Mathematica
Progress Together

Volume 11: DAF18 Construction Code

July 2020

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GLOSSARY

AB	Accelerated Benefits Demonstration
ADM	Awardee Data Mart
AIME	Average Indexed Monthly Earnings
B.E.S.T.	Benefits Entitlement Services Team
BFW	Benefits forgone due to work
BIC	Beneficiary Identification Code
BMF	Budget Month Factor
BOAN	Beneficiary's Own Account Number
BOND	Benefit Offset National Demonstration
BOPD	Benefit Offset Pilot Demonstration
CAN	Claim Account Number
CDR	Continuing Disability Review
CDRCF	CDR Control File
CER	Characteristics Extract Record 100% Field File
COLA	Cost-of-Living Adjustment
DAC	Disabled Adult Child
DAF	Disability Analysis File (previously known as TRF)
DBAD	Disabled Beneficiary and Dependents Extract
DCF	Disability Control File
DDS	Disability Determination Services
DER	Detailed Earnings Record
DI	Disability Insurance, also referred to as SSDI
DMG	Demographic component of the DAF
DSN	Dataset names

DWB	Disabled Widow Beneficiaries
EN	Employment Network (also called a TTW provider)
EPE	Extended Period of Eligibility
EVS	Enumeration Verification System
EXR	Expedited Reinstatement
FBR	Federal Benefit Rate
FCI	Federal Countable Income
FIPS	Federal Information Processing Standards (in reference to U.S. Census standardized codes for uniform identification of geographic entities)
FRA	Full Retirement Age
HI	Hospital Insurance (Medicare Part A)
HOPE	Homeless Outreach Projects and Evaluation Demonstration
HUN	Housed Under Number
ICD-9	International Classification of Diseases Coding Scheme
IPE	Individualized Plan for Employment, developed by SVR Agency
IRS	Internal Revenue Service
IRWE	Impairment-Related Work Expense
LAF	Ledger Account File
LAUS	Local Area Unemployment Statistics
LRF	Longitudinal Record Format
MBR	Master Beneficiary Record
MBR810	MBR extract, version number 810
MBR814	MBR extract, version number 814
MEF	Master Earnings File
MHTS	Mental Health Treatment Study
MIE	Medical Improvement Expected

MO	Milestone + Outcomes payment system
MPR-EVS	Mathematica's EVS
NBS	National Beneficiary Survey
NSCF	National Survey of SSI Children and Families
NUMIDENT	Numerical Identification File
OIM	Office of Information Management
OO	Outcomes-Only payment system
PAN	Person's Account Number
PASS	Program to Achieve Self-Support
PHUS	Payment History Update System
PIA	Primary Insurance Amount
PIN	Personal Identification Number
POD	Promoting Opportunity Demonstration
POMS	SSA's Program Operations Manual System
PROMISE	Promoting Readiness of Minors in SSI
Provider	Service provider under TTW (also called an EN)
PUF	Public Use File
REMICS	Revised Management Information Counts System
RIB	Retirement Insurance Benefits
RMA	Retrospective Monthly Accounting
RSA	Rehabilitation Services Administration
RSA-911	RSA Case Service Report
SAIPE	Small Area Income and Poverty Estimates
SAS	Statistical Analysis Software, used to produce the DAF
SCWF	Standalone Companion Work File

SED	Supported Employment Demonstration
SER	Summary Earnings Record
SGA	Substantial Gainful Activity
SMI	Supplemental Medical Insurance (Medicare Part B)
SNAP	Supplemental Nutrition Assistance Program
SSN	Social Security Number
SSA	Social Security Administration
SSDI	Social Security Disability Insurance (also referred to as DI)
SSI	Supplemental Security Income
SSI-LF	SSI - Longitudinal File
SSR	Supplemental Security Record
STW	Suspension or termination of cash benefits for work
SVR Agency	State Vocational Rehabilitation Agency
T2	Title II, the SSDI Program
T16	Title XVI, the SSI Program
TANF	Temporary Assistance for Needy Families
TCNEI	Total countable non-earned income
TKT	DAF component containing data related to TTW participation
TRF	Ticket Research File, now called the DAF
TTW	Ticket to Work
TWP	Trial Work Period
VR	Federal/State Vocational Rehabilitation program
VRRMS	Vocational Rehabilitation Reimbursement Management System; data from this system is contained in the Payments component
YTD	Youth Transition Demonstration

OVERVIEW OF DAF DOCUMENTATION

The documentation for the DAF consists of the eleven volumes described below. Questions about these documents should be directed to ORDES.DAF@ssa.gov. All of these documents are available at https://www.ssa.gov/disabilityresearch/daf.html.

- **Volume 1: Getting Started with the DAF18.** Provides an overview of the structure and contents of the DAF and related linkable files.
- **Volume 2: Working with the DAF18.** Contains practical suggestions such as how to extract data and interpret blank or missing variables as well as more detailed information on DAF data marts and linkable files.
- **Volume 3: Tips for Conducting Analysis with the DAF18.** Contains suggestions for working with common research concepts in the DAF such as program participation, benefits paid versus benefits due, and constructed measures related to beneficiary work activity resulting in the loss of cash benefits.
- **Volume 4: Lists of DAF18 Variables.** Contains lists of new, changed, and deleted variables, as well as lists of variables by DAF component and analytic category.
- **Volume 5: DAF Variable Detail Pages.** Contains specifications for each DAF variable, including name, definition, data format, identification of the DAF component to which it belongs, data source, availability, and (where applicable) SAS code used to construct the variable.
- **Volume 6: Validating the DAF18 Against Other Sources.** Provides an explanation of validation methods and summary of validation results.
- **Volume 7: DAF18 Development History and Construction Methods.** Describes key changes in DAF construction methodology over time as well as a description of each step in the current year DAF construction process.
- **Volume 8: DAF18 Construction Workflow Charts and Task Tables.** Provides detailed information in both chart and table format on each step in the current year DAF construction process.
- **Volume 9: DAF18 Source File Descriptions.** Describes the administrative source files used to construct the DAF.
- **Volume 10: DAF18 Administrative Source File Documentation.** Contains documentation from SSA or other agencies on the administrative source files described in Volume 9.
- **Volume 11: DAF18 Construction Code**. Contains all SAS code used to construct the DAF.
- **Volume 12: DAF18 RSA Administrative Source File Documentation.** Contains a description of the processing of Rehabilitation Services Administration (RSA) data for linkage to the DAF, along with documentation from RSA on the RSA-911 files.

The following table provides specific locations for common research-related questions and issues.

In order to …	Refer to …
Get started with a research task	Volume 2, “Working with the DAF18,” for information about selecting beneficiaries using finder files versus selection criteria
Identify what’s changed in the latest version of the DAF	Volume 1, “Getting Started with the DAF18”
View lists of DAF variables	Volume 4, “Lists of DAF18 Variables”
Understand individual variable definitions, specifications, and value ranges	Volume 5, “DAF Variable Detail Pages”
Understand the structure of the DAF data files at a high level	Volume 1, “Getting Started with the DAF18”
Identify variables for a specific research task	Volume 4, “Lists of DAF18 Variables,” for a list of variables contained within each DAF file and by analytic category
Understand the beneficiaries for which the DAF does and does not contain data	Volume 1, “Getting Started with the DAF18”
Identify administrative data sources for the DAF	Volume 9, “DAF18 Source File Descriptions”
Understand the linkage of the DAF to RSA-911 data and contents of the RSA files	Volume 12, “DAF18 RSA Administrative Source File Documentation”
Generate ideas for using the DAF more efficiently	Volume 1, “Getting Started with the DAF18” and Volume 2, “Working with the DAF18”
Find suggested ways to identify common research concepts in the DAF, such as calculating age of retirement, or disability title	Volume 3, “Tips for Conducting Analysis with the DAF18”
Understand what variables have changed in the most recent DAF	Volume 4, “Lists of DAF18 Variables”
Read about how information in the DAF is validated against other sources	Volume 6, “Validating the DAF18 Against Other Sources”

APPENDIX A

DAF PROGRAMS

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Appendix A.1
JCL/SAS Code: DBADJCL

```
//#4941DBA  JOB (12510000,T715,,SAS,,ITC9FL),MIAOMIAO-SHEN,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#4941
//*****************************************************************
//* PROJECT:     DAF 50214(06979)
//* PROGRAM:     OPDR.TG.PRD.ETTW.#4941.DAF18.FINDER.PRDLIB(DBADJCL)
//* DIRECTOR:    LAURA KOSAR
//* PROGRAMMER:   MIRIAM LOEWENBERG
//* UPDATED:     1/17/2019 MIAOMIAO SHEN FOR DAF18
//* PHONE:       202 442-6422
//* E-MAIL:      MSHEN@MATHEMATICA-MPR.COM
//*              MIAOMIAO.SHEN@SSA.GOV
//* MODIFICATION:
//*****************************************************************
//*
//FINDPROC   PROC
//FIND       EXEC SAS9,
//          WORK='120000,60000'
//*
//IN      DD DSN=MTOSSI.T2.DBADMBR.D18&M,DISP=SHR
//TEMP    DD DSN=&&TEMP,
//          DISP=(NEW,DELETE,DELETE),
//          SPACE=(CYL,(1000,100),RLSE)
//OUT     DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.DBAD18&M..SA.V1,
//          DISP=(NEW,CATLG,DELETE),
//          SPACE=(CYL,(1000,100),RLSE)
//SYSIN   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.FINDER.PRDLIB(DBADREAD),
//          DISP=(SHR,PASS,KEEP)
//       PEND
//*
//FRUN01  EXEC FINDPROC,M=01
//FRUN02  EXEC FINDPROC,M=02
//FRUN03  EXEC FINDPROC,M=03
//FRUN04  EXEC FINDPROC,M=04
//FRUN05  EXEC FINDPROC,M=05
//FRUN06  EXEC FINDPROC,M=06
//FRUN07  EXEC FINDPROC,M=07
//FRUN08  EXEC FINDPROC,M=08
//FRUN09  EXEC FINDPROC,M=09
//FRUN10  EXEC FINDPROC,M=10
//FRUN11  EXEC FINDPROC,M=11
//FRUN12  EXEC FINDPROC,M=12
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
```

Appendix A.1
JCL/SAS Code: DBADJCL

```
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<MSHEN@MATHEMATICA-MPR.COM>
RCPT TO:<MSHEN@MATHEMATICA-MPR.COM>
DATA
FROM:   <MSHEN@MATHEMATICA-MPR.COM>
TO:     <MSHEN@MATHEMATICA-MPR.COM>
SUBJECT: DBADJCL/DBADREAD IS COMPLETE
DBADJCL/DBADREAD IS COMPLETE.
```

Appendix A.2
JCL/SAS Code: DBADREAD

```
OPTIONS NOCENTER LS=132 PS=60 COMPRESS=YES OBS=MAX;
 /* LAYOUT FOR DEC 2015*/

DATA TEMP.DBAD;
  INFILE IN TRUNCOVER;
  INPUT
  @0001 SEL_DATE  YYMMDD8.     /* DATE OF FILE SELECTION        */
  @0010 CAN       $9.          /* CLAIM ACCOUNT NUMBER (SSN)     */
  @0376 BIC       $2.          /* BENE IDENTIFICATION CODE       */
  @0378 LAF       $2.          /* LEDGER ACCOUNT FILE            */
  @0380 DOBDBAD   YYMMDD8.     /* DATE OF BIRTH                  */
  @1113 BOAN      $9.          /* BENEFICIARY OWN ACCOUNT NUMBER */
  @3297 TOC       $1.          /* TYPE OF CLAIM                  */
  @3321 ZIP_DI    $5.          /* ZIP CODE                       */
  @3326 ZIP_DIADD $4.          /* ZIP ADD ON CODE                */
  ;

 /* COMPUTE AGE AT THE TIME OF THE EXTRACT */
 /*DAF PREFERRED AGE CALCULATION IS NOT USED IN THIS INSTANCE TO
  PRESERVE CONTINUITY IN OUR BENE SELECTION ACROSS ITERATIONS OF
  THE DAF*/
 AGE = (SEL_DATE - DOBDBAD)/365.25;

 /* SET THE BIRTHDATE */
 %LET OLD_DOB = DOBDBAD;

 /* INCLUDE THE PROGRAM TO CALCULATE THE FRADATE */
 %INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(FRACALC)";

 /* CALCULATE FRA */
 FRA = (FRADATE-&OLD_DOB.)/365.25;

 /* CONDITIONS FOR INCLUSION FOR DAF */
 IF 18 <= AGE < FRA;
 IF ((SUBSTR(BIC,1,1) = 'A' AND TOC IN ('5' '6')) OR
   (SUBSTR(BIC,1,1) = 'C' AND TOC IN ('3' '4' '7')) OR
   (SUBSTR(BIC,1,1) = 'W'));
 IF UPCASE(LAF) IN ('AD' 'AS' 'A9' 'C ' 'D ' 'DP' 'DW' 'E ' 'S ' 'SD'
                'S0' 'S1' 'C2' 'S2' 'S6' 'S8');

 /*AUXILIARY BENES ARE CHILDREN (BIC=C) AND WIDOWS (BIC=W) WHO
  RECEIVE SSDI BENEFITS BASED ON ANOTHER PRIMARY WAGE EARNER'S (BIC=A)
  RECORD. AS SUCH, SSA USES THE PRIMARY WAGE EARNER'S SSN (CAN)-NOT THE
  AUXILIARY BENE'S-SSN TO TRACK THE AUXILIARY'S BENEFIT PAYMENTS. SSA
```

Appendix A.2
JCL/SAS Code: DBADREAD

```
  COMMONLY REFERS TO THE AUXILIARY BENE'S SSN AS BENEFICIARY'S OWN
  ACCOUNT NUMBER (BOAN). IF IT IS A PRIMARY WAGE EARNER'S RECORD, SET
  SSN=CAN. IF IT IS AN AUXILIARY BENE'S RECORD, SET SSN=BOAN*/

 IF SUBSTR(BIC,1,1) = 'A' THEN SSN = CAN;
   ELSE SSN = BOAN;

 IF SSN=" " OR SSN="000000000" THEN DELETE;

 DROP SEL_DATE DOBDBAD RETIREDATE;

RUN;

 /* RETAIN ALL SSN/BIC COMBINATIONS SO THAT NO CAN'S WILL BE LOST */
PROC SORT DATA=TEMP.DBAD OUT=OUT.DBAD NODUPKEY; BY SSN BIC; RUN;

PROC CONTENTS DATA=OUT.DBAD;
RUN;

/* CHECK DATA */
TITLE "CHECK OUTPUT DATASET (OBS=20)";
PROC PRINT DATA=OUT.DBAD(OBS=20);
RUN;
TITLE;
```

Appendix A.3
JCL/SAS Code: FRACALC

```
OPTIONS NOCENTER LS=132 PS=60 COMPRESS=YES;
 /* THIS PROGRAM ADJUSTS THE BIRTHDAY AND CALCULATES THE RETIRE DATE*/

 /* IF BIRTHDAY IS ON JANUARY 1ST, ADJUST THE BIRTHDAY TO 12/31 OF
    PREVIOUS YEAR FOR COMPUTING RETIREMENT DATE.
    IF BIRTHDAY IS IN FEB. AND AFTER THE 28TH, ADJUST THE BIRTHDAY TO
    FEB. 28TH OF THE SAME YEAR.
    INPUTS:  ORIGINAL BIRTHDAY BEFORE ADJUSTMENT
    OUTPUTS: ADJUSTED BIRTHDATE, FRADATE, FRTRAGE*/

 IF MONTH(&OLD_DOB.)=1 AND DAY(&OLD_DOB.)=1 THEN
    BIRTHDATE = &OLD_DOB.-1;
    ELSE IF MONTH(&OLD_DOB.)=2 AND DAY(&OLD_DOB.)>28 THEN
      BIRTHDATE = MDY(2,28,YEAR(&OLD_DOB.));
    ELSE BIRTHDATE = &OLD_DOB.;

 /*CALCULATE THE RETIRE DATE*/
 IF YEAR(BIRTHDATE) LE 1937 THEN FRADATE =
  INTNX('MONTH',BIRTHDATE,(65*12),"SAMEDAY");
 ELSE IF YEAR(BIRTHDATE) = 1938 THEN FRADATE =
  INTNX('MONTH',BIRTHDATE,((65*12)+2),"SAMEDAY");
 ELSE IF YEAR(BIRTHDATE) = 1939 THEN FRADATE =
  INTNX('MONTH',BIRTHDATE,((65*12)+4),"SAMEDAY");
 ELSE IF YEAR(BIRTHDATE) = 1940 THEN FRADATE =
  INTNX('MONTH',BIRTHDATE,((65*12)+6),"SAMEDAY");
 ELSE IF YEAR(BIRTHDATE) = 1941 THEN FRADATE =
  INTNX('MONTH',BIRTHDATE,((65*12)+8),"SAMEDAY");
 ELSE IF YEAR(BIRTHDATE) = 1942 THEN FRADATE =
  INTNX('MONTH',BIRTHDATE,((65*12)+10),"SAMEDAY");
 ELSE IF YEAR(BIRTHDATE) GE 1943 AND
  YEAR(BIRTHDATE) LE 1954 THEN FRADATE =
  INTNX('MONTH',BIRTHDATE,(66*12),"SAMEDAY");
 ELSE IF YEAR(BIRTHDATE) = 1955 THEN FRADATE =
  INTNX('MONTH',BIRTHDATE,((66*12)+2),"SAMEDAY");
 ELSE IF YEAR(BIRTHDATE) = 1956 THEN FRADATE =
  INTNX('MONTH',BIRTHDATE,((66*12)+4),"SAMEDAY");
 ELSE IF YEAR(BIRTHDATE) = 1957 THEN FRADATE =
  INTNX('MONTH',BIRTHDATE,((66*12)+6),"SAMEDAY");
 ELSE IF YEAR(BIRTHDATE) = 1958 THEN FRADATE =
  INTNX('MONTH',BIRTHDATE,((66*12)+8),"SAMEDAY");
 ELSE IF YEAR(BIRTHDATE) = 1959 THEN FRADATE =
  INTNX('MONTH',BIRTHDATE,((66*12)+10),"SAMEDAY");
 ELSE IF YEAR(BIRTHDATE) GE 1960 THEN FRADATE =
  INTNX('MONTH',BIRTHDATE,(67*12),"SAMEDAY");
```

Appendix A.3
JCL/SAS Code: FRACALC

```
FRA = INTCK('MONTHS',BIRTHDATE,FRADATE,'C')/12;
DROP BIRTHDATE;
```

Appendix A.4
JCL/SAS Code: DBADCOMB

```
//#4941CDB  JOB (12510000,T715,,SAS,,ITC9FL),MIAOMIAO-SHEN,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#4941
//*****************************************************************
//* PROJECT:    DAF 50214(06979)
//* DIRECTOR:   LAURA KOSA
//* PROGRAM:    OPDR.TG.PRD.ETTW.#4941.DAF18.FINDER.PRDLIB(DBADCOMB)
//* PURPOSE:    COMBINE ALL THE DBAD FILES FOR 2017
//*             CASES IN DBAD FROM JAN 2017 - DEC 2017
//* PROGRAMMER: MIRIAM LOEWENBERG
//* UPDATED:    MIAOMIAO SHEN 1/18/2019 FOR DAF18
//* E-MAIL:     MSHEN@MATHEMATICA-MPR.COM
//*             MIAOMIAO.SHEN@SSA.GOV
//*****************************************************************
//*
// EXEC SAS9,
//      WORK='120000,60000'
//*
//*SEE INPUT FILES IN LIBNAME STATEMENTS BELOW
//OUT   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.CMBDBAD.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        SPACE=(CYL,(1000,100),RLSE),VOL=(,,,10)
//SYSIN DD *
OPTIONS NOCENTER LS=132 PS=60 COMPRESS=YES MPRINT MACROGEN;

   %LET BEGYR=2018; /* CHANGE AS NEEDED */
   %LET ENDYR=2018; /* CHANGE AS NEEDED */

   %MACRO START;

   /* INCLUDE YYMM MACRO PROGRAM */
   %INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

   /* INPUT FILES */
   %DO SEG = 1 %TO 9;
    LIBNAME IN&SEG. "OPDR.TG.PRD.ETTW.#4941.DAF18P.DBAD180&SEG..SA.V1"
                DISP=SHR;
   %END;
   %DO SEG = 10 %TO 12;
    LIBNAME IN&SEG. "OPDR.TG.PRD.ETTW.#4941.DAF18P.DBAD18&SEG..SA.V1"
                DISP=SHR;
   %END;

/* COMBINE 12 DBAD FILES INTO ONE DBAD FILE */
DATA OUT.DBAD;
```

Appendix A.4
JCL/SAS Code: DBADCOMB

```
    MERGE
    %DO MM = 1 %TO &TOTMOS.;
      IN&MM..DBAD(RENAME=(ZIP_DI=ZIP_DI&&YY&MM
                  ZIP_DIADD=ZIP_DIADD&&YY&MM))
    %END;
    ;
    BY SSN BIC;
  RUN;

  PROC CONTENTS DATA = OUT.DBAD;
  RUN;

%MEND START;

%START;
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<MSHEN@MATHEMATICA-MPR.COM>
RCPT TO:<MSHEN@MATHEMATICA-MPR.COM>
DATA
FROM:   <MSHEN@MATHEMATICA-MPR.COM>
TO:     <MSHEN@MATHEMATICA-MPR.COM>
SUBJECT: DBADCOMB IS COMPLETE
```

Appendix A.5
JCL/SAS Code: YYMMMACR

```
%MACRO ASGYYMM;
 %GLOBAL TOTMOS;
 %GLOBAL MOCNTER;

   /* ASSIGN MACROS VARIABLES TO HANDLE TIME SERIES DATA */
   /* MACRO REVISED FOR DAF13 IN THIS PROGRAM (DAF14 MAY
      USE IN ALL PROGRAMS)IN ADDED A %PUT SHOWING MAPPING
      OF MONTHS 1 TO N TO EACH ASSOCIATED YYMM */
   /*INITIATE MONTH COUNTER, MOCNTER, TO 1*/
  %LET MOCNTER=1;
   /*LOOPING THROUGH EACH YEAR SPECIFIED ABOVE*/
  %DO YEAR=&BEGYR. %TO &ENDYR.;
   /*SETTING YR MACRO VAR TO LAST TWO DIGITS OF EACH YEAR*/
    %LET YR=%SUBSTR(&YEAR.,3,2);

     /*LOOP THROUGH MONTHS 1 TO 12 AND INCREMENT MONTH COUNTER*/
     %DO M=1 %TO 12;
       %GLOBAL YY&MOCNTER;
       %LET M=%SYSFUNC(PUTN(&M.,Z2.));
       %LET YY&MOCNTER.=%EVAL(&YR.)%EVAL(&M.);
       %LET MOCNTER=%EVAL(&MOCNTER.+1);
     %END;
  %END;

 /*SET TOTAL MONTHS, TOTMOS, EQUAL TO MOCNTER - 1 TO GET
   TOTAL MONTHS IN TIME SERIES*/
 %LET TOTMOS=%EVAL(&MOCNTER.-1);

 /*USED TO PRINT MAPPING TO LOG - CHECK DURING CODE REVIEW*/
    %DO MM=1 % TO &TOTMOS.;
      %PUT &MM. MAPS TO YYMM, &&YY&MM.;
    %END;
      %PUT TOTAL MONTHS = &TOTMOS.;

%MEND ASGYYMM;
%ASGYYMM;
```

