|     |         |        | :======:          |   |                    |
|-----|---------|--------|-------------------|---|--------------------|
|     |         |        |                   |   | Relabel            |
|     | ROGRAM  |        |                   |   | Relabel            |
|     |         |        | (APRIL 1969)      |   | Relabel            |
|     |         |        | (JUNE 1973)       |   | Relabel            |
|     |         |        | (SEPTEMBER 19     |   | Relabel<br>Relabel |
|     |         |        | (AUGUST 1980)     | ) COMBINED STATEMENT NUMBER SEQUENCE                                      | Relabel            |
| V.E | NOTON   | 03-1   | (UANUARI 1963     | AND LINE I.D. INTO ONE PROGRAM.   | Relabel            |
| VE  | RSTON   | 86-1   | (TANTIARY 1986    | FORTRAN-77/H VERSION  | Relabel            |
|     |         |        |                   | *OPTIONINTERNALLY DEFINE ALL I/O  | Relabel            |
|     |         | -      | (0021 2500)       | FILE NAMES (SEE, SUBROUTINES FILIO1                                       | Relabel            |
|     |         |        |                   | AND FILIO2 FOR DETAILS).  | Relabel            |
|     |         |        |                   | *IMPROVED BASED ON USER COMMENTS.   | Relabel            |
| VE  | ERSION  | 89-1   | (JANUARY 1989     | *PSYCHOANALYZED BY PROGRAM FREUD TO                                       | Relabel            |
|     |         |        |                   | INSURE PROGRAM WILL NOT DO ANYTHING                                       | Relabel            |
|     |         |        |                   | CRAZY.  | Relabel            |
|     |         |        |                   | *UPDATED TO USE NEW PROGRAM CONVERT                                       | Relabel            |
|     |         |        |                   | KEYWORDS.   | Relabel            |
|     |         |        |                   | *ADDED LIVERMORE CIVIC COMPILER   | Relabel            |
| 175 | PDCTON  | 02-1   | ( TANTIADY 1002   | CONVENTIONS.<br>)*ADDED FORTRAN SAVE OPTION                               | Relabel<br>Relabel |
|     |         |        |                   | )*COMPLETE RE-WRITE   | Relabel            |
| • • | 1101011 |        | (01111011111 1331 | *OUTPUT MINIMUM NON-BLANK LENGTH FOR                                      | Relabel            |
|     |         |        |                   | EACH LINE - NO SEQUENCE NUMBERS.  | Relabel            |
|     |         |        |                   | *INCREASED MAXIMUM NUMBER OF LABELS                                       | Relabel            |
|     |         |        |                   | PER ROUTINE FROM 1000 TO 50,000   | Relabel            |
|     |         |        |                   | *CAN NOW PROCESS UPPER OR LOWER CASE                                      | Relabel            |
|     |         |        |                   | CODING.   | Relabel            |
|     |         |        |                   | *SKIP IMBEDDED BLANKS IN KEYWORDS.  | Relabel            |
|     |         |        |                   | *ADDED WRITE(XX,XX,ERR=YYY,END=ZZZ)                                       | Relabel            |
|     |         |        |                   | *ADDED OPEN(XX,ERR=YYY,END=ZZZ)   | Relabel            |
|     |         |        |                   | *ADDED CLOSE(XX,ERR=YYY,END=ZZZ)  | Relabel            |
|     |         |        |                   | *INTEGER INSTEAD OF CHARACTERS IS NO<br>LONGER SUPPORTED - ALL CHARACTERS | Relabel<br>Relabel |
|     |         |        |                   | MUST BE IDENTIFIED AS CHARACTERS.   | Relabel            |
