE OVERHEAD OF CONSTRUCTING Activate A CORRECT REACTION INDEX IN THIS PROGRAM. HOWEVER, IF YOU REQUIRE Activate A REACTION INDEX FOR YOUR APPLICATIONS, AFTER RUNNING THIS PROGRAM Activate YOU MAY USE PROGRAM DICTIN TO CREATE A CORRECT REACTION INDEX. Activate Activate SECTION SIZE Activate Activate SECTIONS OF MF=9 MULTIPLIERS ARE LIMITED TO A MAXIMUM OF 10,000 Activate ENERGY POINTS. Activate Activate THERE IS NO LIMIT ON THE NUMBER OF ENERGY POINTS IN MF=3 AND 10 Activate TABLES. Activate Activate SELECTION OF DATA Activate Activate ------THE PROGRAM PROCESSES ALL ENDF/B DATA ON A SERIES OF ENDF/B TAPES. Activate Activate PROGRAM OPERATION Activate \_\_\_\_\_ Activate PASS #1 Activate Activate THE ENTIRE MAT IS COPIED TO A SCRATCH FILE IN THE ENDF/B ASCII Activate FORMAT AND WHILE COPYING IT TO SCRATCH MF=3, 9, AND 10 ARE ALSO Activate COPIED TO SEPERATE SCRATCH FILES, I.E., THERE ARE A TOTAL OF 4 Activate SCRATCH FILES - SEE THEIR DEFINITIONS BELOW. Activate Activate PASS #2 Activate Activate IF NO MF=9 MULTIPLIERS ARE FOUND DURING PASS #1, THE ENTIRE MAT Activate IS COPIED FROM SCRATCH TO THE OUTPUT FILE, WITHOUT ANY CHECKS. Activate Activate IF MF=9 MULTIPLIERS ARE FOUND THEY ARE USED WITH MF=3 CROSS Activate SECTIONS TO CREATE MF=10 ACTIVATION CROSS SECTIONS. Activate Activate FOR ANY SECTION OF MF=10 DATA FOR WHICH NO MF=9 MULTIPLIERS ARE Activate FOUND, THE ORIGINAL MF=10 IS OUTPUT. Activate Activate FOR CONSISTENCY ALL MF=9 MULTIPLIERS ARE DELETED, I.E., THEY ARE Activate NOT INCLUDED IN THE OUTPUT. Activate Activate KEEP EVALUATED DATA POINTS Activate Activate THE FILE 10 OUTPUT WILL BE AT EXACTLY THE SAME ENERGY POINTS AS Activate THE FILE 3 CROSS SECTIONS USED TO DEFINE THE FILE 10 ACTIVATION Activate CROSS SECTIONS. Activate Activate INPUT FILES Activate Activate \_\_\_\_\_ UNIT DESCRIPTION Activate Activate ---------2 INPUT LINES (BCD - 80 CHARACTERS/RECORD) Activate 10 ORIGINAL ENDF/B DATA (BCD - 80 CHARACTERS/RECORD) Activate Activate OUTPUT FILES Activate \_\_\_\_\_ Activate UNIT DESCRIPTION Activate \_\_\_\_\_ Activate ----3 OUTPUT REPORT (BCD - 120 CHARACTERS/RECORD) Activate 11 FINAL ENDF/B DATA (BCD - 80 CHARACTERS/RECORD) Activate Activate SCRATCH FILES Activate Activate UNIT DESCRIPTION Activate Activate ----\_\_\_\_\_ 12 SCRATCH FILE FOR ALL MAT (BCD - 80 CHARACTERS/RECORD) Activate 14 SCRATCH FILE FOR MF=3 DATA (BCD - 80 CHARACTERS/RECORD) Activate 15 SCRATCH FILE FOR MF=9 DATA (BCD - 80 CHARACTERS/RECORD) Activate 16 SCRATCH FILE FOR MF=10 DATA (BCD - 80 CHARACTERS/RECORD) Activate Activate

OPTIONAL STANDARD FILE NAMES (SEE SUBROUTINE FILEIO)

Activate

				3	
		FILE N		Activate Activate	
				Activate	
	-	ACTIVATE.INP			
		ACTIVATE.LST			
		ENDFB.		Activate	
		ENDFB.		Activate	
	12 (SCRATCH)			Activate Activate	
	14 (SCRATCH) 15 (SCRATCH)			Activate	
	15	(SCRAI)			
	TNIDIIM			Activate Activate	
	INPUT PARAMETERS				
				Activate	
		COT C		Activate	
			DESCRIPTION	Activate	
				Activate	
	1	T-00	ENDF/B INPUT DATA FILENAME	Activate	
	•	1 60	(STANDARD OPTION = ENDFB.IN)	Activate	
	2	T-00	ENDF/B OUTPUT DATA FILENAME	Activate	
			(STANDARD OPTION = ENDFB.OUT)	Activate	
				Activate	
			F PAIRS OF INPUT LINES MAY BE USED, TO PROCESS ANY	Activate	
	NUMBE	R OF EN.	DF/B TAPES, ONE AFTER ANOTHER.	Activate	
				Activate	
			T NO. 1	Activate	
				Activate	
	PROCESS ENDF/B TAPES NAMED, TAPE121, TAPE122, AND TAPE123, AND			Activate	
	NAME :	THE OUT	PUT FILES ACTIVATE121, ACTIVATE122, AND ACTIVATE123.	Activate	
				Activate	
	IN TH.	IS CASE	THE FOLLOWING 6 INPUT LINES ARE REQUIRED	Activate	
	-101			Activate	
	TAPE121			Activate	
	ACTIVATE121			Activate	
	TAPE122			Activate	
	IVATE1:	22		Activate	
	E123			Activate	
ACT.	IVATE1:	23		Activate	
				Activate	
		LE INPU		Activate	
				Activate	
				Activate	
			IN A DIRECTORY NAMED \ENDFB6\ORIGINAL, AND THE	Activate	
	RESUL	LS MITT	BE WRITTEN INTO A DIRECTORY NAMED \ENDFB6\ACTIVATE.	Activate	
				Activate	
	IN TH.	IS CASE	THE FOLLOWING 6 INPUT LINES ARE REQUIRED	Activate	
				Activate	
	\ENDFB6\ORIGINAL\TAPE121			Activate Activate	
	\ENDFB6\ACTIVATE\ACTIVATE121				
\ENDFB6\ORIGINAL\TAPE122				Activate	
\ENDFB6\ACTIVATE\ACTIVATE122				Activate	
\ENDFB6\ORIGINAL\TAPE123 \ENDFB6\ACTIVATE\ACTIVATE123			Activate		
/EN	DL R0 / H	LIVATE	VACIIVAIEI23	Activate	
				Activate	
				ACTIVATE	