Appendix A.6
JCL/SAS Code: CERJCL

```
//#4941CER  JOB (12510000,T715,,SAS,,ITC9FL),MIAOMIAO-SHEN,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#4941
//*****************************************************************
//* PROJECT:    DAF 50214(06979)
//* DIRECTOR:   LAURA KOSA
//* PROGRAM:    OPDR.TG.PRD.ETTW.#4941.DAF18.FINDER.PRDLIB(CERJCL)
//* PURPOSE:    READ IN MONTHLY CER DATA - JCL CALLS CERREAD
//* PROGRAMMER: MIAOMIAO SHEN
//* UPDATED:    1/17/2019 MIAOMIAO SHEN FOR DAF18
//* PHONE:      202 442-6422
//* E-MAIL:     MSHEN@MATHEMATICA-MPR.COM
//*            MIAOMIAO.SHEN@SSA.GOV
//*****************************************************************
//*
//CERPROC    PROC
//FIND       EXEC SAS9,
//          WORK='120000,60000',
//          PARM='SYSPARM="2018&M"'
//*
//IN      DD DSN=MTOSSI.CER100.FIELD.D18&M.,DISP=SHR
//TEMP    DD DSN=&&TEMP,
//          DISP=(NEW,DELETE,DELETE),
//          SPACE=(CYL,(1000,100),RLSE)
//OUT     DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.CER18&M..SA.V1,
//          DISP=(NEW,CATLG,DELETE),
//          SPACE=(CYL,(1000,100),RLSE)
//SYSIN   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.FINDER.PRDLIB(CERREAD),
//          DISP=(SHR,PASS,KEEP)
//       PEND
//*
//FRUN01  EXEC CERPROC,M=01
//FRUN02  EXEC CERPROC,M=02
//FRUN03  EXEC CERPROC,M=03
//FRUN04  EXEC CERPROC,M=04
//FRUN05  EXEC CERPROC,M=05
//FRUN06  EXEC CERPROC,M=06
//FRUN07  EXEC CERPROC,M=07
//FRUN08  EXEC CERPROC,M=08
//FRUN09  EXEC CERPROC,M=09
//FRUN10  EXEC CERPROC,M=10
//FRUN11  EXEC CERPROC,M=11
//FRUN12  EXEC CERPROC,M=12
/*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
```

Appendix A.6
JCL/SAS Code: CERJCL

```
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<MSHEN@MATHEMATICA-MPR.COM>
RCPT TO:<MSHEN@MATHEMATICA-MPR.COM>
DATA
FROM:   <MSHEN@MATHEMATICA-MPR.COM>
TO:     <MSHEN@MATHEMATICA-MPR.COM>
SUBJECT: CERJCL/CERREAD IS COMPLETE
```

Appendix A.7
JCL/SAS Code: CERREAD

```
OPTIONS NOCENTER LS=132 PS=60 COMPRESS=YES OBS=MAX;

%LET SEG=%SUBSTR(&SYSPARM.,5,2);

%MACRO READIN;
DATA CER;
INFILE IN TRUNCOVER;
INPUT
@0004 MFT         $2.        /* MASTER FILE TYPE */
@0015 SSN         $9.        /* SSN SOCIAL SECURITY NUMBER */
@;
  IF SSN GT '000000000';     /*DAF13 MOVED TO INPUT PART OF CODE*/

INPUT
@0108 RCD_EST   ?? YYMMDD8.    /* RCD-EST-JD RECORD ESTABLISHMENT DATE*/
@0116 DOBCER    ?? YYMMDD8.    /* BIRTH-JD DATE OF BIRTH */
@0134 RSEX        $1.        /* SEX */
@0204 DENCDE      $3.        /* DENIAL CODE */
@0223 ERP_IND     $1.        /* ECONOMIC RECOVERY PAYMENT
                              INDICATOR */
@0326 RDX         $4.        /* PRIMARY DISABILITY DIAG. CODE*/
/*THE VARIABLE PDSCC THAT BEGINS AT POSITION 343 IS LISTED AS 6 CHARS
  LONG AND CONTAINS 2 DIGIT STATE, 3 DIGIT COUNTY, AND 1 DIGIT DO.
  WE READ ONLY THE FIRST 5 POSITIONS AS TWO VARIABLES PDS2 AND PDS3.*/
@0343 PDS2        $2.        /* PDSCC RESIDENCE STATE CODE */
@0345 PDS3        $3.        /* PDSCC RESIDENCE COUNTY CODE */
@0349 PDZIP1_5    $5.        /* PDZIP1-5 PAYEE'S ZIP CODE */
@0354 PDZIP6_9    $4.        /* PDZIP6-9 PAYEE'S ZIP CODE SUFFIX */
@0361 IET4        $1.        /* EARNED INC. TYPE (SELF EMPLOYMENT)*/
@0368 IEA_NESE    6.2        /* EARNED INC. AMT. SELF EMPLOYMENT */
@0382 IEA_WAGE    6.2        /* EARNED INC. AMT. (WAGES) */
@0396 IEA_BLIND   6.2        /* EARNED INC. AMT. (BLIND W E)*/
@0410 IEA_PASS    6.2        /* EARNED INC. AMT. (PASS)*/
@0424 IEA_IRWE    6.2        /* EARNED INC. AMT. (IRWE)*/
@0438 IEA_LOSS    6.2        /* EARNED INC. AMT. (NET LOSS)*/
  @;
 POS = 445;
 ARRAY UT (6) $ T1-T6;        /* UNEARNED INCOME TYPE CODE */
 ARRAY UA (6) UN1-UN6;        /* UNEARNED INCOME AMOUNT */
 DO I = 1 TO 6;
  INPUT
  @POS UT(I) $2.
  @POS+8 UA(I) 6.2
   @;
```

Appendix A.7
JCL/SAS Code: CERREAD

```
 POS = POS + 27;
 END;

INPUT
@0691 AAZIP1_5     $5.        /* AAZIP1-5 APPLICANT'S ADDRESS ZIP*/
@0696 AAZIP6_9     $4.        /* AAZIP6-9 APPLICANT'S ZIP CODE SUF*/

%IF &SEG. = 12 %THEN %DO;
  @0767  STATECD_ENDYR  $2.    /*PAYMENT STATE CODE ADDED FOR*/
%END;                          /*ONLY FOR DECEMBER OF THE YEAR*/

@0794 CPST        $3.        /* PSTAT-CURR-PAYMENT STATUS CODE*/
@0811 MEDC        $1.        /* MEDIC MEDICAID ELIGIBILITY CODE*/
@0853 SEL_DATE  ?? YYMMDD8.    /* DATE OF SELECTION */
@1003  CIT        $1.        /* ALIEN ALIEN REFUGE INDICATOR */
@1050  IEA_SEIE    6.2        /* STUDENT EARNED INCOME EXCLUSION
                              AMOUNT IETYP=B (IEAMT) */
 ;

 DO I = 1 TO 6;
     IF UT(I) = 'A' THEN IUA_SSDI = UA(I);   /* TYPE II */
  ELSE IF UT(I) = 'F' THEN IUA_TANF = UA(I);   /* TANF */
  ELSE IF UT(I) = 'Q' THEN IUA_WC   = UA(I);   /* WORKERS COMP */
 END;

 /* CREATE AGE AT TIME OF EXTRACTION VARIABLE */
 /*DAF PREFERRED AGE CALCULATION IS NOT USED IN THIS INSTANCE TO
   PRESERVE CONTINUITY IN OUR BENE SELECTION ACROSS ITERATIONS OF
   THE DAF*/

AGE = (SEL_DATE - DOBCER)/365.25;

/* SET THE BIRTHDATE */
%LET OLD_DOB = DOBCER;

/* INCLUDE THE PROGRAM TO CALCULATE THE FRADATE */
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(FRACALC)";

/* CALCULATE FRA */
FRA = (FRADATE-&OLD_DOB.)/365.25;

/* CONDITIONS FOR INCLUSION FOR DAF */
IF  AGE < FRA;
IF (UPCASE(CPST) IN ('C01' 'E01' 'E02' 'M01' 'M02'
                'P01' 'S05' 'S06' 'S07' 'S08' 'S09' 'S21' 'T30'
```

Appendix A.7
JCL/SAS Code: CERREAD

```
                'T32' 'T33')) OR
   (DENCDE = ' ' AND     /* NEW IN 2004 TO ELIM DENIALS FOR N CODES */
    UPCASE(CPST) IN ('N01' 'N02' 'N04' 'N05' 'N06'
                 'N09' 'N20' 'N22' 'N33' 'N44' 'N54'));
IF UPCASE(MFT) IN ('DI' 'BI' 'DC' 'BC' 'DS' 'BS');

/*CHECK AAZIP1_5 IF IT IS A VALID ZIP CODES-00000 OR 0000A ARE NOT VALID
  NOTDIGIT FUNCTION RETURNS THE POSITION OF THE FIRST NON-DIGIT VALUE
  IN THE CHAR STRING*/
IF NOTDIGIT(AAZIP1_5)=0 AND AAZIP1_5 NE '00000' THEN DO;
  RESZIP = AAZIP1_5;
  RZIPS = AAZIP6_9;
END;
  ELSE DO;
    RESZIP = PDZIP1_5;
    RZIPS = PDZIP6_9;
  END;

FORMAT
      IEA_BLIND IEA_PASS IEA_LOSS IEA_NESE IEA_IRWE
      IEA_WAGE IEA_SEIE IUA_SSDI IUA_TANF IUA_WC 11.2
      DOBCER RCD_EST  YYMMDD10.;
;

DROP SEL_DATE I POS UN1-UN6 T1-T6;

RUN;

PROC SORT DATA=CER OUT=TEMP.CER; BY SSN RCD_EST; RUN;

DATA OUT.CER;
  SET TEMP.CER;
  BY SSN;
  IF LAST.SSN; /*KEEP THE MOST RECENT RECORD ESTABLISHMENT DATE*/
RUN;

PROC CONTENTS DATA=OUT.CER; RUN;

/* CHECK OUTPUT */
TITLE "CHECK OUTPUT DATASET (OBS=10)";
PROC PRINT DATA=OUT.CER(OBS=10);
RUN;
TITLE;

%MEND;
```

Appendix A.7
JCL/SAS Code: CERREAD

```
%READIN;
```

Appendix A.8
JCL/SAS Code: CERCOMB

```
//#4941CRM  JOB (11710000,T715,,SAS,,ITC9FL),MIAOMIAO-SHEN,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#4941
//*****************************************************************
//* PROJECT:    DAF 50214(06979)
//* DIRECTOR:   LAURA KOSA
//* PROGRAM:    OPDR.TG.PRD.ETTW.#4941.DAF18.FINDER.PRDLIB(CERCOMB)
//* PURPOSE:    COMBINE THE MONTHLY CER EXTRACTS AND OUTPUT ONE
//*           RECORD PER BENE
//* UPDATED:    MIAOMIAO SHEN 1/18/2019 FOR DAF18
//* EMAIL:      MSHEN@MATHEMATICA-MPR.COM
//*           MIAOMIAO.SHEN@SSA.GOV
//*****************************************************************
//*
// SET REG='64M'
//JS010   EXEC SAS9,
//       WORK='200000,100000',            * SPACE IN BLKS *
//       REGION=&REG,
//       PARM='MEMSIZE=&REG'
//*
//*SEE INPUT FILES IN LIBNAME STATEMENTS BELOW
//OUT  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.COMBCER.SA.V1,
//       DISP=(NEW,CATLG,DELETE),
//       SPACE=(CYL,(1000,100),RLSE),VOL=(,,,10)
//SYSIN DD *
OPTIONS NOCENTER LS=132 PS=60 COMPRESS=YES MPRINT MACROGEN OBS=MAX;

%LET BEGYR=2018; /* CHANGE AS NEEDED */
%LET ENDYR=2018; /* CHANGE AS NEEDED */

%MACRO START;

 /* INCLUDE YYMM MACRO PROGRAM */
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

 /* INPUT FILES */
%DO SEG = 1 %TO 9;
 LIBNAME IN&SEG. "OPDR.TG.PRD.ETTW.#4941.DAF18P.CER180&SEG..SA.V1"
             DISP=SHR;
%END;
%DO SEG = 10 %TO 12;
 LIBNAME IN&SEG. "OPDR.TG.PRD.ETTW.#4941.DAF18P.CER18&SEG..SA.V1"
             DISP=SHR;
%END;
```

Appendix A.8
JCL/SAS Code: CERCOMB

```
 /* COMBINE 12 CER FILES INTO ONE CER FILE */
DATA OUT.CER;
  MERGE
  %DO MM=1 %TO &TOTMOS.;
     IN&MM..CER(RENAME=(
  CIT=       CIT&&YY&MM
  RDX=       RDX&&YY&MM
  IET4=      IET4&&YY&MM
  IEA_BLIND=  IEA_BLIND&&YY&MM
  IEA_PASS=   IEA_PASS&&YY&MM
  IEA_LOSS=   IEA_LOSS&&YY&MM
  IEA_NESE=   IEA_NESE&&YY&MM
  IEA_IRWE=   IEA_IRWE&&YY&MM
  IEA_WAGE=   IEA_WAGE&&YY&MM
  IUA_SSDI=   IUA_SSDI&&YY&MM
  IUA_TANF=   IUA_TANF&&YY&MM
  IUA_WC=     IUA_WC&&YY&MM
  MEDC=      MEDC&&YY&MM
  PDS2=      PDS2&&YY&MM
  PDS3=      PDS3&&YY&MM
  CPST=      CPST&&YY&MM
  RESZIP =    RZIP&&YY&MM
  RZIPS =     RZPS&&YY&MM
  ERP_IND=    ERP_IND&&YY&MM
  IEA_SEIE=   IEA_SEIE&&YY&MM
  ))
  %END;
  ;
  BY SSN;
RUN;

PROC CONTENTS DATA=OUT.CER; RUN;

%MEND START;

%START;
//**************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//**************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
```

Appendix A.8
JCL/SAS Code: CERCOMB

```
MAIL FROM:<MSHEN@MATHEMATICA-MPR.COM>
RCPT TO:<MSHEN@MATHEMATICA-MPR.COM>
DATA
FROM:   <MSHEN@MATHEMATICA-MPR.COM>
TO:     <MSHEN@MATHEMATICA-MPR.COM>
SUBJECT: CERCOMB IS COMPLETE
```

Appendix A.9
JCL/SAS Code: MAKEFIND

```
//#4941FIN  JOB (12510000,T715,,SAS,,ITC9FL),MIAOMIAO-SHEN,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#4941
// SET REG='64M'
//JOB01  EXEC SAS9,
//       WORK='180000,90000',
//       REGION=&REG,
//       PARM='MEMSIZE=&REG'
//*****************************************************************
//* PROJECT:  DAF 50214(06979)
//* DIRECTOR: LAURA KOSAR
//* PROGRAM:  OPDR.TG.PRD.ETTW.#4941.DAF18.FINDER.PRDLIB(MAKEFIND)
//* PURPOSE:  CREATE DI, SSI, MASTER, AND 831/833 FIDNER FILES
//* UPDATE:   MIAOMIAO SHEN 1/18/2019 FOR DAF18
//* E-MAIL    MSHEN@MATHEMATICA-MPR.COM
//*           MIAOMIAO.SHEN@SSA.GOV
//* NOTE:     IN DAF15 LINKFIND WAS COMBINED INTO MAKEFIND
//* NOTE:     INCLUDING THE HISTORICAL 65-FRA & SSI KIDS IN DAF16
//* NOTE:     INCLUDING SSI KIDS FROM 1996-2004 IN DAF17
//*****************************************************************
//*
//* INPUT FILES
//* DAF18 DBAD & CER100 FILES
//DBAD   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.CMBDBAD.SA.V1,DISP=SHR
//CER    DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.COMBCER.SA.V1,DISP=SHR
//* DAF17 FINDERS
//PRELDI DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF17P.LINKDI.SA.V1,DISP=SHR
//PRESSI DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF17P.SSIFIND.SA.V1,DISP=SHR
//* OUTPUT FILES
//LDI    DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.LINKDI.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         SPACE=(CYL,(3000,3000),RLSE)
//DI     DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.DIFIND.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         SPACE=(CYL,(3000,3000),RLSE)
//DIFL   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.DIFIND.FL.V1,
//         DISP=(NEW,CATLG,DELETE),
//         SPACE=(CYL,(1000,100),RLSE),
//         DCB=(RECFM=FB,LRECL=80,DSORG=PS)
//SSI    DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.SSIFIND.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         SPACE=(CYL,(3000,3000),RLSE)
//SSIFL  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.SSIFIND.FL.V1,
//         DISP=(NEW,CATLG,DELETE),
//         SPACE=(CYL,(1000,100),RLSE),
```

Appendix A.9
JCL/SAS Code: MAKEFIND

```
//        DCB=(RECFM=FB,LRECL=80,DSORG=PS)
//MAST   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MASTFIND.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        SPACE=(CYL,(1000,100),RLSE)
//MASTFL DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MASTFIND.FL.V1,
//        DISP=(NEW,CATLG,DELETE),
//        SPACE=(CYL,(1000,100),RLSE),
//        DCB=(RECFM=FB,LRECL=80,DSORG=PS)
//SSR    DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.FIND831.SA.V1,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//TEMP   DD DSN=&&TEMP,
//        DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(1000,100),RLSE)
//SYSIN  DD *
OPTIONS NOCENTER LS=132 PS=60 COMPRESS=YES OBS=MAX;

 /*****************************************************************/
 /*            CREATE LINKDI (NOT SUBMITTED TO SSA)          */
 /*****************************************************************/
 /* COMBINE NEW DI LINKING FILE WITH OLD DI LINK              */
 /* OUTPUT FILE WILL BE THE LINK FOR KEEPING MBR RECORDS       */
 /* RETURNED FROM THE FINDER PROCESS                          */

 DATA LDI.LINKDI;
  MERGE PRELDI.LINKDI
      DBAD.DBAD(IN=DBAD KEEP=SSN CAN BIC);
   BY SSN BIC;

   /* GET RID OF BLANK CAN'S */
   IF CAN NE ' ';
 RUN;

 /*****************************************************************/
 /*          CREATE DI FINDER FILE (SUBMITTED TO SSA)          */
 /*****************************************************************/

 PROC SORT DATA=LDI.LINKDI NODUPKEY
        OUT=DI.DIFIND;
   BY CAN;
 RUN;

 DATA NULL;
   SET DI.DIFIND;
   BY CAN;
```

Appendix A.9
JCL/SAS Code: MAKEFIND

```
  FILE DIFL;
  PUT
  @1 CAN $9.
  ;
RUN;

/*****************************************************************/
/*        CREATE SSI FINDER FILE (NOT SUBMITTED TO SSA)     */
/*****************************************************************/
/* COMBINE NEW CER100 FILE WITH PREVIOUS SSIFIND FILE */
DATA SSI.SSIFIND;
  MERGE PRESSI.SSIFIND(IN=PRVSSI)
      CER.CER(IN=CER KEEP=SSN);
  BY SSN;
RUN;

/*****************************************************************/
/*        CREATE SSI FINDER FILE (SUBMITTED TO SSA)        */
/*****************************************************************/
DATA NULL;
  SET SSI.SSIFIND;
  BY SSN;
  FILE SSIFL;
  PUT
  @1 SSN $9.
  ;
RUN;

/*****************************************************************/
/*       CREATE MASTER FINDER FILE (SUBMITTED TO SSA)       */
/*****************************************************************/

/* RESORT DI DATA DE-DUPING ON SSN FOR MASTER FILE */
PROC SORT DATA=LDI.LINKDI NODUPKEY
       OUT=TEMP.DIFIND;
  BY SSN;
RUN;

/* OUTPUT MASTER FLAT DATA AND SAS DATA SET */
/* FLAT FILE IS SENT TO SSA STAFF AS FINDER - SAS DATA SET IS
  USED TO SCREEN THE RETURNED RECORDS */
DATA MAST.MASTFIND;
  MERGE SSI.SSIFIND(KEEP=SSN)
      TEMP.DIFIND(KEEP=SSN);
  BY SSN;
```

Appendix A.9
JCL/SAS Code: MAKEFIND

```
RUN;

DATA NULL;
  SET MAST.MASTFIND;
  BY SSN;
  FILE MASTFL;
  PUT
  @1 SSN $9.
  ;
RUN;

/*****************************************************************/
/*       CREATE 831 FINDER FILE (NOT SUBMITTED TO SSA)       */
/*****************************************************************/

 /* DIFIND CONTAINS CANS FROM THE DBAD AND DEMO DATA DE-DUPLICATED ON
    CAN. IN THE LINKDI FILE THE BIC DISTINGUISHES BETWEEN THEM.
    SSIFIND CONTAINS SSNS FROM NEW CER AND DEMO.
    THE "FIND" FILES ARE FLAT FILES SENT TO SSA AS FINDERS.
    831-33 FILE HAS THE DUPLICATED CAN FOR MBR AND THE PAN FOR SSR.
    TO LINK BACK WE NEED TO MATCH THE CAN AND THE BIC FOR MBR RECORDS
    AND THE PAN FOR SSR. ALL SSR RECORDS HAVE BIC = A IN 831.
    CHILDREN ARE REGISTERED AS PRIMARIES ON SSR-831.
    THE LINK SHOULD FIND ALL THE RECORDS WE NEED. */

DATA FIND831;
  SET DI.DIFIND(KEEP=CAN RENAME=(CAN=SSN))
     SSI.SSIFIND(KEEP=SSN);
  BY SSN;
RUN;

PROC SORT NODUPKEY DATA=FIND831 OUT=SSR.FIND831; BY SSN; RUN;

//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<MSHEN@MATHEMATICA-MPR.COM>
RCPT TO:<MSHEN@MATHEMATICA-MPR.COM>
DATA
```

Appendix A.9
JCL/SAS Code: MAKEFIND

FROM: <MSHEN@MATHEMATICA-MPR.COM>
TO: <MSHEN@MATHEMATICA-MPR.COM>
SUBJECT: MAKEFIND IS COMPLETE

Appendix A.10
JCL/SAS Code: COPYFIND

```
//#7429CPH  JOB (12510000,T715,,SAS,,ITC9FL),BRITTANY-COLIP,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#7429
//*****************************************************************
//*
//*     *-------------------------------------------*
//*     |  OPDR.TG.PRD.ETTW.#7429.ENPAY.PRDLIB(COPYH) |
//*     *-------------------------------------------*
//*
//*     1.  COPY HORIZONTAL PAYMENT FILE FROM TAPE TO TAPE
//*
//*****************************************************************
//STEPA   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=MTOSSI.MISC.EARN.FRERN18.D1902,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.SSIERN.FL.V1,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//SYSIN  DD  DUMMY
```