|     |         |        |                   | *VARIABLE FILENAMES TO ALLOW ACCESS                                       | Relabel            |
|     |         |        |                   | FILE STRUCTURES   | Relabel            |
|     |         |        |                   | (WARNING - INPUT PARAMETER FORMAT   | Relabel            |
|     |         |        |                   | HAS BEEN CHANGED)   | Relabel            |
|     |         |        |                   | *CLOSE ALL FILES BEFORE TERMINATING                                       | Relabel            |
|     |         |        |                   | (SEE, SUBROUTINE ENDIT)   | Relabel            |
| VE  | ERSION  | 96-1   | (JANUARY 1996     | ) *COMPLETE RE-WRITE  | Relabel            |
|     |         |        |                   | *IMPROVED COMPUTER INDEPENDENCE   | Relabel            |
|     |         |        |                   | *ALL DOUBLE PRECISION   | Relabel            |
|     |         |        |                   | *ON SCREEN OUTPUT   | Relabel            |
|     |         |        |                   | *IMPROVED OUTPUT PRECISION *DEFINED SCRATCH FILE NAMES                    | Relabel<br>Relabel |
|     |         |        |                   | *INCREASED THE NUMBER OF LABELS   | Relabel            |
|     |         |        |                   | IN A ROUTINE FOR 5,000 TO 50,000  | Relabel            |
| VE  | ERSION  | 99-1   | (MARCH 1999)      | *GENERAL IMPROVEMENTS BASED ON  | Relabel            |
|     |         |        | -                 | USER FEEDBACK   | Relabel            |
| VE  | ERS. 20 | 00-1   | (FEBRUARY 200     | ))*UPDATED TO IGNORE ( AND ) IN QUOTES                                    | Relabel            |
|     |         |        |                   | *GENERAL IMPROVEMENTS BASED ON  | Relabel            |
|     |         |        |                   | USER FEEDBACK   | Relabel            |
| VE  | ERS. 20 | 02-1   | (MAY 2002)        | *OPTIONAL INPUT PARAMETERS  | Relabel            |
|     |         |        |                   | *CORRECTED END=, ERR=, WHEN I/O UNIT                                      | Relabel            |
| 777 | 7Dd 20  | 104 1  | (MADCH 2004)      | NUMBER IS DIMENSIONED   | Relabel            |
| VE  | ERS. 20 | ,04-T  | (MARCH 2004)      | *ADDED INCLUDE FOR COMMON *INCREASED THE NUMBER OF LABELS IN              | Relabel<br>Relabel |
|     |         |        |                   | A ROUTINE FOR 50,000 TO 100,000   | Relabel            |
|     |         |        |                   | 11 10011MB 10N 30,000 10 100,000  | Relabel            |
| OW  | NED, M  | IAINTA | INED AND DIST     | RIBUTED BY  | Relabel            |
|     |         |        |                   |   | Relabel            |
| TH  | E NUCL  | EAR D  | DATA SECTION      |   | Relabel            |
| IN  | NTERNAT | IONAL  | ATOMIC ENERG      | YAGENCY   | Relabel            |
| P.  | O. BOX  | 100    |                   |   | Relabel            |
|     |         | VIENN  | IA, AUSTRIA       |   | Relabel            |
| EU  | JROPE   |        |                   |   | Relabel            |
| _   |         |        |                   |   | Relabel            |
| OF  | RIGINAL | LY WE  | RITTEN BY         |   | Relabel            |
|     |         |        |                   |   |                    |

|  | Relabel   |
|--|---|
|  |   |
|  | Relabel   |
| UNIVERSITY OF CALIFORNIA   | Relabel   |
| LAWRENCE LIVERMORE NATIONAL LABORATORY   | Relabel   |
| L-159  | Relabel   |
| P.O. BOX 808   | Relabel   |
|  | Relabel   |
|  |   |
|  | Relabel   |
|  | Relabel   |
| E. MAIL CULLEN1@LLNL.GOV   | Relabel   |
| WEBSITE HTTP://WWW.LLNL.GOV/CULLEN1  | Relabel   |