Appendix A.11
JCL/SAS Code: COPYFIN2

```
//#7429CPH  JOB (12510000,T715,,SAS,,ITC9FL),BRITTANY-COLIP,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#7429
//*****************************************************************
//*
//*     *-------------------------------------------*
//*     |  OPDR.TG.PRD.ETTW.#7429.ENPAY.PRDLIB(COPYH) |
//*     *-------------------------------------------*
//*
//*     1.  COPY HORIZONTAL PAYMENT FILE FROM TAPE TO TAPE
//*
//*****************************************************************
//STEPA   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=MTOSSI.MISC.ADVR.FRAVR18.D1902,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.SSIADD.FL.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
```

Appendix A.12
JCL/SAS Code: JCL83N

```
//#6266AL8  JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//   MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//*
//*     *-----------------------------------------------------*
//*     |  OPDR.TG.PRD.ETTW.<ID>.DAF<YY>.P831.PRDLIB(JCL83N)      |
//*     |                                                         |
//*     | THIS JCL RUNS YEARS 1988-THE CURRENT DAF YYYY           |
//*     *-----------------------------------------------------*
//* READ IN THE  831/833 FILES
//* JCL CALLS THE APPROPRIATE PROGRAM FOR READING 831 & 833 DATA
//* CONTACT SERGE LUKASHANETS
//* E-MAIL SLUKASHANETS@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//* READ IN PREVIOUS YEARS 831 FILE
//READ831 PROC
//RD831   EXEC SAS9,
//       WORK='120000,60000',            * SPACE IN BLKS *
//       PARM='SYSPARM="&YEAR"'
//*
//P831    DD DSN=AIS.F5750DDB.UNI831.CY&YEAR.,DISP=SHR
//FIND    DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.FIND831.SA.V1,DISP=SHR
//TEMP    DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(3000,3000),RLSE)
//OUT     DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.P831.Y&YEAR..SA,
//         DISP=(NEW,CATLG,DELETE),
//         SPACE=(CYL,(3000,3000),RLSE)
//SYSIN   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.P831.PRDLIB(RD831),
//         DISP=(SHR,PASS,KEEP)
//       PEND
//*
//RUN1988    EXEC READ831,YEAR=1988
//RUN1989    EXEC READ831,YEAR=1989
//RUN1990    EXEC READ831,YEAR=1990
//RUN1991    EXEC READ831,YEAR=1991
//RUN1992    EXEC READ831,YEAR=1992
//RUN1993    EXEC READ831,YEAR=1993
//RUN1994    EXEC READ831,YEAR=1994
//RUN1995    EXEC READ831,YEAR=1995
//RUN1996    EXEC READ831,YEAR=1996
//RUN1997    EXEC READ831,YEAR=1997
//RUN1998    EXEC READ831,YEAR=1998
```

Appendix A.12
JCL/SAS Code: JCL83N

```
//RUN1999    EXEC READ831,YEAR=1999
//RUN2000    EXEC READ831,YEAR=2000
//RUN2001    EXEC READ831,YEAR=2001
//RUN2002    EXEC READ831,YEAR=2002
//RUN2003    EXEC READ831,YEAR=2003
//RUN2004    EXEC READ831,YEAR=2004
//RUN2005    EXEC READ831,YEAR=2005
//RUN2006    EXEC READ831,YEAR=2006
//RUN2007    EXEC READ831,YEAR=2007
//RUN2008    EXEC READ831,YEAR=2008
//RUN2009    EXEC READ831,YEAR=2009
//RUN2010    EXEC READ831,YEAR=2010
//RUN2011    EXEC READ831,YEAR=2011
//RUN2012    EXEC READ831,YEAR=2012
//RUN2013    EXEC READ831,YEAR=2013
//RUN2014    EXEC READ831,YEAR=2014
//RUN2015    EXEC READ831,YEAR=2015
//RUN2016    EXEC READ831,YEAR=2016
//RUN2017    EXEC READ831,YEAR=2017
//*
//* READ IN CURRENT YEAR 831 FILE
//RD831   EXEC SAS9,
//       WORK='120000,60000'
//*
//P831  DD DSN=AIS.D5750030.UNI831.MONDAY.WEEK1862,DISP=SHR
//FIND  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.FIND831.SA.V1,DISP=SHR
//TEMP  DD DSN=&&TEMP,
//        DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUT   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.P831.Y2018.SA,
//        DISP=(NEW,CATLG,DELETE),
//        SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.P831.PRDLIB(RD831),
//        DISP=(SHR,PASS,KEEP)
//*
//* READ IN PREVIOUS YEARS 833 FILE
//READ833 PROC
//RD833   EXEC SAS9,
//       WORK='120000,60000',            * SPACE IN BLKS *
//       PARM='SYSPARM="&YEAR"'
//*
//P833    DD DSN=AIS.F5750DDB.UNI833.CY&YEAR.,DISP=SHR
//FIND    DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.FIND831.SA.V1,DISP=SHR
//TEMP    DD DSN=&&TEMP,
//          DISP=(NEW,DELETE,DELETE),
```

Appendix A.12
JCL/SAS Code: JCL83N

```
//          SPACE=(CYL,(3000,3000),RLSE)
//OUT     DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.P833.Y&YEAR..SA,
//          DISP=(NEW,CATLG,DELETE),
//          SPACE=(CYL,(3000,3000),RLSE)
//SYSIN   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.P831.PRDLIB(RD833),
//          DISP=(SHR,PASS,KEEP)
//       PEND
//*
//RUN1988    EXEC READ833,YEAR=1988
//RUN1989    EXEC READ833,YEAR=1989
//RUN1990    EXEC READ833,YEAR=1990
//RUN1991    EXEC READ833,YEAR=1991
//RUN1992    EXEC READ833,YEAR=1992
//RUN1993    EXEC READ833,YEAR=1993
//RUN1994    EXEC READ833,YEAR=1994
//RUN1995    EXEC READ833,YEAR=1995
//RUN1996    EXEC READ833,YEAR=1996
//RUN1997    EXEC READ833,YEAR=1997
//RUN1998    EXEC READ833,YEAR=1998
//RUN1999    EXEC READ833,YEAR=1999
//RUN2000    EXEC READ833,YEAR=2000
//RUN2001    EXEC READ833,YEAR=2001
//RUN2002    EXEC READ833,YEAR=2002
//RUN2003    EXEC READ833,YEAR=2003
//RUN2004    EXEC READ833,YEAR=2004
//RUN2005    EXEC READ833,YEAR=2005
//RUN2006    EXEC READ833,YEAR=2006
//RUN2007    EXEC READ833,YEAR=2007
//RUN2008    EXEC READ833,YEAR=2008
//RUN2009    EXEC READ833,YEAR=2009
//RUN2010    EXEC READ833,YEAR=2010
//RUN2011    EXEC READ833,YEAR=2011
//RUN2012    EXEC READ833,YEAR=2012
//RUN2013    EXEC READ833,YEAR=2013
//RUN2014    EXEC READ833,YEAR=2014
//RUN2015    EXEC READ833,YEAR=2015
//RUN2016    EXEC READ833,YEAR=2016
//RUN2017    EXEC READ833,YEAR=2017
//*
//* READ IN CURRENT YEAR 833 FILE
//RD833   EXEC SAS9,
//       WORK='120000,60000'
//*
//P833  DD DSN=AIS.D5750030.UNI833.MONDAY.WEEK1862,DISP=SHR
//FIND  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.FIND831.SA.V1,DISP=SHR
```

Appendix A.12
JCL/SAS Code: JCL83N

```
//TEMP  DD DSN=&&TEMP,
//        DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUT   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.P833.Y2018.SA,
//        DISP=(NEW,CATLG,DELETE),
//        SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.P831.PRDLIB(RD833),
//        DISP=(SHR,PASS,KEEP)
//*
```

Appendix A.13
JCL/SAS Code: RD831

```
/*********************************************************
* FILENAME:  OPDR.TG.PRD.ETTW.<ID>.DAF<YY>.P831.PRDLIB(RD831)
* PROGRAMMER: KATE BARTKUS
* PURPOSE: TO READ IN THE 831 TEXT FILES
* EDITED: NATALIE HAZELWOOD, APR 2012 FOR TRF11, ADDED
*       DO,DD,DT,PD,PDD,VRA
* EDITED: SVETLANA BRONNIKOV, MARCH 2013 FOR DAF12 AGE CALCULATION
* EDITED: JOE MASTRIANNI, MARCH 2014 ADDED VARIABLES (SEE COMMENTS)
* CONTACT: JMASTRIANNI@MATHEMATICA-MPR.COM
*********************************************************/
OPTIONS NOCENTER LS=132 PS=60 OBS=MAX;

DATA WKD831;
INFILE P831 TRUNCOVER;
INPUT
@001  SSN      $char9.
@010  bic      $char2.
@012  AL       $char1.
@013  rid      $char1.
@022  toc      $char1.
@023  dodec  ?? yymmdd8.
@023  dodecM ?? yymmN6. /*RE-READING IN MONTHLY VERSION
                IN CASE DAY OF DODEC IS INVALID*/
@031  rdt      $char1.
@037  rb       $char2.
@039  dob    ?? yymmdd8.
@054  rpdx     $char4.
@062  rsdx     $char4.
@066  ddX      $char6.
@072  dt       $char1.
@073  dr       $char1.
@123 ddpb      $char8.
@123 ddpbX     $char6.  /*RE-READING IN 6 CHARACTER VERSION
                INCASE 8 CHARACTER DDPB IS INVALID*/
@131 do        $char3.
@140 ed        $char2.
@142 vra       $char1.
@157 dotX      $char6.
@165 PD        $char1.
@168 PDD       $char6.
@229 dpm       $char1.
  /*QDD/DSI VARIABLES NEW FOR DAF14*/
@366 QDDIND      $CHAR1.
@367 QDRMVDT   ?? YYMMDD8.
```

Appendix A.13
JCL/SAS Code: RD831

```
@375 QDRMVRSN     $CHAR2.
@377 QDREINDT  ?? YYMMDD8.
@385 QDSCORE      $CHAR1.
@386 DSICLAIM     $CHAR1.
;

 /* MONTH MAY BE MISSING ON DISABILITY DATE FIELDS
   IF SO FILL IN WITH JUNE   */
  IF SUBSTR(DDPBX,5,2) = '88' THEN SUBSTR(DDPBX,5,2) = '06';
  IF SUBSTR(DOTX ,5,2) = '88' THEN SUBSTR(DOTX ,5,2) = '06';
  IF SUBSTR(DDX  ,5,2) = '88' THEN SUBSTR(DDX  ,5,2) = '06';

  DDPBM = INPUT(DDPBX,?? YYMMN6.);
  DOT   = INPUT(DOTX ,?? YYMMN6.);
  DD    = INPUT(DDX  ,?? YYMMN6.);

  DECAGE = INTCK('MONTH',DOB,DODEC,'C')/12;

  DROP DDPBX DOTX DDX;
RUN;
 /* SUBSET RECORDS TO CASES IN FINDER */
DATA TEMP.WKD831;
  MERGE      WKD831  (IN=WKD )
       FIND.FIND831 (IN=FIND);
  BY SSN;
  IF WKD AND FIND;
RUN;

PROC SORT DATA=TEMP.WKD831 OUT=OUT.WKD831;
  BY SSN BIC DODEC;
RUN;

PROC CONTENTS DATA=OUT.WKD831;
RUN;

PROC PRINT DATA=OUT.WKD831 (OBS=25);
RUN;
```

Appendix A.14
JCL/SAS Code: RD833

```
/*********************************************************
* FILENAME:  OPDR.TG.PRD.ETTW.<ID>.DAF<YY>.P831.PRDLIB(RD833)
* PROGRAMMER: N. KHAN
* PURPOSE: TO READ IN THE 833 TEXT FILES
* EDITED: NATALIE HAZELWOOD, APRIL 2012 TO ADD BFD, DO, DD
*       EPEDATE EPETERM EPEDENY EPEREIN EPESUSP DT RFC VRA
* EDITED: SVETLANA BRONNIKOV, MARCH 2013 AGE CALCULATION FOR DAF12
* EDITED: JOE MASTRIANNI, MARCH 2014 ADDED VARIABLES (SEE COMMENTS)
* CONTACT:JMASTRIANNI@MATHEMATICA-MPR.COM
*********************************************************/
OPTIONS NOCENTER LS=132 PS=60 OBS=MAX;

DATA WKD833;
INFILE P833 TRUNCOVER;
INPUT
@001  SSN      $char9.
@010  bic      $char2.
@012  AL       $char1.
@013  rid      $char1.
@014  toc      $char1.
@015  dodec  ?? yymmdd8.
@015  dodecM ?? yymmN6. /*RE-READING IN MONTHLY VERSION
                IN CASE DAY OF DODEC IS INVALID*/
@023  rdt      $char1.
@029  rfc      $char2.
@031  bfd      $char1.
@032  wrm      $char2.
@034  dob    ?? yymmdd8.
@049  rpdx     $char4.
@057  rsdx     $char4.
@061  ddx      $char6.
@067  dt       $char1.
@068  dr       $char1.
@118 ddpb      $char8.
@118 ddpbx     $char6. /*RE-READING IN 6 CHARACTER VERSION
                INCASE 8 CHARACTER DDPB IS INVALID*/
@126 do        $char3.
@135 ed        $char2.
@137 vra       $char1.
@152 dotx      $char6.
@180 epedatex  $char6.
@186 epedeny   $char1.
@187 epereinx  $char6.
@193 epesuspx  $char6.
```

Appendix A.14
JCL/SAS Code: RD833

```
@199 epetermx  $char6.
@260 cdt       $char2.
@262 DPM       $char1.
   /*QDD/DSI VARIABLES NEW FOR DAF14*/
@397 QDDIND       $CHAR1.
@398 QDRMVDT   ?? YYMMDD8.
@406 QDRMVRSN     $CHAR2.
@408 QDREINDT  ?? YYMMDD8.
@416 QDSCORE      $CHAR1.
@417 DSICLAIM     $CHAR1.
;
 /* MONTH MAY BE MISSING ON DISABILITY DATE FIELDS
   IF SO FILL IN WITH JUNE   */
  IF SUBSTR(DDPBX   ,5,2) = '88' THEN SUBSTR(DDPBX   ,5,2) = '06';
  IF SUBSTR(DOTX    ,5,2) = '88' THEN SUBSTR(DOTX    ,5,2) = '06';
  IF SUBSTR(DDX     ,5,2) = '88' THEN SUBSTR(DDX     ,5,2) = '06';
  /*833 ONLY*/
  IF SUBSTR(EPEDATEX,5,2) = '88' THEN SUBSTR(EPEDATEX,5,2) = '06';
  IF SUBSTR(EPEREINX,5,2) = '88' THEN SUBSTR(EPEREINX,5,2) = '06';
  IF SUBSTR(EPESUSPX,5,2) = '88' THEN SUBSTR(EPESUSPX,5,2) = '06';
  IF SUBSTR(EPETERMX,5,2) = '88' THEN SUBSTR(EPETERMX,5,2) = '06';

  DDPBM = INPUT(DDPBX,?? YYMMN6.);
  DOT   = INPUT(DOTX ,?? YYMMN6.);
  DD    = INPUT(DDX  ,?? YYMMN6.);

  EPEDATE = INPUT(EPEDATEX,?? YYMMN6.);
  EPEREIN = INPUT(EPEREINX,?? YYMMN6.);
  EPESUSP = INPUT(EPESUSPX,?? YYMMN6.);
  EPETERM = INPUT(EPETERMX,?? YYMMN6.);

  DECAGE = INTCK('MONTH',DOB,DODEC,'C')/12;

  DROP DDPBX DOTX DDX EPEDATEX EPEREINX EPESUSPX EPETERMX;
RUN;

 /* SUBSET RECORDS TO CASES IN FINDER */
DATA TEMP.WKD833;
MERGE      WKD833  (IN=WKD)
     FIND.FIND831 (IN=FIND);
 BY SSN;
 IF WKD AND FIND;
RUN;

PROC SORT DATA=TEMP.WKD833 OUT=OUT.WKD833;
```

Appendix A.14
JCL/SAS Code: RD833

```
 BY SSN BIC DODEC;
RUN;

PROC CONTENTS DATA=OUT.WKD833;
RUN;

PROC PRINT DATA=OUT.WKD833 (OBS=25);
RUN;
```

Appendix A.15
JCL/SAS Code: CMB3133

```
//#6266C3N JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//*
//*     *-------------------------------------------------*
//*     ¦ OPDR.TG.PRD.ETTW.<ID>.DAF<YY>.P831.PRDLIB(CMB3133) ¦
//*     *------------------------------------------------- *
//*
//*     1. ALL STEPS ARE STEP RESTARTABLE
//*     2. COMBINING ALL 831-833 FILES
//*
//* CONTACT SERGE LUKASHANETS
//* E-MAIL SLUKASHANETS@MATHEMATICA-MPR.COM
//*
//*****************************************************************
//*
//      SET REG='64M'
//*
//JS010  EXEC SAS9,
//      WORK='200000,100000',
//      REGION=&REG,
//      PARM='MEMSIZE=&REG'
//*
//TEMP    DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(1000,100),RLSE),VOL=(,,,10)
//TEMP1   DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(1000,100),RLSE),VOL=(,,,10)
//* ADDITIONAL DATASETS READ IN AT LINES 42 & 43
//OUT     DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.CMB3133.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         SPACE=(CYL,(3000,3000),RLSE),VOL=(,,,10)
//MEAN    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.P831.MEAN.SA,
//         DISP=(NEW,CATLG,DELETE),
//         SPACE=(CYL,(3000,3000),RLSE),VOL=(,,,10)
//SYSIN   DD *
OPTIONS NOCENTER COMPRESS=YES OBS=MAX MPRINT MACROGEN;

%LET DAFYEAR=2018; /*UDPATE TO CURRENT DAF YEAR*/
%LET DAFYY  =%SUBSTR(&DAFYEAR.,3);
  /*THE NUMBER OF N VARIABLES WAS RESTRICTED TO 16 FOR COMBINED
  AND 10 FOR T16 IN DAF12*/
%LET T16REST = 10; /*CHECK IN PREVIOUS DAF AND CHANGE AS NEEDED*/
```

Appendix A.15
JCL/SAS Code: CMB3133

```
%LET TOTREST = 16; /*CHECK IN PREVIOUS DAF AND CHANGE AS NEEDED*/

%MACRO COMB831833;
%DO YEAR=1988 %TO &DAFYEAR.;
 LIBNAME INA&YEAR.
   "OPDR.TG.PRD.ETTW.#6266.DAF&DAFYY..P831.Y&YEAR..SA"
 DISP=SHR;
 LIBNAME INB&YEAR.
   "OPDR.TG.PRD.ETTW.#6266.DAF&DAFYY..P833.Y&YEAR..SA"
 DISP=SHR;
%END;

DATA OUT.COMB3133;
 SET
 %DO YEAR=1988 %TO &DAFYEAR.;
  INA&YEAR..WKD831
  INB&YEAR..WKD833
 %END;;
  BY SSN BIC DODEC;
  /* DODEC IS THE DATE OF DECISION.  THERE ARE MULTIPLE RECORDS FOR
     BENEFICIARIES BECAUSE CDR'S (CONTINUING DISABILITY REVIEWS) ARE
     OCCURRING EVERY 3 OR 7 YEARS, CREATING THE MULTIPLE RECORDS

     THE COMBINATION OF SSN AND BIC IS THE LINK FOR T2 CASES.
     SSN FOR T2 IS THE CAN. ALL T2 RECORDS FOR A GIVEN CAN
     HAVE IDENTICAL SSN'S AND CAN BE DISTINGUISED ONLY BY THE BIC.
     THERE IS NO BOAN FIELD IN THE 831-33 FILES.
     THE LINK FOR T16 IS SSN - THE PAN - WHICH IS THE SAME AS
     SSN IN DAF. THE DATA LISTS ALL T16 BICS AS "A" EVEN THOUGH
     BIC IS NOT RELEVANT TO T16 CASES. THE SSN'S ARE UNIQUE THOUGH
     THERE MAY BE MULTIPLE RECORDS FOR A GIVEN BENEFICIARY

     CREATE A FLAG TO INDICATE DI SSI LINES*/

  LINEDI  = 0;
  LINESSI = 0;

      IF RID IN('2','4') THEN LINEDI  = 1;
  ELSE IF RID IN('R','S') THEN LINESSI = 1;

RUN;

 /* COUNT UP TOTAL CDR'S-NUMBER T2 CDRS-NUMBER T16 CDRS.
      THESE FIELDS WILL INDEX THE ARRAYS FOR VARIABLES  */
PROC SQL NOPRINT;
```

Appendix A.15
JCL/SAS Code: CMB3133

```
  CREATE TABLE TEMP1.CNTCDR AS
  SELECT COUNT(BIC)   AS CDRTOT,
       SUM(LINEDI)  AS CDRT2,
       SUM(LINESSI) AS CDRT16
  FROM OUT.COMB3133
  GROUP BY SSN,BIC;
QUIT;

*DETERMINE MAX NUMBER AND P99 OF ADJUDICATIONS FOR USE IN FUTURE STEPS;
PROC MEANS DATA=TEMP1.CNTCDR P99 MAX;
  VAR CDRT16 CDRTOT;
  OUTPUT OUT=MEAN.P831MEAN (DROP = _TYPE_ _FREQ_)
  P99(CDRT16)=P99CDRT16
  P99(CDRTOT)=P99CDRTOT
  MAX(CDRT16)=MAXCDRT16
  MAX(CDRTOT)=MAXCDRTOT;
RUN;

PROC PRINT DATA = MEAN.P831MEAN;
RUN;

*CHECK WITH PROC FREQ;
PROC FREQ DATA=TEMP1.CNTCDR;
  TABLES CDRT16 CDRTOT / LIST MISSING;
  TITLE "DETERMINE MAX NUM OF ADJUDICATIONS";
RUN;

DATA MEAN.P831MEAN;
 SET MEAN.P831MEAN;

  /*THE NUMBER OF N VARIABLES WAS RESTRICTED TO 16 FOR COMBINED
    AND 10 FOR T16 IN TRF12
    RESTRICT THE NUMBER OF N VAIABLES TO MAX OF 99TH PERCENTILE
    AND THE NUMBER FROM LAST YEAR*/

  MAXT16_99 = MAX(ROUND(P99CDRT16),&T16REST.);
  MAXTOT_99 = MAX(ROUND(P99CDRTOT),&TOTREST.);

RUN;

PROC CONTENTS DATA = OUT.COMB3133;
RUN;

PROC CONTENTS DATA = MEAN.P831MEAN;
RUN;
```

Appendix A.15
JCL/SAS Code: CMB3133

```
PROC PRINT DATA=OUT.COMB3133(OBS=25);
  FORMAT DODECM DOT DDPBM YYMMN6.;
RUN;
%MEND COMB831833;
%COMB831833;
```

Appendix A.16
JCL/SAS Code: P3133SSI

```
//#6266PSI JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//*
//*     *-----------------------------------------------------*
//*     |  OPDR.TG.PRD.ETTW.<ID>.DAF<YY>.P831.PRDLIB(P3133SSI)  |
//*     *-----------------------------------------------------*
//*
//* PURPOSE:PROCESS 831/833 DATA FOR SSI BENEFICIARIES
//*        CREATE MONTHLY VARS FROM 831-833 FILES FOR TTW
//* CREATED:02/26/05
//* UPDATED:04/13/18
//* CONTACT SERGE LUKASHANETS
//* E-MAIL  SLUKASHANETS@MATHEMATICA-MPR.COM
//*
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='120000,60000'
//*
//CMB     DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.CMB3133.SA.V1,
//         DISP=SHR
//MEAN    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.P831.MEAN.SA,
//         DISP=SHR
//TEMP    DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(3000,3000),RLSE),VOL=(,,,10)
//OUT     DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.RSTRCT16.SA.V1,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//*
OPTIONS NOCENTER LS=132 PS=60 COMPRESS=BINARY OBS =MAX;

 /* CREATE A MACRO VARIABLE TO INDEX THE FOLLOWING ARRAYS
   IT FLAGS THE MAXIMUM NUMBER OF RECORDS FOR A BENEFICIARY */
    *SQL NOW NEEDED TO AVOID INX=         28;
    *(CAUSES ISSUES WITH VAR1-VAR&INX SYNTAX);
PROC SQL NOPRINT;
  SELECT MAXCDRT16,
       MAXT16_99,
       MAXCDRT16
  INTO   :INX    SEPARATED BY ' ',
       :REST16 SEPARATED BY ' ',
       :MAXT16 SEPARATED BY ' '
```

Appendix A.16
JCL/SAS Code: P3133SSI

```
  FROM MEAN.P831MEAN;
QUIT;

%PUT INX=&INX.;
%PUT REST16=&REST16.;
%PUT MAXT16=&MAXT16.;

%MACRO P3133SSI;
 DATA TEMP.SSICDR(KEEP=SSN AGE18_CDR AGE18REDDT
                /*MAX:*/
                 T16APPL1 -  T16APPL&INX
                T16START1 - T16START&INX
                 T16STOP1 -  T16STOP&INX
                  T16RID1 -   T16RID&INX);
              *KEEP T16 CASES;
 SET CMB.COMB3133(WHERE = (RID IN ('R','S')));
  BY SSN BIC DODEC ; /* BIC IS ALWAYS "A" FOR T16 CLAIMS */

  LENGTH    DEC1 - DEC&INX
        T16RID1 - T16RID&INX $1;

  /* SET UP ARRAYS FOR CREATING VARIABLES */
  ARRAY T16APPL  (*)   T16APPL1  - T16APPL&INX ;
  ARRAY T16START (*)   T16START1 - T16START&INX;
  ARRAY T16STOP  (*)   T16STOP1  - T16STOP&INX ;
  ARRAY DEC      (*) $ DEC1      - DEC&INX     ;
  ARRAY T16RID   (*) $ T16RID1   - T16RID&INX  ;

  RETAIN   T16APPL1 -  T16APPL&INX
         T16START1 - T16START&INX
          T16STOP1 -  T16STOP&INX
             DEC1 -      DEC&INX
           T16RID1 -   T16RID&INX
        AGE18_CDR AGE18REDDT INDX;

  IF FIRST.SSN THEN DO; /* BIC IS ALWAYS "A" FOR SSI RECORDS */

  /* INTITIALIZE VARS */
   DO I = 1 TO DIM(T16APPL);
     T16APPL(I) =  . ;
    T16START(I) =  . ;
     T16STOP(I) =  . ;
        DEC(I) = ' ';
      T16RID(I) = ' ';
   END;
```

Appendix A.16
JCL/SAS Code: P3133SSI

```
 AGE18_CDR  = 0;
 AGE18REDDT = .;
 INDX       = 0;

END; /* FIRST SSN */

 INDX = INDX + 1;

   DEC(INDX) = RDT;
 T16RID(INDX) = RID;
 IF AL IN ('B','C','D','E','F') THEN  T16APPL(INDX) = DODECM;
 IF DDPBM GT .Z              THEN T16START(INDX) = DDPBM;
 IF RDT = 'T'                THEN  T16STOP(INDX) = DOT;

 /* DETERMINE IF BENE HAS BEEN RE-DETERMINED AS ADULT */
 IF DECAGE GE 18 AND  RDT = 'C' AND CDT = '04' AND WRM = '29'
  THEN DO;
   AGE18_CDR =1;
   AGE18REDDT = DODEC;
  END;

IF LAST.SSN THEN DO;

/* DELETE STOP DATES IF A SUBSEQUENT APPEAL RESULTS IN CONTINUATION */
 DO I = 2 TO &INX; /* ONLY IF MORE THAN ONE CLAIM */

  IF T16APPL(I) GT .Z  AND DEC(I) = 'C' THEN DO; /* CONTINUATION */
   IF T16STOP(I-1) NE . THEN T16STOP(I-1) = .;
  END;

 END; /* DO I = 2 TO &INX */

LABEL  AGE18_CDR = "INDICATOR FOR ADULT REDETERMINATION"
     AGE18REDDT = "ADULT REDETERMINATION DATE"
     %DO I=1 %TO &INX;
      T16APPL&I  = "T16 APPEAL DATE &I"
      T16START&I = "T16 BENEFIT ENTITLEMENT DATE &I"
      T16STOP&I  = "T16 BENEFIT CESSATION DATE &I"
     %END;;
OUTPUT;
END; /* LAST.SSN */
RUN;

PROC FREQ DATA=TEMP.SSICDR; TABLES AGE18REDDT; WHERE AGE18_CDR = 1;
```

Appendix A.16
JCL/SAS Code: P3133SSI

```
 FORMAT AGE18REDDT YYMMDD10.;
RUN;
PROC CONTENTS; RUN;

%MEND P3133SSI;
%P3133SSI;

/*START RSTRCT16*/

%MACRO RSTRCT16;
*** PRINT RECORDS PRIOR TO PROCESSING IN ORDER TO CHECK THAT ***;
*** OUTPUT IS WHAT WE EXPECT ***;

PROC PRINT DATA=TEMP.SSICDR(OBS=25);
  VAR SSN T16: ;
  WHERE T16RID11 NE ' ';
  TITLE "CHECK VARIABLES PRIOR TO PROCESSING";
  TITLE2 "RECORDS WITH MORE THAN &REST16 N OCCURRENCES";
RUN;

PROC PRINT DATA=TEMP.SSICDR(OBS=25);
  VAR SSN T16: ;
  TITLE2 " ";
RUN;

DATA OUT.RSTRCT16(DROP=I J RID_START T16RID:);
 SET TEMP.SSICDR;

 *RESTRICT NUMBER FOR SSI;
 ARRAY T16APPL     (*)    T16APPL1 -  T16APPL&MAXT16;
 ARRAY T16RID      (*) $   T16RID1 -   T16RID&MAXT16;
 ARRAY T16START    (*)   T16START1 - T16START&MAXT16;
 ARRAY T16STOP     (*)    T16STOP1 -  T16STOP&MAXT16;

 *OUTPUT ARRAY;
 ARRAY HOLDT16APPL (*)  HOLDT16APPL1 -  HOLDT16APPL&REST16 ;
 ARRAY HOLDT16START(*) HOLDT16START1 - HOLDT16START&REST16;
 ARRAY HOLDT16STOP (*)  HOLDT16STOP1 -  HOLDT16STOP&REST16 ;

 RID_INDEX=0;

 DO I=&MAXT16 TO 1 BY -1 UNTIL (RID_INDEX>0);
  IF T16RID(I) NE ' ' THEN RID_INDEX=I;
 END;
```

Appendix A.16
JCL/SAS Code: P3133SSI

```
  %MACRO REST(VAR=);
  *** STEP 1 IS TO CREATE AN ADDITIONAL VARIABLE THAT IS ***;
  *** SET TO THE EARLIEST OCCURRENCE OF EACH N VARIABLE  ***;
   FIRST&VAR.=&VAR.1;

   IF RID_INDEX <= &REST16 THEN DO I=1 TO &REST16;
    HOLD&VAR.(I)=&VAR.(I);
   END;

  *** IF RID_INDEX > 10 THEN SET THE LAST 10 OCCURRENCES TO THE ***;
  *** HOLD VARIABLES ***;

   IF RID_INDEX > &REST16 THEN DO;
    RID_START=RID_INDEX-(&REST16-1);

    DO I = RID_START TO RID_INDEX;
     J = I-(RID_START-1);
     HOLD&VAR(J) = &VAR.(I);
    END;
   END;

   DROP &VAR:;
   RENAME
    %DO I = 1 %TO &REST16;
     HOLD&&VAR.&I=&&VAR.&I
    %END;;

  %MEND REST;
  %REST(VAR=T16APPL );
  %REST(VAR=T16START);
 %REST(VAR=T16STOP );
RUN;

*** PRINT RECORDS AFTER FINAL PROCESSING IN ORDER TO CHECK THAT ***;
*** OUTPUT IS WHAT WE EXPECT ***;

PROC PRINT DATA=OUT.RSTRCT16(OBS=25);
   VAR SSN T16: ;
   WHERE RID_INDEX > &REST16;
   TITLE "CHECK VARIABLES AFTER PROCESSING";
   TITLE2 "RECORDS WITH MORE THAN &REST16 N OCCURRENCES";
RUN;

PROC PRINT DATA=OUT.RSTRCT16(OBS=25);
   VAR SSN T16: ;
```

Appendix A.16
JCL/SAS Code: P3133SSI

```
  TITLE "CHECK VARIABLES AFTER PROCESSING";
  TITLE2 " ";
RUN;

PROC CONTENTS DATA=OUT.RSTRCT16;
  TITLE "PROC CONTENTS RSTRCT16";
RUN;
%MEND RSTRCT16;
%RSTRCT16;
```

Appendix A.17
JCL/SAS Code: P3133ALL

```
//#6266PAL JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,              *****
//           MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//*
//*     *-----------------------------------------------------*
//*     | OPDR.TG.PRD.ETTW.#6266.DAF17.P831.PRDLIB(P3133ALL)    |
//*     *-----------------------------------------------------*
//*
//* PURPOSE:PROCESS 831/833 DATA FOR ALL BENEFICIARIES
//*        TO CREATE MONTHLY VARS FROM 831-833 FILES
//* CREATED:02/26/05
//* UPDATED:04/13/18
//* CONTACT SERGE LUKASHANETS
//* E-MAIL  SLUKASHANETS@MATHEMATICA-MPR.COM
//*
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='120000,60000'
//TEMP1   DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(1000,100),RLSE),VOL=(,,,10)
//CMB     DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.CMB3133.SA.V1,
//         DISP=SHR
//MEAN    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.P831.MEAN.SA,
//         DISP=SHR
//OUT1    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.ALLCDR.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUT2   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.RSTRCTN.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//*

   OPTIONS NOCENTER LS=132 PS=60 COMPRESS=BINARY OBS = MAX;
%LET BEGYR=1994;
%LET ENDYR=2018; /* CHANGE AS NEEDED */
%LET ENDMN=12;    /* CHANGE AS NEEDED */

  /* STEP TO ASSIGN MACRO VARIABLES TO HANDLE TIME SERIES DATA */

%MACRO P3133ALL;

%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";
```

Appendix A.17
JCL/SAS Code: P3133ALL

```
 /* CREATE A MACRO VARIABLE TO INDEX MAX OF RESTRICT N IN ALL FILE
    AND MAX OF TOTAL CRDS; */
PROC SQL;
 SELECT MAXCDRTOT,
       MAXTOT_99,
       MAXCDRTOT
 INTO   :IND  SEPARATED BY ' ',
       :REST SEPARATED BY ' ',
       :MAXT SEPARATED BY ' '
 FROM MEAN.P831MEAN;
RUN;

%PUT  IND(MAXCDRTOT)=&IND;
%PUT REST(MAXTOT_99)=&REST;
%PUT MAXT(MAXCDRTOT)=&MAXT;

DATA OUT1.ALLCDR
 (KEEP= SSN BIC PROGRAM /*MAX:*/
    %DO I = 1 %TO &IND;
       DODEC&I    JUDLVL&I      RDT&I      RID&I      RB&I DPM&I
         DOC&I       DD&I       DT&I       PD&I     PDD&I VRA&I
         BFD&I   EPEDATE&I  EPETERM&I  EPEDENY&I EPEREIN&I
      EPESUSP&I       RFC&I       DR&I

       QDDIND&I   QDRMVDT&I  QDRMVRSN&I
      QDREINDT&I   QDSCORE&I
      DSICLAIM&I
    %END;
    %DO MM = 1 %TO &TOTMOS;
          MIEX&&YY&MM         ALX&&YY&MM EDX&&YY&MM
       DXPRI_SSI&&YY&MM DXPRI_DI831&&YY&MM
       DXSEC_SSI&&YY&MM DXSEC_DI831&&YY&MM
    %END;);

 LENGTH
  %DO I = 1 %TO &IND;
    JUDLVL&I
       RDT&I
       RID&I
       DPM&I
        DT&I
        PD&I
       VRA&I
       BFD&I
```

Appendix A.17
JCL/SAS Code: P3133ALL

```
  EPEDENY&I
      DR&I
%END;
 $1;
SET CMB.COMB3133;
 BY SSN BIC DODEC ;

/*CREATE PROGRAM FLAGS FOR DI AND SSI*/
RETAIN PROGRMDI PROGRMSSI;
/*LENGTH PROGRMDI PROGRMSSI 3;*/ /*DAF14 REMOVE?*/

IF FIRST.BIC THEN DO;
 PROGRMDI  = 0;
 PROGRMSSI = 0;
END;

    IF LINEDI =1 THEN PROGRMDI  = 1; /*NEVER THE CASE WHERE  */
ELSE IF LINESSI=1 THEN PROGRMSSI = 1; /*LINEDI=1 AND LINESSI=1*/


/* SET UP ARRAYS FOR CREATING VARIABLES */

ARRAY DODECA   (*)      DODEC1 -   DODEC&IND;
ARRAY CDRTYP   (*) $    JUDLVL1 -  JUDLVL&IND;
ARRAY DECIS    (*) $      RDT1 -     RDT&IND;
ARRAY TERM     (*)     TRMDTE1 -  TRMDTE&IND;
ARRAY PROG     (*) $      RID1 -     RID&IND;
ARRAY DIS      (*)     DDPBM1 -   DDPBM&IND;
ARRAY REG      (*) $      RB1 -      RB&IND;
ARRAY CONTIN   (*) $      RFC1 -     RFC&IND;
ARRAY PRMDIS   (*) $      DPM1 -     DPM&IND;
ARRAY DSTOFF   (*) $      DOC1 -     DOC&IND;
ARRAY DIARYDT  (*)         DD1 -      DD&IND;
ARRAY DIARYTP  (*) $       DT1 -      DT&IND;
ARRAY DISDEC   (*) $       PD1 -      PD&IND;
ARRAY DECDT    (*) $      PDD1 -     PDD&IND;
ARRAY VRACT    (*) $      VRA1 -     VRA&IND;
ARRAY BASDT    (*) $      BFD1 -     BFD&IND;
ARRAY EPEDT    (*)    EPEDATE1 - EPEDATE&IND;
ARRAY EPETRM   (*)    EPETERM1 - EPETERM&IND;
ARRAY EPEDNY   (*) $  EPEDENY1 - EPEDENY&IND;
ARRAY EPERIN   (*)    EPEREIN1 - EPEREIN&IND;
ARRAY EPESUS   (*)    EPESUSP1 - EPESUSP&IND;
ARRAY DIARYRES (*)         DR1 -      DR&IND;
```

Appendix A.17
JCL/SAS Code: P3133ALL

```
ARRAY AQDDIND   (*) $    QDDIND1 -     QDDIND&IND;
ARRAY AQDRMVDT  (*)     QDRMVDT1 -    QDRMVDT&IND;
ARRAY AQDRMVRSN (*) $  QDRMVRSN1 -   QDRMVRSN&IND;
ARRAY AQDREINDT (*)    QDREINDT1 -   QDREINDT&IND;
ARRAY AQDSCORE  (*) $   QDSCORE1 -    QDSCORE&IND;
ARRAY ADSICLAIM (*) $  DSICLAIM1 -   DSICLAIM&IND;

RETAIN  %DO I = 1 %TO &IND;
   DODEC&I JUDLVL&I      RDT&I RID&I      TRMDTE&I
   DDPBM&I     RB&I      RFC&I DPM&I        DOC&I DD&I
      DT&I     PD&I      PDD&I VRA&I        BFD&I
  EPEDATE&I   EPETERM&I  EPEDENY&I  EPEREIN&I EPESUSP&I DR&I

   QDDIND&I   QDRMVDT&I  QDRMVRSN&I
 QDREINDT&I   QDSCORE&I
 DSICLAIM&I
%END;
INDX;

 IF FIRST.BIC THEN DO I = 1 TO DIM(DODECA);
  /* INITIALIZE VARIABLES */
      DODECA(I) =  . ;
      CDRTYP(I) = ' ';
       DECIS(I) = ' ';
        PROG(I) = ' ';
        TERM(I) =  . ;
         DIS(I) =  . ;
         REG(I) = ' ';
      CONTIN(I) = ' ';
      PRMDIS(I) = ' ';
      DSTOFF(I) = ' ';
     DIARYDT(I) =  . ;
     DIARYTP(I) = ' ';
      DISDEC(I) = ' ';
       DECDT(I) = ' ';
       VRACT(I) = ' ';
       BASDT(I) = ' ';
       EPEDT(I) =  . ;
      EPETRM(I) =  . ;
      EPEDNY(I) = ' ';
      EPERIN(I) =  . ;
      EPESUS(I) =  . ;
    DIARYRES(I) = ' ';

     AQDDIND(I) = ' ';
```

Appendix A.17
JCL/SAS Code: P3133ALL

```
      AQDRMVDT(I) =  . ;
     AQDRMVRSN(I) = ' ';
     AQDREINDT(I) =  . ;
      AQDSCORE(I) = ' ';
     ADSICLAIM(I) = ' ';

          INDX =  0 ; /*UNDERSTOOD THIS IS BEING DONE FOR EACH 'I'*/
   END;

            INDX  = INDX + 1;
      DODECA(INDX) = DODEC;
      CDRTYP(INDX) = AL;
       DECIS(INDX) = RDT;
        TERM(INDX) = DOT;
        PROG(INDX) = RID;
         DIS(INDX) = DDPBM;
         REG(INDX) = RB;
      CONTIN(INDX) = RFC;
      PRMDIS(INDX) = DPM;
      DSTOFF(INDX) = DO;
     DIARYDT(INDX) = DD;
     DIARYTP(INDX) = DT;
      DISDEC(INDX) = PD;
       DECDT(INDX) = PDD;
       VRACT(INDX) = VRA;
       BASDT(INDX) = BFD;
       EPEDT(INDX) = EPEDATE;
      EPETRM(INDX) = EPETERM;
      EPEDNY(INDX) = EPEDENY;
      EPERIN(INDX) = EPEREIN;
      EPESUS(INDX) = EPESUSP;
    DIARYRES(INDX) = DR;

     AQDDIND(INDX) = QDDIND;
    AQDRMVDT(INDX) = QDRMVDT;
   AQDRMVRSN(INDX) = QDRMVRSN;
   AQDREINDT(INDX) = QDREINDT;
    AQDSCORE(INDX) = QDSCORE;
   ADSICLAIM(INDX) = DSICLAIM;

  LENGTH
   %DO MM=1 %TO &TOTMOS;
         MIEX&&YY&MM
          ALX&&YY&MM $1
          EDX&&YY&MM $2
```

Appendix A.17
JCL/SAS Code: P3133ALL

```
    DXPRI_SSI&&YY&MM   DXSEC_SSI&&YY&MM
   DXPRI_DI831&&YY&MM DXSEC_DI831&&YY&MM $4
  %END;;

 /* CREATE ARRAYS FOR MONTHLY VARIABLES FROM 1994 THRU CURRENT YEAR*/

ARRAY EDX   {*} $  %DO MM=1 %TO &TOTMOS;        EDX&&YY&MM %END;;
ARRAY ALX   {*} $  %DO MM=1 %TO &TOTMOS;        ALX&&YY&MM %END;;
ARRAY MIE   {*} $  %DO MM=1 %TO &TOTMOS;        MIEX&&YY&MM %END;;
ARRAY DX1SSI{*} $4 %DO MM=1 %TO &TOTMOS;   DXPRI_SSI&&YY&MM %END;;
ARRAY DX2SSI{*} $4 %DO MM=1 %TO &TOTMOS;   DXSEC_SSI&&YY&MM %END;;
ARRAY DX1DI {*} $4 %DO MM=1 %TO &TOTMOS; DXPRI_DI831&&YY&MM %END;;
ARRAY DX2DI {*} $4 %DO MM=1 %TO &TOTMOS; DXSEC_DI831&&YY&MM %END;;
ARRAY CYEAR (*) $  %DO MM=1 %TO &TOTMOS;          C&&YY&MM %END;;
ARRAY NYEAR (*)    %DO MM=1 %TO &TOTMOS;          N&&YY&MM %END;;

RETAIN
  %DO MM=1 %TO &TOTMOS;
        EDX&&YY&MM        MIEX&&YY&MM ALX&&YY&MM
    DXPRI_SSI&&YY&MM   DXSEC_SSI&&YY&MM
   DXPRI_DI831&&YY&MM DXSEC_DI831&&YY&MM
  %END;
  TERMIND1 TERMIND2;

 IF FIRST.BIC THEN DO I = 1 TO &TOTMOS;
     EDX(I) = ' ';
     MIE(I) = '0';
     ALX(I) = ' ';
   DX1SSI(I) = ' ';
   DX2SSI(I) = ' ';
    DX1DI(I) = ' ';
    DX2DI(I) = ' ';

    TERMIND1 = 0; /*UNDERSTOOD THESE ARE BEING SET TO 0 FOR EACH I*/
    TERMIND2 = 0;
 END; /* FIRST BIC */

  /* THE FOLLOWING ROUTINE CREATES MONTHLY REFERENCE DATES FROM
     JAN 1994 TO DEC CURRENT YEAR - EACH RECORD WILL BE EVALUATED.
     FOR BENEFICIARIES WITH MULTIPLE RECORDS THE FIELDS ARE RETAINED
     FROM RECORD TO RECORD */

 J=1;
 Y=&BEGYR;
```