|  | Relabel   |
|  | Relabel   |
|  |   |
|  | Relabel   |
|  | Relabel   |
| STATEMENT LABELS ARE IN INCREASING ORDER IN INCREMENTS OF 10   | Relabel   |
| WITHIN EACH ROUTINE.   | Relabel   |
|  | Relabel   |
|  | Relabel   |
|  | Relabel   |
|  |   |
|  | Relabel   |
| GO TO (NN,MM,,JJ,KK),LL (MULTI LINE O.K.)  | Relabel   |
| DO NN  | Relabel   |
| IF() NN,MM,JJ,KK   | Relabel   |
|  | Relabel   |
|  |   |
|  | Relabel   |
| IF() READ(,END=NN,ERR=MM)  | Relabel   |
| IF() WRITE(,END=NN,ERR=MM)   | Relabel   |
| READ(,END=NN,ERR=MM)   | Relabel   |
|  | Relabel   |
|  | Relabel   |
|  |   |
|  | Relabel   |
| THERE IS ROOM ON THE LINE 'GOTO' WILL BE CONVERTED TO 'GO TO'.   | Relabel   |
| WHETHER OR NOT 'GOTO' IS CONVERTED TO 'GO TO' IT WILL BE TREATED   | Relabel   |
| AS IDENTICAL TO 'GO TO' FOR SUBSEQUENT PROCESSING AND RELACEMENT   | Relabel   |
|  | Relabel   |
|  |   |
|  | Relabel   |
|  | Relabel   |
| STATEMENTS AND ASSOCIATED FORMAT STATEMENTS ARE NOT CONVERTED.   | Relabel   |
|  | Relabel   |
| WARNING  | Relabel   |
|  | Relabel   |
|  |   |
|  | Relabel   |
| •  | Relabel   |
| TYPES THAT CAN BE USED ON A VARIETY OF DIFFERENT TYPES OF  | Relabel   |
| COMPUTERS. THIS PROGRAM IS NOT DESIGNED TO HANDLE ALL POSSIBLE   | Relabel   |
| TYPES OF FORTRAN STATEMENTS.   | Relabel   |
|  | Relabel   |
|  |   |
| THE FORTRAN STATEMENTS DESCRIBED ABOVE AND TREATED BY THIS PROGRAM   |   |
|  | Relabel   |
| PROGRAM IS NOT COMPLETELY GENERAL AND SHOULD ONLY BE USED WITH   |   |
| PROGRAMS THAT ONLY USE THE FORTRAN STATEMENTS DESCRIBED ABOVE.   | Relabel   |
|  |   |
|  | Relabel<br>Relabel  |
| EXTIDE TO BOLLOW TURGE INCUDICATIONS CAN LEAD TO EDDOD IN DECCEDANCE   | Relabel<br>Relabel<br>Relabel   |
| FAILURE TO FOLLOW THESE INSTRUCTIONS CAN LEAD TO ERROR IN PROGRAMS   | Relabel<br>Relabel<br>Relabel<br>Relabel  |
|  | Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel   |
|  | Relabel<br>Relabel<br>Relabel<br>Relabel  |
| OPTIONAL STANDARD FILE NAMES (SEE SUBROUTINES FILIO1 AND FILIO2)   | Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel   |
| OPTIONAL STANDARD FILE NAMES (SEE SUBROUTINES FILIO1 AND FILIO2)   | Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel  |
| OPTIONAL STANDARD FILE NAMES (SEE SUBROUTINES FILIO1 AND FILIO2)   | Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel   |
| OPTIONAL STANDARD FILE NAMES (SEE SUBROUTINES FILIO1 AND FILIO2)   | Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel  |
| OPTIONAL STANDARD FILE NAMES (SEE SUBROUTINES FILIO1 AND FILIO2)  UNIT FILE NAME DESCRIPTION  2 RELABELINP INPUT PARAMETERS  | Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel   |
| OPTIONAL STANDARD FILE NAMES (SEE SUBROUTINES FILIO1 AND FILIO2)  UNIT FILE NAME DESCRIPTION  2 RELABELINP INPUT PARAMETERS 3 RELABELLST OUTPUT REPORT   | Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel  |
| OPTIONAL STANDARD FILE NAMES (SEE SUBROUTINES FILIO1 AND FILIO2)  UNIT FILE NAME DESCRIPTION  2 RELABELINP INPUT PARAMETERS 3 RELABELLST OUTPUT REPORT   | Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel   |
| OPTIONAL STANDARD FILE NAMES (SEE SUBROUTINES FILIO1 AND FILIO2)  UNIT FILE NAME DESCRIPTION  2 RELABEL.INP INPUT PARAMETERS 3 RELABEL.LST OUTPUT REPORT 10 RELABEL.IN PROGRAM TO READ   | Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel  |
| OPTIONAL STANDARD FILE NAMES (SEE SUBROUTINES FILIO1 AND FILIO2)  UNIT FILE NAME DESCRIPTION  2 RELABEL.INP INPUT PARAMETERS 3 RELABEL.LST OUTPUT REPORT 10 RELABEL.IN PROGRAM TO READ 11 RELABEL.OUT PROGRAM TO WRITE   | Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel                                |
| OPTIONAL STANDARD FILE NAMES (SEE SUBROUTINES FILIO1 AND FILIO2)  UNIT FILE NAME DESCRIPTION  2 RELABEL.INP INPUT PARAMETERS 3 RELABEL.LST OUTPUT REPORT 10 RELABEL.IN PROGRAM TO READ 11 RELABEL.OUT PROGRAM TO WRITE 12 (SCRATCH)  | Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel                                |
| OPTIONAL STANDARD FILE NAMES (SEE SUBROUTINES FILIO1 AND FILIO2)  UNIT FILE NAME DESCRIPTION  2 RELABEL.INP INPUT PARAMETERS 3 RELABEL.LST OUTPUT REPORT 10 RELABEL.IN PROGRAM TO READ 11 RELABEL.OUT PROGRAM TO WRITE 12 (SCRATCH)  | Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel                     |
| OPTIONAL STANDARD FILE NAMES (SEE SUBROUTINES FILIO1 AND FILIO2)  UNIT FILE NAME DESCRIPTION  2 RELABEL.INP INPUT PARAMETERS 3 RELABEL.LST OUTPUT REPORT 10 RELABEL.IN PROGRAM TO READ 11 RELABEL.OUT PROGRAM TO WRITE 12 (SCRATCH)  INPUT CARDS   | Relabel                                 |
| OPTIONAL STANDARD FILE NAMES (SEE SUBROUTINES FILIO1 AND FILIO2)  UNIT FILE NAME DESCRIPTION  2 RELABEL.INP INPUT PARAMETERS 3 RELABEL.LST OUTPUT REPORT 10 RELABEL.IN PROGRAM TO READ 11 RELABEL.OUT PROGRAM TO WRITE 12 (SCRATCH)  INPUT CARDS   | Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel          |
| OPTIONAL STANDARD FILE NAMES (SEE SUBROUTINES FILIO1 AND FILIO2)  UNIT FILE NAME DESCRIPTION  2 RELABEL.INP INPUT PARAMETERS 3 RELABEL.LST OUTPUT REPORT 10 RELABEL.IN PROGRAM TO READ 11 RELABEL.OUT PROGRAM TO WRITE 12 (SCRATCH)  INPUT CARDS   | Relabel                                 |
| OPTIONAL STANDARD FILE NAMES (SEE SUBROUTINES FILIO1 AND FILIO2)  UNIT FILE NAME DESCRIPTION  2 RELABEL.INP INPUT PARAMETERS 3 RELABEL.LST OUTPUT REPORT 10 RELABEL.IN PROGRAM TO READ 11 RELABEL.OUT PROGRAM TO WRITE 12 (SCRATCH)  INPUT CARDS   | Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel<br>Relabel          |
| OPTIONAL STANDARD FILE NAMES (SEE SUBROUTINES FILIO1 AND FILIO2)  UNIT FILE NAME DESCRIPTION  2 RELABEL.INP INPUT PARAMETERS 3 RELABEL.LST OUTPUT REPORT 10 RELABEL.UN PROGRAM TO READ 11 RELABEL.OUT PROGRAM TO WRITE 12 (SCRATCH)  INPUT CARDS  LINE COLUMNS DEFINITION                                | Relabel         |
| OPTIONAL STANDARD FILE NAMES (SEE SUBROUTINES FILIO1 AND FILIO2)  UNIT FILE NAME DESCRIPTION  2 RELABEL.INP INPUT PARAMETERS 3 RELABEL.LST OUTPUT REPORT 10 RELABEL.UN PROGRAM TO READ 11 RELABEL.OUT PROGRAM TO WRITE 12 (SCRATCH)  INPUT CARDS  LINE COLUMNS DEFINITION  1 1-60 INPUT PROGRAM FILENAME | Relabel |

PREPRO 2004

| 2 1-60 OUTPUT PROGRAM FILENAME                                 | Relabel |
|--|---------|
| (STANDARD OPTION = RELABEL.OUT)                                | Relabel |
|  | Relabel |
| LEAVE THE DEFINITION OF THE FILENAMES BLANK - THE PROGRAM WILL | Relabel |
| THEN USE STANDARD FILENAMES.                                   | Relabel |
|  | Relabel |
| EXAMPLE INPUT NO. 1  | Relabel |
|  | Relabel |
| TO READ \PREPRO94\RECENT\RECENT.FOR AND                        | Relabel |
| WRITE \PREPRO94\RECENT\RECENT.NEW THE FOLLOWING 2 INPUT LINES  | Relabel |
| ARE REQUIRED,  | Relabel |
|  | Relabel |
| \PREPRO94\RECENT\RECENT.FOR                                    | Relabel |
|  | Relabel |
| EXAMPLE INPUT NO. 2  | Relabel |
|  | Relabel |
| TO READ RELABEL.IN AND WRITE RELABEL.OUT THE FOLOWING 2 INPUT  | Relabel |
| LINES ARE REQUIRED,  | Relabel |
|  | Relabel |
| RELABEL.IN   | Relabel |
| RELABEL.OUT  | Relabel |
|  | Relabel |
| EXAMPLE INPUT NO. 3  | Relabel |
|  | Relabel |
| TO READ RELABEL.IN AND WRITE RELABEL.OUT, SINCE THESE ARE THE  | Relabel |
| STANDARD OPTIONS THE 2 INPUT LINES CAN BE COMPLETELY BLANK.    | Relabel |
|  | Relabel |
|  | Relabel |

3