Appendix A.17
JCL/SAS Code: P3133ALL

```
DO I = 1 TO DIM(CYEAR); /* LOOP THROUGH ALL MONTH/YEAR REFERENCES */

 CYEAR(I) = PUT(Y,4.)||(PUT(J,Z2.));

 IF INT(I/12)=I/12 THEN DO; /*FINDS YEAR END*/
     J=1;
     Y=Y+1;
 END;
 ELSE J=J+1;

NYEAR(I)=INPUT(SUBSTR(CYEAR(I),1,4)||SUBSTR(CYEAR(I),5,2),YYMMN6.);

/* IF THE DISAB ENTIT MONTH EXISTS USE IT. ELSE USE DODEC(ADJUD DATE)
   THE DISAB ENTIT MONTH USUALLY PREDATES THE DODEC,
   BUT IS OFTEN MISSING.
   COMPARE TO EACH MONTHLY REFERENCE VARIABLE TO SET MONTHLY VARS */

/* IF THERE IS A TERMINATION DATE - END MONTHLIES THEN */
/* LOOK AT SEPARATE TITLE TERMINATIONS              */
/* FOR MULTIPLE TERMINATIONS ON THE SAME PROGRAM THE LAST
  WILL BE KEPT.
  SET TERMINATION INDEXES USING THE ARRAY REFERENCE I WHEN
  A TERMINATION DATE (DOT) IS IN THAT ARRAY MONTH */

     IF DOT = NYEAR(I) AND RID IN ('2' '4') THEN TERMIND1 = I;
 ELSE IF DOT = NYEAR(I) AND RID IN ('R' 'S') THEN TERMIND2 = I;

 IF ( DDPBM > .Z AND DDPBM  <= NYEAR(I)) OR
   (DODECM > .Z AND DODECM <= NYEAR(I)) THEN DO;


  EDX(I) = ED;
 /* CHANGE FOR 2006 - ALX EVALUATED FOR ACCEPTED AND DENIED CLAIMS */
  ALX(I) = AL;

 IF (RID IN ('2' 'R') AND RDT = 'A') OR
   (RID IN ('4' 'S') AND RDT = 'C') THEN DO; /* ACCEPTED CLAIMS */

  /* NEW DEFINITION OF MIE */
     IF DR IN ('1','3','9') THEN MIE(I)='P';
 ELSE IF DR IN ('5','7')     THEN MIE(I)='N';
 ELSE IF DR IN ('E','F','G','I','J','K','L',
             'M','N','V','W','X','Y','Z') THEN DO;
               IF DPM='P' THEN MIE(I)='N';
                       ELSE MIE(I)='P';
```

Appendix A.17
JCL/SAS Code: P3133ALL

```
    END;

    ELSE IF 'A'<=DR<='Z'       THEN MIE(I)='E';

   END; /* ACCEPTED CLAIMS */

   /* SELECT ACCEPTED CLAIMS FOR SSI*/
     IF (RID = 'R' AND RDT = 'A') OR
       (RID = 'S' AND RDT = 'C') THEN DO;
      DX1SSI(I) = RPDX;
      DX2SSI(I) = RSDX;
     END; /* ACCEPTED CLAIMS FOR SSI*/

   /* SELECT ACCEPTED CLAIMS FOR DI*/
     IF (RID = '2' AND RDT = 'A') OR
       (RID = '4' AND RDT = 'C') THEN DO;
      DX1DI(I) = RPDX;
      DX2DI(I) = RSDX;
     END; /* ACCEPTED CLAIMS FOR DI*/

  END; /* DATE FALLS WITHIN MONTH */

 END; /* LOOP THROUGH ALL MONTH-YEAR REFERENCES */

 IF LAST.BIC THEN DO;

  /* TAKE THE LATEST TERMINATION TO BLANK OUT VARIABLES */
  /* IF FOR A TITLE THERE IS NO TERMINATION THEN DO NOT BLANK */
  /* IF BOTH TITLES THEN TAKE THE LATEST */

    /*CREATE TERMINATION */
  TERMIND=MAX(TERMIND1,TERMIND2);

  /* BLANK OUT THE VARIABLES AFTER TERMINATION DATE */
  /* ONLY IF THE LAST CLAIM IS TERMINATED */

  IF  DOT NE . THEN DO I = 1 TO &TOTMOS;

    IF TERMIND = I THEN DO J = I TO &TOTMOS;
     ALX(J) = ' ';
     MIE(J) = '0';
    END;
    /*FOR DI BENES*/
    IF TERMIND1 = I THEN DO J = I TO &TOTMOS;
      DX1DI(J) = ' ';
```

Appendix A.17
JCL/SAS Code: P3133ALL

```
    DX2DI(J) = ' ';
   END;
   /*FOR SSI BENES*/
   IF TERMIND2 = I THEN DO J = I TO &TOTMOS;
    DX1SSI(J) = ' ';
    DX2SSI(J) = ' ';
   END;

  END; /* DOT NE . */

  /*LENGTH PROGRAM 3;*/ /*DAF14 CAN REMOVE?*/

   /* LAST BIC - IF BIC = A AND HE IS NOT A CONCURRENT
     HE WILL BE ASSIGNED TO DI AS A CAN.
     HOWEVER FOR DI PRIMARIES (BIC = A) WHO ARE CONCURRENTS
     RECORDS MAY APPEAR IN THE SSI SEGMENT.  THE INFORMATION ON THESE
     RECORDS MUST BE COMBINED WITH THE DI INFORMATION IN GET2SSN
     BEFORE THEY ARE DE-DUPED.
     A WIDOW OR A DAC WHO HAS A CAN WITH A BIC OF C OR W WILL
     BE OUTPUT IN PROGRAM 1 AS A CAN. BUT THERE COULD BE AN SSI RECORD
     FOR THE PRIMARY UNDER A PAN AND A BIC = A AND THIS  CASE
     WOULD BE OUTPUT AS PROGRAM 2 SSI.  THESE RECORDS WILL BE SCREENED
     OUT IN THE GET2SSN PROGRAM WHERE ONLY SSI RECORDS IN THE FINDER
     FOR SSI WILL BE KEPT */

  /*T2  ONLY CASES*/
      IF PROGRMDI  = 1 AND PROGRMSSI = 0 THEN PROGRAM = 1;
  /* CONCURRENTS */
  ELSE IF PROGRMDI  = 1 AND PROGRMSSI = 1 THEN PROGRAM = 2;
  /*T16 ONLY CASES*/
  ELSE IF PROGRMSSI = 1                THEN PROGRAM = 3;

  LABEL
  %DO MM=1 %TO &TOTMOS;
        MIEX&&YY&MM = "&&YY&MM MEDICAL IMPROVEMENT EXPECTED"
         ALX&&YY&MM = "&&YY&MM LEVEL OF ADJUDICATION"
         EDX&&YY&MM = "&&YY&MM YEARS OF EDUCATIOM"
    DXPRI_SSI&&YY&MM = "&&YY&MM SSI PRIMARY DIAGNOSIS"
    DXSEC_SSI&&YY&MM = "&&YY&MM SSI SECONDARY DIAGNOSIS"
  DXPRI_DI831&&YY&MM = "&&YY&MM DI PRIMARY DIAGNOSIS"
  DXSEC_DI831&&YY&MM = "&&YY&MM DI SECONDARY DIAGNOSIS"
  %END;
  %DO I=1 %TO &IND;
     DODEC&I = "CDR DATE &I"
    JUDLVL&I = "LEVEL OF ADJUDICATION &I"
```

Appendix A.17
JCL/SAS Code: P3133ALL

```
      RDT&I = "RESULT OF DETERMINATION &I"
      RID&I = "PROGRAM IDENTIFICATION &I"
       RB&I = "REGULATION BASIS CODE &I"
      RFC&I = "REASON FOR CONTINUATION-CESSATION CODE &I"
      DPM&I = "PERMANENT DISABILITY CODE &I"
      DOC&I = "DISTRICT OFFICE CODE &I"
       DD&I = "DIARY DATE &I"
       DT&I = "DIARY TYPE &I"
       PD&I = "PRESUMPTIVE DISABILITY DECISION &I"
      PDD&I = "PRESUMPTIVE DECISION DATE &I"
      VRA&I = "VR ACTION &I"
      BFD&I = "BASIS FOR DETERMINATION &I"
  EPEDATE&I = "EPE BEGIN DATE &I"
  EPETERM&I = "EPE BENEFIT TERMINATION &I"
  EPEDENY&I = "EPE REINSTATEMENT DENIED &I"
  EPEREIN&I = "EPE REINSTATEMENT ALLOWED &I"
  EPESUSP&I = "EPE SUSPENDED AFTER REINSTATEMENT &I"
       DR&I = "DIARY REASON &I"

   QDDIND&I = "QDD INDICATOR &I"
  QDRMVDT&I = "QDD REMOVAL DATE &I"
 QDRMVRSN&I = "QDD REMOVAL REASON &I"
 QDREINDT&I = "QDD REINSTATEMENT DATE &I"
  QDSCORE&I = "QDD SCORING CODE &I"
 DSICLAIM&I = "DISABILITY SERVICES IMPROVEMENT CLAIM &I"
%END;
 ;
OUTPUT OUT1.ALLCDR;

END; /* LAST BIC */
RUN;

PROC FREQ DATA=OUT1.ALLCDR;
TABLES PROGRAM * MIEX0001
      PROGRAM * MIEX0101
      PROGRAM * MIEX0201
      PROGRAM * MIEX0301
      PROGRAM * MIEX0401
      PROGRAM * MIEX0501
      PROGRAM * MIEX0601
      ;
RUN;

TITLE "PROC CONTENTS ALLCDR";
PROC CONTENTS DATA=OUT1.ALLCDR;
```

Appendix A.17
JCL/SAS Code: P3133ALL

```
RUN;

PROC PRINT DATA=OUT1.ALLCDR (OBS=100);
 TITLE 'CDR DATA ALL';RUN;
PROC CONTENTS; RUN;

  /****************** START RSTRCTN ******************/

*** PRINT RECORDS PRIOR TO PROCESSING IN ORDER TO CHECK THAT ***;
*** OUTPUT IS WHAT WE EXPECT ***;

PROC PRINT DATA=OUT1.ALLCDR(OBS=25);
  VAR SSN BFD: DT: PD: DODEC: ;
  WHERE DODEC18 NE .;
  TITLE "CHECK VARIABLES PRIOR TO PROCESSING";
  TITLE2 "RECORDS WITH MORE THAN &REST N OCCURRENCES";
RUN;

PROC PRINT DATA=OUT1.ALLCDR(OBS=25);
  VAR SSN BFD: DT: PD: DODEC: ;
  TITLE2 " ";
RUN;


 DATA OUT2.RSTRCTN(DROP=I J DODEC_START);
   SET OUT1.ALLCDR;

   LENGTH
   %DO I = 1 %TO &REST;
    HOLDJUDLVL&I
      HOLDRDT&I
      HOLDRID&I
      HOLDDPM&I
       HOLDDT&I
       HOLDPD&I
      HOLDVRA&I
      HOLDBFD&I
   HOLDEPEDENY&I
       HOLDDR&I
   %END; $1;

  *INPUT ARRAY;
  ARRAY BFD      (*) $      BFD1 -     BFD&MAXT;
  ARRAY DD       (*)        DD1 -      DD&MAXT;
  ARRAY DOC      (*) $      DOC1 -     DOC&MAXT;
```

Appendix A.17
JCL/SAS Code: P3133ALL

```
ARRAY DPM      (*) $      DPM1 -     DPM&MAXT;
ARRAY DT       (*) $      DT1 -      DT&MAXT;
ARRAY EPEDATE  (*)     EPEDATE1 - EPEDATE&MAXT;
ARRAY EPEDENY  (*) $   EPEDENY1 - EPEDENY&MAXT;
ARRAY EPEREIN  (*)     EPEREIN1 - EPEREIN&MAXT;
ARRAY EPESUSP  (*)     EPESUSP1 - EPESUSP&MAXT;
ARRAY EPETERM  (*)     EPETERM1 - EPETERM&MAXT;
ARRAY JUDLVL   (*) $   JUDLVL1 -  JUDLVL&MAXT;
ARRAY PD       (*) $      PD1 -      PD&MAXT;
ARRAY PDD      (*) $      PDD1 -     PDD&MAXT;
ARRAY RB       (*) $      RB1 -      RB&MAXT;
ARRAY RDT      (*) $      RDT1 -     RDT&MAXT;
ARRAY RFC      (*) $      RFC1 -     RFC&MAXT;
ARRAY RID      (*) $      RID1 -     RID&MAXT;
ARRAY VRA      (*) $      VRA1 -     VRA&MAXT;
ARRAY DODEC    (*)        DODEC1 -   DODEC&MAXT;
ARRAY DR       (*) $      DR1 -      DR&MAXT;

ARRAY QDDIND   (*) $   QDDIND1 -   QDDIND&MAXT;
ARRAY QDRMVDT  (*)     QDRMVDT1 -  QDRMVDT&MAXT;
ARRAY QDRMVRSN (*) $  QDRMVRSN1 - QDRMVRSN&MAXT;
ARRAY QDREINDT (*)    QDREINDT1 - QDREINDT&MAXT;
ARRAY QDSCORE  (*) $   QDSCORE1 -  QDSCORE&MAXT;
ARRAY DSICLAIM (*) $  DSICLAIM1 - DSICLAIM&MAXT;

*OUTPUT ARRAY;
ARRAY HOLDBFD      (*) $      HOLDBFD1 - HOLDBFD&REST     ;
ARRAY HOLDDD       (*)        HOLDDD1 - HOLDDD&REST       ;
ARRAY HOLDDOC      (*) $      HOLDDOC1 - HOLDDOC&REST     ;
ARRAY HOLDDPM      (*) $      HOLDDPM1 - HOLDDPM&REST     ;
ARRAY HOLDDT       (*) $      HOLDDT1 - HOLDDT&REST       ;
ARRAY HOLDEPEDATE  (*)    HOLDEPEDATE1 - HOLDEPEDATE&REST ;
ARRAY HOLDEPEDENY  (*) $  HOLDEPEDENY1 - HOLDEPEDENY&REST ;
ARRAY HOLDEPEREIN  (*)    HOLDEPEREIN1 - HOLDEPEREIN&REST ;
ARRAY HOLDEPESUSP  (*)    HOLDEPESUSP1 - HOLDEPESUSP&REST ;
ARRAY HOLDEPETERM  (*)    HOLDEPETERM1 - HOLDEPETERM&REST ;
ARRAY HOLDJUDLVL   (*) $   HOLDJUDLVL1 - HOLDJUDLVL&REST  ;
ARRAY HOLDPD       (*) $      HOLDPD1 - HOLDPD&REST       ;
ARRAY HOLDPDD      (*) $      HOLDPDD1 - HOLDPDD&REST     ;
ARRAY HOLDRB       (*) $      HOLDRB1 - HOLDRB&REST       ;
ARRAY HOLDRDT      (*) $      HOLDRDT1 - HOLDRDT&REST     ;
ARRAY HOLDRFC      (*) $      HOLDRFC1 - HOLDRFC&REST     ;
ARRAY HOLDRID      (*) $      HOLDRID1 - HOLDRID&REST     ;
ARRAY HOLDVRA      (*) $      HOLDVRA1 - HOLDVRA&REST     ;
ARRAY HOLDDODEC    (*)        HOLDDODEC1 - HOLDDODEC&REST ;
```

Appendix A.17
JCL/SAS Code: P3133ALL

```
  ARRAY HOLDDR      (*) $      HOLDDR1 - HOLDDR&REST     ;

  ARRAY HOLDQDDIND   (*) $   HOLDQDDIND1 - HOLDQDDIND&REST  ;
  ARRAY HOLDQDRMVDT  (*)    HOLDQDRMVDT1 - HOLDQDRMVDT&REST ;
  ARRAY HOLDQDRMVRSN (*) $ HOLDQDRMVRSN1 - HOLDQDRMVRSN&REST;
  ARRAY HOLDQDREINDT (*)   HOLDQDREINDT1 - HOLDQDREINDT&REST;
  ARRAY HOLDQDSCORE  (*) $  HOLDQDSCORE1 - HOLDQDSCORE&REST ;
  ARRAY HOLDDSICLAIM (*) $ HOLDDSICLAIM1 - HOLDDSICLAIM&REST;

  DODEC_INDEX=0;
  DO I=&MAXT TO 1 BY -1 UNTIL (DODEC_INDEX>0);
     IF DODEC(I) NE ' ' THEN DODEC_INDEX=I;
  END;

%MACRO REST(VAR = );

*STEP 1 IS TO CREATE AN ADDITIONAL VARIABLE THAT IS SET TO THE EARLIEST
 OCCURRENCE OF EACH N VARIABLE ;
  FIRST&VAR.=&VAR.1;

  IF DODEC_INDEX <= &REST THEN DO I=1 TO &REST;
    HOLD&VAR.(I)=&VAR.(I);
  END;

* IF DODEC_INDEX > THE RESTRICTION NUMBER THEN SET THE LAST REST NUMBER
 OCCURRENCES TO THE HOLD VARIABLES;

  IF DODEC_INDEX > &REST THEN DO;
    DODEC_START=DODEC_INDEX-(&REST-1);

    DO I = DODEC_START TO DODEC_INDEX;
      J = I-(DODEC_START-1);
        HOLD&VAR(J) = &VAR.(I);
    END;
  END;

  DROP
   %DO I = 1 %TO &MAXT;
    &&VAR.&I
   %END;;

  RENAME
     %DO I = 1 %TO &REST;
      %PUT RENAMING HOLD&&VAR.&I TO &&VAR.&I;
      HOLD&&VAR.&I=&&VAR.&I
```

Appendix A.17
JCL/SAS Code: P3133ALL

```
        %END;;

    %MEND REST;
    %REST(VAR=BFD     );
    %REST(VAR=DD      );
    %REST(VAR=DOC     );
    %REST(VAR=DPM     );
    %REST(VAR=DT      );
    %REST(VAR=EPEDATE );
    %REST(VAR=EPEDENY );
    %REST(VAR=EPEREIN );
    %REST(VAR=EPESUSP );
    %REST(VAR=EPETERM );
    %REST(VAR=JUDLVL  );
    %REST(VAR=PD      );
    %REST(VAR=PDD     );
    %REST(VAR=RB      );
    %REST(VAR=RDT     );
    %REST(VAR=RFC     );
    %REST(VAR=RID     );
    %REST(VAR=VRA     );
    %REST(VAR=DODEC   );
    %REST(VAR=DR      );

    %REST(VAR=QDDIND  );
    %REST(VAR=QDRMVDT );
    %REST(VAR=QDRMVRSN);
    %REST(VAR=QDREINDT);
    %REST(VAR=QDSCORE );
    %REST(VAR=DSICLAIM);

    RUN;

    *** PRINT RECORDS AFTER FINAL PROCESSING IN ORDER TO CHECK THAT ***;
    *** OUTPUT IS WHAT WE EXPECT ***;

    PROC PRINT DATA=OUT2.RSTRCTN(OBS=25);
      VAR SSN BFD: DT: PD: DODEC: QD: DSI:;
      WHERE DODEC_INDEX > &REST;
      TITLE  "CHECK VARIABLES AFTER PROCESSING";
      TITLE2 "RECORDS WITH MORE THAN &REST N OCCURRENCES";
    RUN;

    PROC PRINT DATA=OUT2.RSTRCTN(OBS=25);
      VAR SSN BFD: DT: PD: DODEC: QD: DSI:;
```

Appendix A.17
JCL/SAS Code: P3133ALL

```
  TITLE "CHECK VARIABLES AFTER PROCESSING";
  TITLE2 " ";
RUN;

PROC CONTENTS DATA=OUT2.RSTRCTN;
  TITLE "PROC CONTENTS RSTRCTN";
RUN;

%MEND P3133ALL;
%P3133ALL;

//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<SLUKASHANETS@MATHEMATICA-MPR.COM>
RCPT TO:<SLUKASHANETS@MATHEMATICA-MPR.COM>
DATA
FROM:   <SLUKASHANETS@MATHEMATICA-MPR.COM>
TO:     <SLUKASHANETS@MATHEMATICA-MPR.COM>
SUBJECT: SUBMISSION DAF18 TASK05 P3133ALL IS COMPLETE
SUBJECT: SUBMISSION DAF18 TASK05 P3133ALL IS COMPLETE
DAF18 TASK05 P3133ALL SUBMITTED ON <DATE> AT <TIME> IS COMPLETE.
```

Appendix A.18
JCL/SAS Code: GET2SSI

```
//#6266GSI  JOB (11710000,T715,,SAS,,ITC9FL),LUKASHANETS,
//         MSGCLASS=1,MSGLEVEL=(1,1),REGION=2047M,NOTIFY=#6266
//*****************************************************************
//*
//*     *-----------------------------------------------------*
//*     ¦  OPDR.TG.PRD.ETTW.#6266.DAF18.P831.PRDLIB(GET2SSI)    ¦
//*     *-----------------------------------------------------*
//* ATTACH SSN TO ALLCDR RECORDS PRELIMINARY TO MERGING WITH DAF
//* THIS PROGRAM SPLITS THE RESTRCTN FILE BY PROGRAM FOR SSI BENES
//*
//* DATE: 4/14/10
//* UPDATED: 3/07/2014
//* UPDATED: 3/28/2019
//* CONTACT SERGE LUKASHANETS
//* E-MAIL SLUKASHANETS@MATHEMATICA-MPR.COM
//*****************************************************************
//*
// SET REG='64M'
//JS010   EXEC SAS9,
//        WORK='200000,100000'            * SPACE IN BLKS *
//*
//RSTN  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.RSTRCTN.SA.V1,DISP=SHR
//SSIF  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.SSIFIND.FL.V1,DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.ALLCDSSI.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN DD *
OPTIONS NOCENTER LS=132 PS=60 COMPRESS=YES OBS=MAX;

  /* SUBSET SSI DATA TO SSN'S IN SSI FINDER. */
DATA FINDER;
  INFILE SSIF TRUNCOVER;
  INPUT @001 SSN $9.;
RUN;

DATA OUT.SSI;
  MERGE RSTN.RSTRCTN(IN=A WHERE =(PROGRAM IN (2,3)))
       FINDER(IN=F);
   BY SSN;
 IF F AND A;
 IF FIRST.SSN;
RUN;

//*************************************************
```

Appendix A.18
JCL/SAS Code: GET2SSI

```
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<SLUKASHANETS@MATHEMATICA-MPR.COM>
RCPT TO:<SLUKASHANETS@MATHEMATICA-MPR.COM>
DATA
FROM:   <SLUKASHANETS@MATHEMATICA-MPR.COM>
TO:     <SLUKASHANETS@MATHEMATICA-MPR.COM>
SUBJECT: SUBMISSION DAF18 TASK05 GET2SSI IS COMPLETE
SUBJECT: SUBMISSION DAF18 TASK05 GET2SSI IS COMPLETE
DAF18 TASK05 GET2SSI SUBMITTED ON 3/28/19 IS COMPLETE.
```

Appendix A.19
JCL/SAS Code: GET2DI

```
//#6266GDI  JOB (11710000,T715,,SAS,,ITC9FL),LUKASHANETS,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//*
//*     *-----------------------------------------------------*
//*     ¦  OPDR.TG.PRD.ETTW.#6266.DAF18.P831.PRDLIB(GET2DI)   ¦
//*     *-----------------------------------------------------*
//* RETRIEVE THE SSN FROM CAN/BIC COMBO FOR T2 RECORDS
//* ATTACH SSN TO ALLCDR RECORDS PRELIMINARY TO MERGING WITH TRF
//* THIS PROGRAM SPLITS THE RESTRCTN FILE BY PROGRAM FOR DIBENES
//*
//* DATE: 4/14/10
//* UPDATED: 3/07/2014
//* UPDATED: 3/28/2019
//* CONTACT SERGE LUKASHANETS
//* E-MAIL SLUKASHANETS@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='200000,100000'            * SPACE IN BLKS *
//*
//RSTN  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.RSTRCTN.SA.V1,DISP=SHR
//LKDI  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.LINKDI.SA.V1,DISP=SHR
//TEMP1 DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//TEMP2 DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//TEMP3 DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.ALLCDRDI.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO
//SYSIN DD *
OPTIONS NOCENTER LS=132 PS=60 COMPRESS=YES OBS=MAX;

PROC SORT DATA=LKDI.LINKDI OUT=LINKDI;
   BY CAN BIC;
RUN;

 /* SPLIT ALLCDR FILE BY PROGRAM */
 /* OUTPUT THE CONCURRENTS ON BOTH SSI AND DI DATA SEGMENTS */
   /* SUBSET DI DATA TO THE CAN/BIC COMBINATIONS IN DI LINKING FILE */
DATA TEMP1.DI ;
  MERGE RSTN.RSTRCTN(IN=A WHERE = ( PROGRAM IN (1 2))
```

Appendix A.19
JCL/SAS Code: GET2DI

```
                    RENAME= (SSN=CAN))
        LINKDI(IN=C);
  BY CAN BIC;
  IF C AND A;
RUN;

  /* NEW DATA STEP TO ELIMINATE THE DUPLICATE SSN'S PULLED BY CAN DATA
     IN THE 831/33 FILES - THE CAN AND BIC ARE THE INDENTIFIERS IN 831.
     OUR LINKING FILE HAS EACH CAN SSN AND BIC COMBINATIONS WHICH MAY
     REPEAT THE SSN FOR DUAL ELIGIBLES (EG. BENE WITH BIC OF A ON HER
     PRIMARY ACCOUNT WHO HAS A BIC OF W ON HER HUSBAND'S ACCOUNT WHERE
     SHE GETS WIDOW'S BENEFITS. WE WILL TAKE THE FIRST RECORD WHICH
     WILL BE THE PRIMARY IF THERE IS A BIC = A RECORD.  IF NOT THEN
     WE WILL TAKE THE FIRST AUXILIARY RECORD. THIS IS THE BEST WE CAN
     DO FOR DUALS */


   /*DIVIDE TEMP.DI IN ORDER TO SUCCEED IN SORTING IT */
%MACRO SORTDAT(BEGIN = ,END = ,RUN = );
  PROC SORT DATA = TEMP1.DI(FIRSTOBS = &BEGIN. OBS=&END.)
              OUT=TEMP&RUN..DI;
    BY SSN BIC;
  RUN;
%MEND SORTDAT;
%SORTDAT(BEGIN = 1 ,END = 9000000 ,RUN = 2);
%SORTDAT(BEGIN = 9000001 ,END = MAX ,RUN = 3);

DATA OUT.DI;
   SET TEMP2.DI TEMP3.DI;
   BY SSN BIC;
   /* IF THE CAN = A KEEP THE RECORD - OTHERWISE KEEP THE FIRST
   AUXILIARY */
  IF FIRST.SSN;
RUN;

//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<SLUKASHANETS@MATHEMATICA-MPR.COM>
```

Appendix A.19
JCL/SAS Code: GET2DI

```
RCPT TO:<SLUKASHANETS@MATHEMATICA-MPR.COM>
DATA
FROM:   <SLUKASHANETS@MATHEMATICA-MPR.COM>
TO:     <SLUKASHANETS@MATHEMATICA-MPR.COM>
SUBJECT: SUBMISSION DAF18 TASK05 GET2DI IS COMPLETE
SUBJECT: SUBMISSION DAF18 TASK05 GET2DI IS COMPLETE
DAF18 TASK05 GET2DI SUBMITTED ON 3/28/19 IS COMPLETE.
```

Appendix A.20
JCL/SAS Code: GET2COM

```
//#6266GCM  JOB (11710000,T715,,SAS,,ITC9FL),LUKASHANETS,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//*
//*     *-----------------------------------------------------*
//*     ¦  OPDR.TG.PRD.ETTW.#6266.DAF18.P831.PRDLIB(GET2COM)   ¦
//*     *-----------------------------------------------------*
//* RETRIEVE THE SSN FROM CAN/BIC COMBO FOR T2 RECORDS
//* ATTACH SSN TO ALLCDR RECORDS PRELIMINARY TO MERGING WITH DAF
//* COMBINE SSI AND DI SEGMENTS FROM GET2DI AND GET2SSI
//* DATE: 3/22/17
//* UPDATED: 3/10/2014 BY SVETLANA BRONNIKOV
//* UPDATED: 4/03/2015 BY JOE MASTRIANNI
//* UPDATED: 4/04/2019 BY SERGE LUKASHANETS
//* CONTACT  SERGE LUKASHANETS
//* E-MAIL  SLUKASHANETS@MATHEMATICA-MPR.COM
//*****************************************************************
//*
// SET REG='64M'
//JS010   EXEC SAS9,
//       WORK='200000,100000',            * SPACE IN BLKS *
//       REGION=&REG,
//       PARM='MEMSIZE=&REG'
//*
//ALDI  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.ALLCDRDI.SA.V1,DISP=SHR
//ALSI  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.ALLCDSSI.SA.V1,DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.ALLCDCOM.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO
//SYSIN DD *
OPTIONS NOCENTER LS=132 PS=60 COMPRESS=YES;
   /* COMBINE SSI AND DI SEGMENTS */

DATA OUT.ALLCDCOM (DROP=MIEX0805-MIEX0812 MIEX09: MIEX1:);
 MERGE ALSI.SSI ALDI.DI;
  BY SSN;
  /* THERE ARE RECORDS FOR SOME DAC'S AND WIDOWS IN THE SSI SEGMENT -
     DUPLICATES OF RECORDS ON THE DI SIDE.  IT SEEMS THAT AT SOME
     POINT A RECORD HAS BEEN CREATED IN SSI FOR SOME OF THESE BENES.
     THIS SHOWS UP AS A DUPLICATE BECAUSE THE BIC IS W OR C IN THE
     DI PROGRAM ON 831 AND A IN THE SSI PROGRAM.  THESE DUP RECORDS
     HAVE BEEN SCRUTINIZED. IN MANY CASE THEY HAVE DUPLICATE VALUES
     FOR THE VARIABLES.  WHEN THESE ARE NOT DUPLICATES THE DI RECORD
     USUALLY HAS MORE COMPLETE DATA.  THEREFORE WE HAVE CHANGED THE
```

Appendix A.20
JCL/SAS Code: GET2COM

```
    DATA STEP FROM "SET" TO "MERGE" PLACING THE SSI RECORD FIRST
    TO BE OVERWRITTEN BY THE DI RECORD (SECOND) WHEN THE SSN
    APPEARS IN BOTH FILES. */
RUN;

PROC CONTENTS DATA=OUT.ALLCDCOM; RUN;

//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<SLUKASHANETS@MATHEMATICA-MPR.COM>
RCPT TO:<SLUKASHANETS@MATHEMATICA-MPR.COM>
DATA
FROM:   <SLUKASHANETS@MATHEMATICA-MPR.COM>
TO:     <SLUKASHANETS@MATHEMATICA-MPR.COM>
SUBJECT: SUBMISSION DAF18 TASK05 GET2COM IS COMPLETE
SUBJECT: SUBMISSION DAF18 TASK05 GET2COM IS COMPLETE
DAF18 TASK05 GET2COM SUBMITTED ON 4/04/19  IS COMPLETE.
```

Appendix A.21
JCL/SAS Code: TESTMACR

```
//#6266SPL JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//*
//*     *-------------------------------------------------*
//*     ¦  TEST THE MACRO SPLIT PROGRAM                   ¦
//*     *-------------------------------------------------*
//*
//*
//* CREATED BY: SERGE LUKASHANETS, 5/26/2016
//* MPR PHONE
//* E-MAIL SLUKASHANETS@MATHEMATICA-MPR.COM
//*****************************************************************
//  SET REG='64M'
//*
//JS010  EXEC SAS9,
//      WORK='200000,100000', F10
//      REGION=&REG,
//      PARM='MEMSIZE=&REG'
//*
//IN1     DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.ALLCDCOM.SA.V1,DISP=SHR
//OUT94    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM94.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
//          UNIT=TSILO
//OUT95    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM95.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
//          UNIT=TSILO
//OUT96    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM96.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
//          UNIT=TSILO
//OUT97    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM97.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
//          UNIT=TSILO
//OUT98    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM98.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
//          UNIT=TSILO
//OUT99    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM99.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
//          UNIT=TSILO
//OUT00    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM00.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
//          UNIT=TSILO
//OUT01    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM01.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
```

Appendix A.21
JCL/SAS Code: TESTMACR

```
//          UNIT=TSILO
//OUT02    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM02.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
//          UNIT=TSILO
//OUT03    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM03.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
//          UNIT=TSILO
//OUT04    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM04.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
//          UNIT=TSILO
//OUT05    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM05.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
//          UNIT=TSILO
//OUT06    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM06.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
//          UNIT=TSILO
//OUT07    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM07.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
//          UNIT=TSILO
//OUT08    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM08.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
//          UNIT=TSILO
//OUT09    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM09.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
//          UNIT=TSILO
//OUT10    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM10.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
//          UNIT=TSILO
//OUT11    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM11.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
//          UNIT=TSILO
//OUT12    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM12.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
//          UNIT=TSILO
//OUT13    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM13.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
//          UNIT=TSILO
//OUT14    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM14.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
//          UNIT=TSILO
//OUT15    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM15.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
//          UNIT=TSILO
//OUT16    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM16.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
```

Appendix A.21
JCL/SAS Code: TESTMACR

```
//          UNIT=TSILO
//OUT17    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM17.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
//          UNIT=TSILO
//OUT18    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM18.SA.V1,
//          DISP=(NEW,CATLG,KEEP),
//          UNIT=TSILO
//TEMP     DD DSN=&&TEMP,
//          DISP=(NEW,DELETE,DELETE),
//          SPACE=(CYL,(3000,3000),RLSE)
//TEMP1    DD DSN=&&TEMP,
//          DISP=(NEW,DELETE,DELETE),
//          SPACE=(CYL,(3000,3000),RLSE)
//SYSIN   DD *
OPTIONS NOCENTER COMPRESS=YES MPRINT OBS=MAX;

%LET BEGYR=1994;
%LET ENDYR=2018;

* GET VARIABLE LIST FROM INPUT DATASET *;
PROC CONTENTS DATA=IN1.ALLCDCOM NOPRINT
          OUT=TEMP.CONTS(KEEP=NAME);
RUN;

%MACRO SPLITV;

* KEEP ONLY VARIABLES WITHOUT YYMM *;
DATA TEMP.CONTS(DROP=YR MO YYMM);
  SET TEMP.CONTS;
  DO YR=&BEGYR. TO &ENDYR.;
    DO MO=1 TO 12;
    IF MO<=9 THEN YYMM=SUBSTR(STRIP(YR),3,2)||"0"||STRIP(MO);
    ELSE YYMM=SUBSTR(STRIP(YR),3,2)||STRIP(MO);

    IF LENGTH(NAME)>=4 THEN DO;
      IF REVERSE(SUBSTR(REVERSE(STRIP(NAME)),1,4))
        EQ YYMM THEN DELETE;
    END;

    END;
  END;
RUN;

PROC SORT DATA=TEMP.CONTS NODUPKEY OUT=TEMP1.CONTS;
  BY NAME;
```

Appendix A.21
JCL/SAS Code: TESTMACR

```
RUN;

* CREATE MACRO VARIABLE WHICH CONTAINS ALL COMMON VARIABLES *;
PROC SQL;
  SELECT NAME INTO :COMMVAR SEPARATED BY ' '
  FROM TEMP1.CONTS;
QUIT;

%PUT COMMON VARIABLES=&COMMVAR;

%INCLUDE "OPDR.TG.PRD.ETTW.#6266.DAF18.P831.PRDLIB(MSPLIT)";

%OUTP(IN1.ALLCDCOM,OUT,ALLCDCOM,&BEGYR,2008,&COMMVAR);
%OUTP(IN1.ALLCDCOM (DROP=MIEX:),OUT,ALLCDCOM,2009,&ENDYR,&COMMVAR);

%DO YEAR=&BEGYR %TO &ENDYR;
%LET YR=%SUBSTR(&YEAR,3,2);
TITLE "CONTENTS OF &YEAR P831/833 DATA";
PROC CONTENTS DATA=OUT&YR..ALLCDCOM;
RUN;
TITLE;
%END;

%MEND SPLITV;
%SPLITV;
//**************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//**************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<SLUKASHANETS@MATHEMATICA-MPR.COM>
RCPT TO:<SLUKASHANETS@MATHEMATICA-MPR.COM>
DATA
FROM:   <SLUKASHANETS@MATHEMATICA-MPR.COM>
TO:     <SLUKASHANETS@MATHEMATICA-MPR.COM>
SUBJECT: SUBMISSION DAF18 MACROSPLIT IS COMPLETE
SUBJECT: SUBMISSION DAF18 MACROSPLIT IS COMPLETE
DAF18 TASK MACROSPLIT SUBMITTED ON 4/04/19  IS COMPLETE.
```

Appendix A.22
JCL/SAS Code: MSPLIT

```
/* THIS MACRO SPLITS THE MULTI-YEAR DATA INTO YEAR-SPECIFIC FILES;
   INCLUDE IT INTO YOUR PROGRAM;

INSTRUCTIONS:
1. TO RUN THIS MACRO CREATE A PROGRAM WITH JCL NAMES FOR INPUT
   AND OUTPUT DATA SETS, THEN INCLUDE THIS MACRO;
2. SET YOUR PARAMETERS CORRECTLY;

PARAMETERS:
1. OLDFILE - YOUR EXISTING MULTI-YEAR DATA (NNNN.NNNN)
2. FILELOC - JCL LOCATION FOR YOUR YEARLY FILES,
   IT SHOULD CONSIT OF NAME STUB + YEAR
   (E.G., FOR NUM99, NUM00, NUM01, ETC. FILELOC = NUM)
3. FILENAME - SAS DATASET NAMES FOR YOUR YEARLY FILES
   (IT SHOULD BE THE SAME FOR ALL NEW FILES)
4. START_YEAR - THE FIRST YEAR FOR NEW FILES
5. END_YEAR - THE LAST YEAR FOR NEW FILES
6. REGVARS - THE LIST OF NON-YEAR-SPECIFIC VARIABLES,
   WHICH SHOULD BE KEPT IN EACH OF NEW FILES

EXAMPLE:
<OLD FILE>
//IN1      DD DSN=OPDR.TG.PRD.ETTW.<*>.SA.V1,DISP=SHR
<NEW FILES, FROM 1994 TO 2012>
//OUT94    DD DSN=OPDR.TG.PRD.ETTW.<*>.NUMDAT94.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUT95    DD DSN=OPDR.TG.PRD.ETTW.<*>.NUMDAT95.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUT96   DD DSN=OPDR.TG.PRD.ETTW.<*>.NUMDAT96.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
<***>
//OUT12    DD DSN=OPDR.TG.PRD.ETTW.<*>.NUMDAT12.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
<*OTHER NECESSARY JCL STATEMENTS*>

%INCLUDE ...

%OUTP(IN1.ALLYEARS,OUT,YEARF,1994,2012,SSN REC ...);
*/
```

Appendix A.22
JCL/SAS Code: MSPLIT

```
OPTIONS NOSYMBOLGEN MPRINT;
%MACRO OUTP (OLDFILE,FILELOC,FILENAME,START_YEAR,END_YEAR,REGVARS);

PROC CONTENTS DATA=&OLDFILE OUT=CONT_A ORDER=VARNUM;RUN;

%LET CHNUM = "0" "1" "2" "3" "4" "5" "6" "7" "8" "9";

DATA CONT_A1 (KEEP = BODY);
LENGTH BODY $15.;
SET CONT_A (KEEP=NAME);

IF SUBSTR(NAME,LENGTH(NAME),1) IN (&CHNUM.)
& SUBSTR(NAME,LENGTH(NAME)-1,1) IN (&CHNUM.)
THEN _MNTH = INPUT(SUBSTR(NAME,LENGTH(NAME)-1,2),BEST.);

/*CHECK THAT WE HAVE 12 MONTHS*/
RETAIN COUNT_MNTH;
IF _MNTH = 1 THEN COUNT_MNTH = _MNTH;
ELSE IF _MNTH > 1 THEN COUNT_MNTH +1;
ELSE IF _MNTH < 1 THEN COUNT_MNTH = .;

IF COUNT_MNTH = 12 &
SUBSTR(NAME,LENGTH(NAME)-2,1) IN (&CHNUM.)
& SUBSTR(NAME,LENGTH(NAME)-3,1) IN (&CHNUM.)
THEN DO;
 IF SUBSTR(NAME,LENGTH(NAME)-3,1) IN ("0" "1") THEN
  _YR = INPUT(SUBSTR(NAME,LENGTH(NAME)-3,2),BEST.) + 2000;
 ELSE IF SUBSTR(NAME,LENGTH(NAME)-3,1)="9" THEN
  _YR = INPUT(SUBSTR(NAME,LENGTH(NAME)-3,2),BEST.) + 1900;
 IF &START_YEAR. <= _YR <= &END_YEAR. THEN DO;
  BODY = SUBSTR(NAME,1,LENGTH(NAME)-4);
  OUTPUT;
 END;
 END;

RUN;

PROC FREQ DATA=CONT_A1;
TABLES BODY / NOPRINT OUT=CONT_A2;
RUN;

DATA _NULL_;
SET CONT_A2 END = _A_;
PUT "ALL 12 MONTHS OF " BODY "AVAILABLE FOR " COUNT "YEARS";
CALL SYMPUT("BODY"||LEFT(_N_),TRIM(LEFT(BODY)));
```

Appendix A.22
JCL/SAS Code: MSPLIT

```
IF _A_ THEN DO;
 CALL SYMPUT("N_BODIES",_N_);
END;
RUN;

/*SPLIT THE DATA*/
DATA
 %DO I = &START_YEAR %TO &END_YEAR;
  %LET J = %SYSFUNC(SUBSTR(&I.,3,2));

   %LET YEARVARS = ;
    %DO B = 1 %TO &N_BODIES.;
     %LET YEARVARS = &YEARVARS &&BODY&B..&J.:;
    %END;

   %PUT &I. : &YEARVARS;
   &FILELOC&J..&FILENAME (KEEP = &REGVARS &YEARVARS)
    %END;
    ;
    SET &OLDFILE;
    RUN;
   %MEND;
```

Appendix A.23
JCL/SAS Code: JCLLOAD

```
//#4941NUM JOB (12510000,T715,,SAS,,ITC9FL),MIAOMIAO-SHEN,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#4941
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR: LAURA KOSA
//* PROGRAM:  OPDR.TG.PRD.ETTW.#4941.DFA18.NUM.PRDLIB(JCLLOAD)
//* PURPOSE:  LOAD RAW NUMIDENT DATA INTO SAS
//* CREATED:  SERGE LUKASHANETS 5/22/2018
//* UPDATE:   SERGE LUKASHANETS 5/22/2018
//*         MIAOMIAO SHEN 5/14/2019 FOR DAF18
//* E-MAIL:   MSHEN@MATHEMATICA-MPR.COM
//*         SHEN.MIAOMIAO@SSA.GOV
//*****************************************************************
//*
//MRGPROC  PROC
//JS010  EXEC SAS9,
//      WORK='200000,100000',
//      PARM='SYSPARM="&SEG"'
//*
//***RAW NUMIDENT FINDER RETURN
//IN1     DD DSN=OPDR.TG.PRD.ETTW.DAF18.NUMIDENT.D1902,DISP=SHR
//TEMP    DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(1000,100),RLSE)
//***OUTPUT FILE
//OUT     DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.NUMLOAD&SEG..SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.NUM.PRDLIB(LOADNUM),
//         DISP=(SHR,PASS,KEEP)
//       PEND
//*
//RUN1    EXEC MRGPROC,SEG=1
//RUN2    EXEC MRGPROC,SEG=2
//RUN3    EXEC MRGPROC,SEG=3
//RUN4    EXEC MRGPROC,SEG=4
//RUN5    EXEC MRGPROC,SEG=5
//RUN6    EXEC MRGPROC,SEG=6
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
```

Appendix A.23
JCL/SAS Code: JCLLOAD

```
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<MSHEN@MATHEMATICA-MPR.COM>
RCPT TO:<MSHEN@MATHEMATICA-MPR.COM>
DATA
FROM:   <MSHEN@MATHEMATICA-MPR.COM>
TO:     <MSHEN@MATHEMATICA-MPR.COM>
SUBJECT: JCLLOAD IS COMPLETE
```

Appendix A.24
JCL/SAS Code: LOADNUM

```
* EXECUTED BY OPDR.TG.PRD.ETTW.#4941.DAF16.NUM.PRDLIB(JCLLOAD);
* THIS PROGRAM UPLOAD NUMIDENT FLAT FILE INTO MULTIPLE SAS SEGMENTS;

OPTIONS NOCENTER COMPRESS=YES MPRINT MACROGEN OBS=MAX;

%LET SEGOBS=24000000;  /*SET 24M FOR EACH SEGMENT*/
%LET LASTOBS=%EVAL(&SEGOBS.*&SYSPARM.);
%LET FIRSTOBS=%EVAL(&LASTOBS.-&SEGOBS.+1);
%PUT PROCESSING SEGMENT &SYSPARM., OBS FROM &FIRSTOBS TO &LASTOBS..;
%MACRO DOIT;

  /* READ IN NUMIDENT DATA */

 DATA TEMP.NUM;
  INFILE IN1 TRUNCOVER FIRSTOBS=&FIRSTOBS. OBS=&LASTOBS.;

  /* READ IN ALL RECORDS TYPE */
  INPUT @013 SSN  $9.
  @;
  /* REMOVE RECORDS WITH MISSING SSN */
  IF SSN NE ' ';

  INPUT  @027 REC  $1.
  @;

  /* REMOVE RECORDS WITH OTHER REC TYPE */
  IF REC IN ('G' 'J' 'K' '0' '1' '2' '4' '5' '9'
          'P' 'S' 'W' 'V' 'D' 'L' 'T' 'E');

   /* READ COMMON DATA FOR CERTAIN RECORD TYPES */
   INPUT @027  ENTLST    $1. /* VAR RENAMED FROM ENTCD   */
       @029  CYCDTLST  $8. /* VAR RENAMED FROM CYCDTE  */
       @037  FRSTNAME  $15./* VAR RENAMED FROM FRSTNAM */
       @053  MIDNAME   $15./* VAR RENAMED FROM MIDNAM  */
       @069  LASTNAME  $20./* VAR RENAMED FROM LASTNAM */
       @090  NAMESUFX  $4. /* VAR RENAMED FROM NAMESUF */
       @097  DOBNUM    $8. /* VAR RENAMED FROM DOBR    */
     @;

   /* READ NOT COMMON DATA FROM EACH RECORD TYPE */
   IF REC IN ('G' 'J' 'K' '0' '1' '2' '4' '5' '9'
           'P' 'S' 'W' 'V') THEN DO;
     INPUT @105 NSEX   $1. /* VAR RENAMED FROM SEXR  */
          @106 NRACE  $1. /* VAR RENAMED FROM RACER */
```

Appendix A.24
JCL/SAS Code: LOADNUM

```
      @;
    END;
    ELSE IF REC  IN ('D' 'L') THEN DO;
      INPUT @105 NSEX   $1. /* VAR RENAMED FROM SEXR */
          @298 DOD    $8. /* VAR RENAMED FROM DODR */
        @;
    END;
    ELSE IF REC = 'T' THEN DO;
      INPUT @105 NSEX   $1. /* VAR RENAMED FROM SEXR */
          @145 DOD    $8. /* VAR RENAMED FROM DODR */
        @;
    END;
    /* RECORD TYPE E HAS NO ADDITIONAL VARS READ IN */

    /* NEW VARIABLES IN DAF18 */
    INPUT @234 POBSC     $2. /*POB-STATE-CONTRY*/
        @236 POBFORID  $1. /*POB-FOREIGN-IND*/
      ;
  RUN;

***ORDER THE RECORDS BY SSN FOR SORT LATER;
PROC SORT DATA=TEMP.NUM
        OUT=OUT.NUMLOAD&SYSPARM.;
  BY SSN CYCDTLST;
RUN;

****CHECK CATEGORICAL VALUES;
PROC FREQ DATA=TEMP.NUM;
TABLES REC ENTLST NSEX NRACE / LIST MISSING;
RUN;

***CHECK DAF18 NEW VARIABLES
TITLE "CHECK DAF18 NEW VARIABLES";
PROC FREQ DATA=TEMP.NUM;
TABLES POBSC POBFORID POBSC * POBFORID / LIST MISSING;
RUN;
TITLE;

***PRINT FIRST 50 RECORDS;
PROC PRINT DATA=OUT.NUMLOAD&SYSPARM. (OBS=50);
  TITLE "AFTER SSN SORT NUMLOAD&SYSPARM.";
RUN;

%MEND DOIT;
%DOIT;
```

Appendix A.24
JCL/SAS Code: LOADNUM

```
ENDSAS;
```

Appendix A.25
JCL/SAS Code: COMBNUM

```
//#4941COM JOB (12510000,T715,,SAS,,ITC9FL),MIAOMIAO-SHEN,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#4941
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR: LAURA KOSA
//* PROGRAM:  OPDR.TG.PRD.ETTW.#4941.DAF18.NUM.PRDLIB(COMBNUM)
//* PURPOSE:  COMBINE NUMIDENT FILES FOR ONE MASTER NUMIDENT FILE
//* CREATED:  SERGE LUKASHANETS 4/26/2016
//* UPDATE:   SERGE LUKASHANETS 5/24/2018
//*         MIAOMIAO SHEN 5/16/2019 FOR DAF18
//* E-MAIL:   MSHEN@MATHEMATICA-MPR.COM
//*         SHEN.MIAOMIAO@SSA.GOV
//*****************************************************************
//  SET REG='64M'
//*
//JS010  EXEC SAS9,
//      WORK='200000,100000',
//      REGION=&REG,
//      PARM='MEMSIZE=&REG'
//*
//*SEE INPUT FILES IN THE LIBNAME STATEMENTS
//*** TEMPFILES
//TEMP1   DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         UNIT=TSILO,VOL=(,,,15)
//TEMP2   DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(1000,100),RLSE),VOL=(,,,15)
//*** OUTPUT FILE
//OUT     DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.NUMCOMB.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         SPACE=(CYL,(1000,100),RLSE),VOL=(,,,15)
//*
//SYSIN   DD *
OPTIONS NOCENTER COMPRESS=YES MPRINT MACROGEN OBS=MAX;
%LET TOTAL_SEG = 6; /* UPDATE THE TOTAL NUMBER OF SEGMENTS */

*READ IN INPUT FILES;
%MACRO DOIT;
  %DO SEG = 1 %TO &TOTAL_SEG.;
    LIBNAME IN&SEG. "OPDR.TG.PRD.ETTW.#4941.DAF18.NUMLOAD&SEG..SA.V1"
          DISP=SHR;
  %END;
```

Appendix A.25
JCL/SAS Code: COMBNUM

```
*CREATE THE TRANSACTION FILE CONTAINS THE NEW INFORMATION;
*DATA IS ORDERED BY EACH SSN AND THEIR CYCLE DATES;
DATA TEMP1.TRANNUM;
  SET
  %DO SEG = 1 %TO &TOTAL_SEG.;
     IN&SEG..NUMLOAD&SEG.(DROP = REC)
  %END;
  ;
  BY SSN CYCDTLST;
  IF NRACE = '0' THEN NRACE = ' ';
RUN;
%MEND DOIT;
%DOIT;

*CREATE THE MASTER DATA SET THAT CONTAINS THE LIST OF SSNS;
PROC SORT DATA = TEMP1.TRANNUM OUT = TEMP2.MASTNUM NODUPKEY;
BY SSN;
RUN;

*TEMP1.TRANNUM (TRANSACTION FILE) IS SORTED BY SSN AND CYCLE DATE;
*USE THE UPDATE STATEMENT TO READ OBS FROM THE TRANSACTION DATA SET;
*AND UPDATE CORRESPONDING OBS FROM THE MASTER DATA SET WITH;
*THE MOST RECENT POPULATED RECORDS;

DATA OUT.NUMCOMB;
 UPDATE TEMP2.MASTNUM
      TEMP1.TRANNUM
 ;
 BY SSN;
RUN;

PROC PRINT DATA=OUT.NUMCOMB (OBS=50); RUN;

PROC CONTENTS DATA=OUT.NUMCOMB; RUN;
//**************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//**************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<MSHEN@MATHEMATICA-MPR.COM>
RCPT TO:<MSHEN@MATHEMATICA-MPR.COM>
```

Appendix A.25
JCL/SAS Code: COMBNUM

```
DATA
FROM:   <MSHEN@MATHEMATICA-MPR.COM>
TO:     <MSHEN@MATHEMATICA-MPR.COM>
SUBJECT: COMBNUM IS COMPLETE
```

Appendix A.26
JCL/SAS Code: JCLSSR1

```
//#7429SR1 JOB (12510000,T715,,SAS,,ITC9FL),COLIP,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#7429
//*       RESTART=JS020.SAS9
//*****************************************************************
//*
//*     *-----------------------------------------------*
//*     ¦  OPDR.TG.PRD.ETTW.#7429.DAF18.SSR.PRDLIB(JCLSSR1)|
//*     *-----------------------------------------------*
//*
//*     1.  READ IN EACH SEGMENT OF SSI LONGITUDINAL FILE
//*     2.  SORT BY SSN AND RCD_EST AND OUTPUT STEP 1
//* JCL CALLS THE PROGRAM FOR STEP 1 RLONGST1
//* CONTACT BRITTANY COLIP
//* E-MAIL BCOLIP@MATHEMATICA-MPR.COM
//*
//* POS PARAMETER ALLOWS PROGRAM TO SKIP YEARS 74-93
//* POS PARAMETER SHOULD BE CALCULATED BASED ON LAYOUT:
//*   - POSITION OF FIRST MONTHLY VAR + NUM MONTHLY VARS =
//*     LENGTH OF EACH MONTH
//*   - USING KNOWN LENGTH OF MONTH, CALCULATE POSITION OF
//*     JAN OF DAF YEAR
//*   - POS OF JAN OF DAF YEAR - POS OF FIRST MONTHLY VAR =
//*     THE &POS PARAMETER
//* POS PARAMETER WILL BE ADDED TO POSITION OF EACH VAR LISTED
//* IN THE LAYOUT WHEN READING IN EACH VAR
//*****************************************************************
//*
//MRGPROC   PROC
//STEP1   EXEC SAS9,
//        WORK='120000,60000',            * SPACE IN BLKS *
//        PARM='SYSPARM="&SEG&BY&EY&POS"'
//*
//IN1     DD DSN=OPDR.TG.PRD.ETTW.DAF18.SSILNGTP.D1902,
//        DISP=SHR
//IN2     DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.SSIFIND.SA.V1,
//        DISP=SHR
//TEMP1   DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO
//TEMP2   DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO
//OUT1    DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.RLONG&SEG..SA.V1,
//        DISP=(MOD,CATLG,DELETE),
//        SPACE=(CYL,(3000,3000),RLSE),VOL=(,,,10)
//SYSIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18.SSR.PRDLIB(SSR1),
//        DISP=(SHR,PASS,KEEP)
//*************************************************************
```

Appendix A.26
JCL/SAS Code: JCLSSR1

```
//* SENDING EMAIL FROM HOST USING IEBGENER IF PROGRAM ABENDS
//*********************************************************
//     IF (ABEND=TRUE | RC > 0 ) THEN
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<BCOLIP@MATHEMATICA-MPR.COM>
RCPT TO:<BCOLIP@MATHEMATICA-MPR.COM>
DATA
FROM:   <BCOLIP@MATHEMATICA-MPR.COM>
TO:     <BCOLIP@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 JCLSSR1 IS ABENDED
//     ENDIF
//      PEND
//* *********************************************************
//RUN1    EXEC MRGPROC,SEG=01,POS=11040,BY=1994,EY=2018
//RUN2    EXEC MRGPROC,SEG=02,POS=11040,BY=1994,EY=2018
//RUN3    EXEC MRGPROC,SEG=03,POS=11040,BY=1994,EY=2018
//RUN4    EXEC MRGPROC,SEG=04,POS=11040,BY=1994,EY=2018
//RUN5    EXEC MRGPROC,SEG=05,POS=11040,BY=1994,EY=2018
//RUN6    EXEC MRGPROC,SEG=06,POS=11040,BY=1994,EY=2018
//RUN7    EXEC MRGPROC,SEG=07,POS=11040,BY=1994,EY=2018
//RUN8    EXEC MRGPROC,SEG=08,POS=11040,BY=1994,EY=2018
//RUN9    EXEC MRGPROC,SEG=09,POS=11040,BY=1994,EY=2018
//RUN10   EXEC MRGPROC,SEG=10,POS=11040,BY=1994,EY=2018
//RUN11   EXEC MRGPROC,SEG=11,POS=11040,BY=1994,EY=2018
//RUN12   EXEC MRGPROC,SEG=12,POS=11040,BY=1994,EY=2018
//RUN13   EXEC MRGPROC,SEG=13,POS=11040,BY=1994,EY=2018
//RUN14   EXEC MRGPROC,SEG=14,POS=11040,BY=1994,EY=2018
//RUN15   EXEC MRGPROC,SEG=15,POS=11040,BY=1994,EY=2018
//RUN16   EXEC MRGPROC,SEG=16,POS=11040,BY=1994,EY=2018
//RUN17   EXEC MRGPROC,SEG=17,POS=11040,BY=1994,EY=2018
//RUN18   EXEC MRGPROC,SEG=18,POS=11040,BY=1994,EY=2018
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
```

Appendix A.26
JCL/SAS Code: JCLSSR1

```
MAIL FROM:<BCOLIP@MATHEMATICA-MPR.COM>
RCPT TO:<BCOLIP@MATHEMATICA-MPR.COM>
DATA
FROM:   <BCOLIP@MATHEMATICA-MPR.COM>
TO:     <BCOLIP@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 SSR1 IS COMPLETE
DAF18 SSR1 FOR READING IN SSR SEGMENTS HAS ENDED
```

Appendix A.27
JCL/SAS Code: SSR1

```
 ****************************************************************;
 * FILENAME: OPDR.TG.PRD.ETTW.#7429.DAF18.SSR.PRDLIB(SSR1);
 * PROGRAMMER: BRITTANY COLIP;
 * PURPOSE: TO READ IN THE LONGITUDINAL FILE '
 * CREATED: 3/11/13;
 * UPDATED: 4/19/17 - ADELE RIZZUTO;
 * UPDATED: 4/30/18 - ALEX BRYCE ;
 * UPDATED: 3/27/19 - BRITTANY COLIP;
 ****************************************************************;
OPTIONS NOCENTER LS=132 PS=60 COMPRESS=YES OBS=MAX MPRINT MACROGEN;

* EXTRACT INFO FOR MACRO VARIABLES FROM THE SYSPARM SET IN JCL;
* FIRST 2 POSITIONS ARE SEGMENT;
%LET SASSEG=%SUBSTR(&SYSPARM.,1,2);

* NEXT 4 ARE BEGINNING YEAR;
%LET BEGYR=%SUBSTR(&SYSPARM.,3,4);

* NEXT 4 ARE END YEAR;
%LET ENDYR=%SUBSTR(&SYSPARM.,7,4);

* REMAINING IS POSITION;
%LET SASPOS=%SUBSTR(&SYSPARM.,11);

* READ INTO 4M FOR EACH SEGEMENT;
%LET OBS=%EVAL(4000000*&SASSEG.);

* FIRST OBS TO BE READ FOR SEG;
%LET FIRSTOBS=%EVAL(&OBS.-4000000+1);


%PUT PROCESSING SEGMENT &SASSEG., OBS &FIRSTOBS. TO &OBS.;
%PUT USING POSITION &SASPOS. TO READ IN YYMM VARIABLES;


* ASSIGN MACROS VARIABLES TO HANDLE TIME SERIES DATA;
* MACRO REVISED FOR DAF13 IN THIS PROGRAM (DAF14 MAY;
*    USE IN ALL PROGRAMS)IN ADDED A PUT SHOWING MAPPING;
*    OF MONTHS 1 TO N TO EACH ASSOCIATED YYMM ;
%MACRO GETSSILF;

*INITIATE MONTH COUNTER, MOCNTER, TO 1;
%LET MOCNTER=1;
```

Appendix A.27
JCL/SAS Code: SSR1

```
* LOOPING THROUGH EACH YEAR SPECIFIED ABOVE;
%DO YEAR=&BEGYR. %TO &ENDYR.;
  * SETTING YR MACRO VAR TO LAST TWO DIGITS OF EACH YEAR;
   %LET YR=%SUBSTR(&YEAR.,3,2);

   * LOOP THROUGH MONTHS 1 TO 12 AND INCREMENT MONTH COUNTER;
   %DO M=1 %TO 12;
     %LET M=%SYSFUNC(PUTN(&M.,Z2.));
     %LET YY&MOCNTER.=%EVAL(&YR.)%EVAL(&M.);
     %LET MOCNTER=%EVAL(&MOCNTER.+1);
   %END;
%END;

* SET TOTAL MONTHS, TOTMOS, EQUAL TO MOCNTER - 1 TO GET;
*   TOTAL MONTHS IN TIME SERIES;
%LET TOTMOS=%EVAL(&MOCNTER.-1);

* USED TO PRINT MAPPING TO LOG - CHECK DURING CODE REVIEW;
%DO MM=1 % TO &TOTMOS.;
   %PUT &MM. MAPS TO YYMM, &&YY&MM.;
%END;
   %PUT TOTAL MONTHS = &TOTMOS.;

*******************************************************************;
* READ IN EVERY RECORD IN THIS SECTION OF THE FILE ;
* AFTER ALL SECTIONS ARE READ IN THEN PROCESS THE MULTIPLE RECORDS;
* SORT EACH SECTION BY SSN AND FILE SELECTION DATE TO ENSURE;
* PROPER GROUPING OF MULTIPLE RECORDS IN THE FINAL COMBINE STEP;
*******************************************************************;

DATA TEMP1.LONG;

INFILE IN1 TRUNCOVER FIRSTOBS=&FIRSTOBS. OBS=&OBS.;

INPUT
  /*READING IN FIXED VARIABLES (NON-YYMM)*/
@010  SSN      $9.         /* PAN SOCIAL SECURITY NUMBER */
@023  MFT      $2.         /* MFT MASTER FILE TYPE CODE  */
 @;
 /* MARY BARBOUR INSTRUCTION - IF MFT = X THEN STOP READING RECORDS*/

IF SSN = "000000000" OR SUBSTR(MFT,1,1)= 'X' THEN DELETE;

 /* CONTINUE READING RECORDS */
```

Appendix A.27
JCL/SAS Code: SSR1

```
INPUT
@001  HUN       $9.          /* HOUSED UNDER NUMBER */
@019  TOA       $2.          /* TOA TYPE OF ACTION */
@021 COMP_STA   $2.          /* COMP-STAT-TOA COMP. STATUS TYPE OF ACTION */
@025  START_RD  ?? YYMMN6.    /* START-RD EARLIEST COMPUTATION DATE */
@041  RCD_EST   ?? YYMMDD8.   /* RCD-EST-JD RECORD ESTABLISHMENT DATE */
@049  DOBSSR    ?? YYMMDD8.   /* BIRTH-JD DATE OF BIRTH */
@057  DODSSR    ?? YYMMDD8.   /* DEATH-JD DATE OF DEATH */
@065  LAF       $2.          /* LAF MBR LEDGER ACCOUNT FILE CODE */
@067  CURSTAT   $3.          /* CURSTAT CURRENT PAYMENT STATUS */
@070  SEXSSR    $1.          /* SEX SEX */
@071  RACE      $1.          /* RACE RACE */
@072  ELG_RD    ?? YYMMN6.    /* ELG-RD DATE OF CURRENT ELIGIBILITY */
@078  APP_RD    ?? YYMMDD8.   /* APPL-JD APPLICATION DATE (CURRENT) */
@086  _8080_JD  ?? YYMMDD8.   /* 8080-JD 8080 DATE */
@112 CLM_FIL   ?? YYMMDD8.   /* CLM-FIL-JD DATE CLAIM FILED */
@120 DISPAYCD   $1.          /* DISABILITY PAYMENT CODE */
@136 DIB_DIG    $4.          /* DIB-DIG PRIMARY DISABILITY DIAGNOSTIC CODE */
@140 DIB_DIG2   $4.          /* DIB-DIG2 SECONDARY DISABILITY DIAGNOSTIC CODE */
@144 DIB_MDR    $1.          /* DIB-MDR MEDICAL DIARY REASON */
@145 DIB_DPM    $1.          /* PERMANENT DISABILITY INDICATOR */
@146 PDSCC      $6.          /* PDSCC RESIDENCE STATE/COUNTY/DO CODE */
@152 PDZIP      $5.          /* PDZIP PAYEE'S ZIP CODE */
@157 PDZIP6_9   $4.          /* PDZIP6-9 PAYEE'S ZIP CODE SUFFIX */
@161 DOC_SSI_MR $3.          /* DO DISTRICT OFFICE CODE */
@172 REPPAYTP   $3.          /* REPPAYTYP TYPE OF PAYEE CODE */
@191 SEL_DATE  ?? YYMMN6.    /* DATE OF SELECTION */
@197 FIRST_PA  ?? YYMMDD8.   /* FIRST-PAY-DTE FIRST PAYMENT DATE (THIS RECORD)*/
@217 STOP_RD   ?? YYMMN6.    /* STOP-RD STOP DATE */
@223 LANGSSR   $2.           /* LANGUAGE PREFERENCE WRITTEN */
@;

 /* READING IN YYMM VARIABLES*/
POS=&SASPOS.;
/* LOOP THROUGH MONTHS  */
%DO MM=1 %TO &TOTMOS.;
INPUT                        /*POS:VARNAME DESCRIPTION (NEW) */
@POS+301  CMTHRD&&YY&MM. ?? YYMMN6./*CMTH-RD MONTH OF COMPUTATION*/
@POS+307    PSTA&&YY&MM. $3.       /*PSTAT PAYMENT STATUS CODE */
@POS+310    LIVF&&YY&MM. $1.       /*LIVF LIVING ARRANGEMENT CODE*/
@POS+311    SCON&&YY&MM. $1.       /*STCONCATM STATE CONCURR ELIG IND*/
@POS+313    EICM&&YY&MM.  4.       /*EINCM CHARGEABLE EARNED */
                        /* INCOME AMOUNT */
@POS+317    UINC&&YY&MM.  4.       /*UINCM CHARGEABLE UNEARNED */
                        /* INCOME AMOUNT */
```

Appendix A.27
JCL/SAS Code: SSR1

```
@POS+321    FAMT&&YY&MM.  5.      /*FEDAMT FEDERAL ASSISTANCE */
                        /* AMOUNT */
@POS+326    SAMT&&YY&MM.  5.      /*SUPAMT CURRENT AMOUNT OF */
                        /* STATE SUPPLEMENT*/
@POS+331    MTST&&YY&MM. $1.      /*MEDTEST MEDICAL AND SOCIAL */
                        /* SERVICE INCOME TEST*/
@POS+332 CURCOMP&&YY&MM. $1.      /*CUR-COMP CURRENT COMPOSITION*/
                        /* CODE (NEW DAF13) */
@POS+333    FPMT&&YY&MM.  6.      /*FEDPMT FEDERAL MONEY AMOUNT */
                        /* (PAYMENT) */
@POS+339    SPMT&&YY&MM.  6.      /*STATPMT STATE SUPPL AMOUNT  */
                        /*(PAYMENT) */
@;
POS=POS+46;
%END;

DROP POS;
RUN;

* SORT EACH SEGMENT BY SSN AND RECORD ESTAB DATE FOR COMBINING;
PROC SORT DATA=TEMP1.LONG OUT=TEMP2.LONG; BY SSN RCD_EST; RUN;

DATA OUT1.LONG;
 MERGE TEMP2.LONG (IN=T)
      IN2.SSIFIND (IN=F WHERE=(SSN NE '000000000'))
      ;
  BY SSN;
 IF T AND F;
RUN;

PROC CONTENTS DATA = OUT1.LONG; RUN;
%MEND GETSSILF;
%GETSSILF;
```

Appendix A.28
JCL/SAS Code: JCLSSR1B

```
//#7429S1B JOB (12510000,T715,,SAS,,ITC9FL),COLIP,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#7429
//*       RESTART=JS020.SAS9
//*****************************************************************
//*
//*     *-----------------------------------------------*
//*     ¦  OPDR.TG.PRD.ETTW.#7429.DAF18.SSR.PRDLIB(JCLSSR1B)|
//*     *-----------------------------------------------*
//*
//*     1.  READ IN EACH SEGMENT OF SSI LONGITUDINAL FILE (74-93)
//*     2.  SORT BY SSN AND RCD_EST AND OUTPUT STEP 1
//* JCL CALLS THE PROGRAM FOR STEP 1 RLONGST1
//* CONTACT BRITTANY COLIP
//* E-MAIL BCOLIP@MATHEMATICA-MPR.COM
//*
//* POS PARAMETER ALLOWS PROGRAM TO READ YEARS 74-93
//* POS PARAMETER SHOULD BE 0 FOR READING IN YEARS 74-93
//*****************************************************************
//*
//MRGPROC   PROC
//STEP1   EXEC SAS9,
//       WORK='120000,60000',            * SPACE IN BLKS *
//       PARM='SYSPARM="&SEG&BY&EY&POS"'
//*
//IN1     DD DSN=OPDR.TG.PRD.ETTW.DAF18.SSILNGTP.D1902,
//         DISP=SHR
//IN2     DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.SSIFIND.SA.V1,
//         DISP=SHR
//TEMP1   DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO
//TEMP2   DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO
//OUT1    DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.RLONGB&SEG..SA.V1,
//         DISP=(MOD,CATLG,DELETE),
//         SPACE=(CYL,(3000,3000),RLSE),VOL=(,,,10)
//SYSIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18.SSR.PRDLIB(SSR1),
//         DISP=(SHR,PASS,KEEP)
//*************************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER IF PROGRAM ABENDS
//*************************************************************
//     IF (ABEND=TRUE | RC > 0 ) THEN
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
```

Appendix A.28
JCL/SAS Code: JCLSSR1B

```
HELO MVSHOST
MAIL FROM:<BCOLIP@MATHEMATICA-MPR.COM>
RCPT TO:<BCOLIP@MATHEMATICA-MPR.COM>
DATA
FROM:   <BCOLIP@MATHEMATICA-MPR.COM>
TO:     <BCOLIP@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 JCLSSR1B IS ABENDED
SUBJECT: DAF18 JCLSSR1B IS ABENDED
//      ENDIF
//       PEND
//*********************************************************
//RUN1    EXEC MRGPROC,SEG=01,POS=0000,BY=1974,EY=1993
//RUN2    EXEC MRGPROC,SEG=02,POS=0000,BY=1974,EY=1993
//RUN3    EXEC MRGPROC,SEG=03,POS=0000,BY=1974,EY=1993
//RUN4    EXEC MRGPROC,SEG=04,POS=0000,BY=1974,EY=1993
//RUN5    EXEC MRGPROC,SEG=05,POS=0000,BY=1974,EY=1993
//RUN6    EXEC MRGPROC,SEG=06,POS=0000,BY=1974,EY=1993
//RUN7    EXEC MRGPROC,SEG=07,POS=0000,BY=1974,EY=1993
//RUN8    EXEC MRGPROC,SEG=08,POS=0000,BY=1974,EY=1993
//RUN9    EXEC MRGPROC,SEG=09,POS=0000,BY=1974,EY=1993
//RUN10   EXEC MRGPROC,SEG=10,POS=0000,BY=1974,EY=1993
//RUN11   EXEC MRGPROC,SEG=11,POS=0000,BY=1974,EY=1993
//RUN12   EXEC MRGPROC,SEG=12,POS=0000,BY=1974,EY=1993
//RUN13   EXEC MRGPROC,SEG=13,POS=0000,BY=1974,EY=1993
//RUN14   EXEC MRGPROC,SEG=14,POS=0000,BY=1974,EY=1993
//RUN15   EXEC MRGPROC,SEG=15,POS=0000,BY=1974,EY=1993
//RUN16   EXEC MRGPROC,SEG=16,POS=0000,BY=1974,EY=1993
//RUN17   EXEC MRGPROC,SEG=17,POS=0000,BY=1974,EY=1993
//RUN18   EXEC MRGPROC,SEG=18,POS=0000,BY=1974,EY=1993
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<BCOLIP@MATHEMATICA-MPR.COM>
RCPT TO:<BCOLIP@MATHEMATICA-MPR.COM>
DATA
FROM:   <BCOLIP@MATHEMATICA-MPR.COM>
TO:     <BCOLIP@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 SSR1 FOR 74-93 IS COMPLETE
DAF18 SSR1 FOR READING IN SSR SEGMENTS FOR YEARS 74-93 HAS ENDED
```

Appendix A.29
JCL/SAS Code: JCLSSR2

```
//#7429SS2 JOB (12510000,T715,,SAS,,ITC9FL),COLIP,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#7429
//*****************************************************************
//*
//*     *-----------------------------------------------------*
//*     ¦  OPDR.TG.PRD.ETTW.#7429.DAF18.SSR.PRDLIB(JCLSSR2)  ¦
//*     *-----------------------------------------------------*
//*
//*     1.  COMBINE AND PROCESS LONGITUDINAL FILE
//*     2.  OUTPUT UPDATED STEP2 FILE
//*
//* SEGMENTS WERE PRODUCED IN STEP 1
//* THIS IS A NEW PROGRAM COMBINING JCL STATEMENTS FOR ALL SEGMENTS
//* 1974-1993 VS. 1994-DAFYR WILL HAVE DIFFERENT INCLUDE FILE
//*****************************************************************
//*
//JS010   EXEC SAS9,
//        WORK='120000,60000',
//* MAKE UPDATES TO THIS SYSPARM
//* THE FORMAT IS: BEGYR, ENDYR, YOURID, NUMSEG, NODE, DAFYR
//* DO NOT UPDATE BEGYR
//* UPDATE ENDYR TO THIS DAFYR
//* UPDATE YOUR ID
//* UPDATE NUMSEG (THE NUMBER OF SEGMENTS IN SSR1 PROGRAMS)
//* DO NOT UPDATE NODE (THIS IS A NODE FOR THE INPUT FILES)
//* UPDATE THE TWO-DIGIT DAFYR (USED IN THE NODE FOR INPUT FILES)
//        PARM='SYSPARM="1994,2018,#7429,18,RLONG,18"'
//*
//LONGF DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(3000,3000),RLSE),VOL=(,,,20)
//LONGV DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//LF1   DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//LF2   DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(3000,3000),RLSE),VOL=(,,,20)
//LV1   DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//LV2   DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//LV3   DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//LFUPD DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(3000,3000),RLSE),VOL=(,,,20)
```

Appendix A.29
JCL/SAS Code: JCLSSR2

```
//LVUPD DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.SSR2.SA.V1,
//         DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18.SSR.PRDLIB(SSR2),
//         DISP=(SHR,PASS,KEEP)
//*
//JS020   EXEC SAS9,
//       WORK='120000,60000',
//* MAKE UPDATES TO THIS SYSPARM
//* THE FORMAT IS: BEGYR, ENDYR, YOURID, NUMSEG, NODE, DAFYR
//* DO NOT UPDATE BEGYR
//* DO NOT UPDATE ENDYR
//* UPDATE YOUR ID
//* UPDATE NUMSEG (THE NUMBER OF SEGMENTS IN SSR1 PROGRAMS)
//* DO NOT UPDATE NODE (THIS IS A NODE FOR THE INPUT FILES)
//* UPDATE THE TWO-DIGIT DAFYR (USED IN THE NODE FOR INPUT FILES)
//       PARM='SYSPARM="1974,1993,#7429,18,RLONGB,18"'
//*
//LONGF DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(3000,3000),RLSE),VOL=(,,,20)
//LONGV DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//LF1   DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//LF2   DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(3000,3000),RLSE),VOL=(,,,20)
//LV1   DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//LV2   DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//LV3   DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//LFUPD DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),
//       SPACE=(CYL,(3000,3000),RLSE),VOL=(,,,20)
//LVUPD DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.SSR2B.SA.V1,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18.SSR.PRDLIB(SSR2),
//         DISP=(SHR,PASS,KEEP)
//*
```

Appendix A.29
JCL/SAS Code: JCLSSR2

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<BCOLIP@MATHEMATICA-MPR.COM>
RCPT TO:<BCOLIP@MATHEMATICA-MPR.COM>
DATA
FROM:   <BCOLIP@MATHEMATICA-MPR.COM>
TO:     <BCOLIP@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 SSR2 IS COMPLETE
DAF18 SSR2 HAS FINISHED RUNNING
```

Appendix A.30
JCL/SAS Code: SSR2

```
* SSR2 - THIS IS AN INCLUDE FILE TO PROCESS 1994 - CURRENT DAF FILES;
%LET BEGYR=%SCAN(%QUOTE(&SYSPARM),1,%STR(,));
%LET ENDYR=%SCAN(%QUOTE(&SYSPARM),2,%STR(,));
%LET YOURID=%SCAN(%QUOTE(&SYSPARM),3,%STR(,));
%LET NUMSEG=%SCAN(%QUOTE(&SYSPARM),4,%STR(,));
%LET NODE=%SCAN(%QUOTE(&SYSPARM),5,%STR(,));
%LET DAFYR=%SCAN(%QUOTE(&SYSPARM),6,%STR(,));

* BEGIN PROCESSING;
OPTIONS NOCENTER LS=132 PS=60 COMPRESS=BINARY;
OPTIONS OBS=MAX MPRINT SYMBOLGEN;
 /* NOTE: CHANGE THE ENDYR AND ENDMN PARAMETER BEFORE EACH RUN */


 /* ASSIGN MACROS VARIABLES TO HANDLE TIME SERIES DATA */

%MACRO PROCSSILF;
   /*INITIATE MONTH COUNTER, MOCNTER, TO 1*/
 %LET MOCNTER=1;
   /*LOOPING THROUGH EACH YEAR SPECIFIED ABOVE*/
 %DO YEAR=&BEGYR. %TO &ENDYR.;
   /*SETTING YR MACRO VAR TO LAST TWO DIGITS OF EACH YEAR*/
    %LET YR=%SUBSTR(&YEAR.,3,2);

    /*LOOP THROUGH MONTHS 1 TO 12 AND INCREMENT MONTH COUNTER*/
    %DO M=1 %TO 12;
       %LET M=%SYSFUNC(PUTN(&M.,Z2.));
       %LET YY&MOCNTER=%EVAL(&YR)%EVAL(&M);
       %LET MOCNTER=%EVAL(&MOCNTER+1);
    %END;
 %END;
   /*SET TOTAL MONTHS, TOTMOS, EQUAL TO MOCNTER - 1 TO GET
     TOTAL MONTHS IN TIME SERIES*/
 %LET TOTMOS=%EVAL(&MOCNTER-1);

  /*USED TO PRING MAPPING TO LOG - CHECK DURING CODE REVIEW*/
 %DO MM=1 % TO &TOTMOS;
    %PUT &MM. MAPS TO YYMM, &&YY&MM.;
 %END;
    %PUT TOTAL MONTHS = &TOTMOS.;
```

Appendix A.30
JCL/SAS Code: SSR2

```
 /*********************************************************************
WE NEED TO READ THE SSI LONG FILES TO CAPTURE THE HISTORY FIELDS
WE NEED TO SCAN ALL THE RECORDS FOR VALID VALUES INSTEAD OF JUST
KEEPING THE LAST RECORD AS WE DID PREVIOUSLY.
THE LAST RECORD MAY HAVE HISTORY FIELDS BLANKED OUT
*********************************************************************/

 /*SPLIT THE VARIABLE  FILE TO UPDATE RECORDS WITH NONMISSING DATA */

 %DO SEG = 1 %TO &NUMSEG; /*UPDATE THE TOTAL NUMBER OF SEGMENTS */
    %LET SEG=%SYSFUNC(PUTN(&SEG,Z2.));
    LIBNAME IN&SEG.
      "OPDR.TG.PRD.ETTW.&YOURID..DAF&DAFYR.P.&NODE.&SEG..SA.V1"
           DISP=SHR;
 %END;


DATA LONGF.ALLF(DROP=
           %DO MM=1 %TO &TOTMOS;
            PSTA&&YY&MM.     LIVF&&YY&MM. SCON&&YY&MM. EICM&&YY&MM.
            UINC&&YY&MM.     FAMT&&YY&MM. SAMT&&YY&MM. MTST&&YY&MM.
            FPMT&&YY&MM.     SPMT&&YY&MM.
            CMTHRD&&YY&MM. CURCOMP&&YY&MM.
           %END;)
    LONGV.ALLV(KEEP=SSN RCD_EST  /* VARIABLE PART */
    %DO MM=1 %TO &TOTMOS;
      PSTA&&YY&MM.    LIVF&&YY&MM. SCON&&YY&MM. EICM&&YY&MM.
      UINC&&YY&MM.    FAMT&&YY&MM. SAMT&&YY&MM. MTST&&YY&MM.
      FPMT&&YY&MM.    SPMT&&YY&MM.
     CMTHRD&&YY&MM. CURCOMP&&YY&MM.
    %END;);
   SET

    %DO SEG = 1 %TO &NUMSEG; /* UPDATE THE TOTAL NUMBER OF SEGMENTS */
      %LET SEG=%SYSFUNC(PUTN(&SEG,Z2.));
      IN&SEG..LONG
    %END;;
    BY SSN RCD_EST;
RUN;

PROC PRINT DATA=LONGF.ALLF (OBS=20); TITLE 'BEFORE UPDATE'; RUN;
PROC PRINT DATA=LONGV.ALLV (OBS=50); RUN;

  /*CREATE MIN AND MAX VALUES FROM SOME OF THE FIXED PART VARIABLES */
```

Appendix A.30
JCL/SAS Code: SSR2

```
PROC MEANS NOPRINT DATA=LONGF.ALLF;
  VAR START_RD RCD_EST ELG_RD APP_RD _8080_JD CLM_FIL FIRST_PA STOP_RD;
  BY SSN;
  OUTPUT OUT=LONGF.MAXMIN(DROP=_:)
       MIN=MINSTRRD MINRCDST SSI_MIN_ELG MINAPPRD MIN_80JD MINCLMFL
          MINFRSTP MINSTPRD
       MAX=MAXSTRRD MAXRCDST MAXELGRD MAXAPPRD MAX_80JD MAXCLMFL
          MAXFRSTP MAXSTPRD
       ;
RUN;

  /*SPLIT THE FIXED PART FILE TO UPDATE RECS WITH NONMISSING DATA */
  /*FOR FIXED DATA WE DO NOT HAVE TO EXAMINE INTERMEDIATE RECORDS */
  /*WE WANT THE CURRENT VALUE IN THE FIELDS                       */

DATA LF1.FIXEDA LF2.FIXEDB;
  SET LONGF.ALLF;
  BY SSN RCD_EST;
  IF FIRST.SSN THEN OUTPUT LF1.FIXEDA;
    ELSE OUTPUT LF2.FIXEDB;
RUN;

  /* RUN THE UPDATE PROCEDURE */

DATA LFUPD.LONGF;
  UPDATE LF1.FIXEDA LF2.FIXEDB;
  BY SSN;
RUN;

 /* CONVERSATIONS WITH MARY BARBOUR HAVE REVEALED THAT SSA WILL
    TRY TO SAVE SPACE BY BLANKING AND ZEROING OUT HISTORY FIELDS
    WHEN A NEW PERIOD OF ELIGIBILITY IS ESTABLISHED FOLLOWING THE
    END OF AN OLD PERIOD OF ELIGIBILITY (CREATING A NEW RECORD).
    THEREFORE WE CAN NOT TAKE THE HISTORY VALUES FROM THE LAST RECORD
    AS PREVIOUSLY BUT MUST SCAN ALL THE RECORDS USING AN UPDATE
    PROCEDURE.  FOR CHARACTER VALUES, A BLANK ON A SUBSEQUENT RECORD
    (WHERE THERE HAD BEEN A VALUE ON A PREVIOUS RECORD) WILL NOT
    OVERWRITE THE VALUE USING THE UPDATE PROCEDURE. HOWEVER, FOR
    NUMERIC VALUES, SSA WILL ZERO OUT THE FIELD AND UPDATE WILL
    OVERWRITE A VALUE WITH THE ZERO. AS A RESULT WE WILL BLANK OUT
    THESE ZEROS SO AS NOT TO OVERWRITE THE FIELD.
    WITH REFERENCE TO THE ACTUAL STATE AND FEDERAL PAYMENT FIELDS
    MARY HAS ALSO INDICATED THAT THERE MAY BE DOLLAR ADJUSTMENTS TO A
    GIVEN MONTHLY PAYMENT ON A SUBSEQUENT RECORD. FOR EXAMPLE,
```

Appendix A.30
JCL/SAS Code: SSR2

```
    FDP0309 (FED PAYMENT IN SEPT 2003) MAY SHOW PAYMENTS ON 2 RECORDS
    THE TOTAL ACTUAL PAYMENT BEING THE SUM OF THESE.  THIS IS HANDLED
    IN THE FOLLOWING PROCEDURE  */

DATA LV1.VARA LV2.VARB;
 SET LONGV.ALLV; BY SSN RCD_EST;

    /* ADD UP THE PAYMENT AMOUNTS ACROSS RECORDS */
    /* IN THE CASE WHERE A FIELD IS ADJUSTED, THE INCREMENT
       WILL APPEAR  ACROSS RECORDS AND THE UPDATE PROCEDURE
       WILL TAKE THE SUM INSTEAD OF OVERWRITING ONE AMOUNT
       WITH A SUBSEQUENT AMOUNT */

   ARRAY  FPMT (*) %DO MM=1 %TO &TOTMOS;  FPMT&&YY&MM. %END;;
   ARRAY  SPMT (*) %DO MM=1 %TO &TOTMOS;  SPMT&&YY&MM. %END;;
   /*CREATING TEMPORARY VARIABLES, IMPLIED BY 'T'*/
   ARRAY TFPMT (*) %DO MM=1 %TO &TOTMOS; TFPMT&&YY&MM. %END;;
   ARRAY TSPMT (*) %DO MM=1 %TO &TOTMOS; TSPMT&&YY&MM. %END;;

    RETAIN  %DO MM=1 %TO &TOTMOS; TFPMT&&YY&MM. %END;;
    RETAIN  %DO MM=1 %TO &TOTMOS; TSPMT&&YY&MM. %END;;

     IF FIRST.SSN THEN DO I=1 TO DIM(FPMT);
      TFPMT(I) = FPMT(I);
      TSPMT(I) = SPMT(I);
     END;
     ELSE DO I=1 TO DIM(FPMT);
      IF FPMT(I) >= 0 THEN TFPMT(I) + FPMT(I);
      IF SPMT(I) >= 0 THEN TSPMT(I) + SPMT(I);
     END;

   DROP FPMT: SPMT:;

   /* RENAME PAYMENT VARIABLES BACK TO ORIGINAL NAME */

  %DO MM = 1 %TO &TOTMOS;
    RENAME TFPMT&&YY&MM. = FPMT&&YY&MM.;
    RENAME TSPMT&&YY&MM. = SPMT&&YY&MM.;
  %END;

 IF FIRST.SSN THEN OUTPUT LV1.VARA;
 OUTPUT LV2.VARB;
RUN;

 DATA LV3.VARB2;
```

Appendix A.30
JCL/SAS Code: SSR2

```
 SET LV2.VARB; BY SSN RCD_EST;

/* ON THE LAST RECORD IF IT IS A TERMINATION RECORD THE WHOLE
   HISTORY MAY BE BLANKED AND ZEROED */

ARRAY FAMT    (*) %DO MM=1 %TO &TOTMOS;    FAMT&&YY&MM. %END;;
ARRAY SAMT    (*) %DO MM=1 %TO &TOTMOS;    SAMT&&YY&MM. %END;;
ARRAY EICM    (*) %DO MM=1 %TO &TOTMOS;    EICM&&YY&MM. %END;;
ARRAY UINC    (*) %DO MM=1 %TO &TOTMOS;    UINC&&YY&MM. %END;;
ARRAY FPMT    (*) %DO MM=1 %TO &TOTMOS;    FPMT&&YY&MM. %END;;
ARRAY SPMT    (*) %DO MM=1 %TO &TOTMOS;    SPMT&&YY&MM. %END;;
ARRAY CURCOMP (*) %DO MM=1 %TO &TOTMOS; CURCOMP&&YY&MM. %END;;

 /*NEW DAF13-CURCOMPYYMM RANGES FROM 0 TO 8. 0 IS INVALID SO SET TO
   MISSING.  WITH 0'S RECODING TO MISSING, DO NOT HAVE TO WORRY ABOUT
   0'S OVERWRITING VALID 1-8 VALUES DURING THE UPDATE PROCEDURE BELOW*/
 DO I=1 TO DIM(CURCOMP);
    IF CURCOMP(I)="0" THEN CURCOMP(I)=" ";
 END; DROP I;

 /* FLAG THE NUMERIC FIELDS IF GT 0 ON ANY RECORD -
    NEVER SET THEM TO ZERO IF THEY ARE ZEROED OUT SUBSEQUENTLY */
 /*DELETED '3' WHICH SET NUMERIC LENGTH TO 3*/
ARRAY FAF (&TOTMOS) _TEMPORARY_;
ARRAY SAF (&TOTMOS) _TEMPORARY_;
ARRAY EIF (&TOTMOS) _TEMPORARY_;
ARRAY UIF (&TOTMOS) _TEMPORARY_;
ARRAY FPF (&TOTMOS) _TEMPORARY_;
ARRAY SPF (&TOTMOS) _TEMPORARY_;


 /* INITIALIZE FLAGS TO ZERO */
IF FIRST.SSN THEN DO I = 1 TO DIM(FAF);

  FAF(I) = 0;
  SAF(I) = 0;
  EIF(I) = 0;
  UIF(I) = 0;
  FPF(I) = 0;
  SPF(I) = 0;
 END;


  DO I = 1 TO DIM(FAMT);
   IF FAMT(I) > 0 THEN FAF(I) = 1;
```

Appendix A.30
JCL/SAS Code: SSR2

```
    IF SAMT(I) > 0 THEN SAF(I) = 1;
    IF EICM(I) > 0 THEN EIF(I) = 1;
    IF UINC(I) > 0 THEN UIF(I) = 1;
    IF FPMT(I) > 0 THEN FPF(I) = 1;
    IF SPMT(I) > 0 THEN SPF(I) = 1;
   END;

  /* IF THE AMOUNTS HAVE BEEN ZEROED OUT ON SUBSEQUENT RECORDS
    WITH A NEW START DATE -
    SET THE ZERO TO MISSING IF THE MONTHLY AMOUNT HAS BEEN
    FLAGGED AS EVER BEING > 0. THIS PREVENTS THE UPDATE
    PROCEDURE FROM OVERWRITING A RECORD WITH ZERO.
    FOR THE ALPHANUMERIC FIELDS A BLANK WILL NOT OVERWRITE
    A PREVIOUS VALID VALUE     */

  DO I = 1 TO DIM(FAMT);
   IF FAMT(I) = 0 AND FAF(I) = 1 THEN FAMT(I) = .;
   IF SAMT(I) = 0 AND SAF(I) = 1 THEN SAMT(I) = .;
   IF EICM(I) = 0 AND EIF(I) = 1 THEN EICM(I) = .;
   IF UINC(I) = 0 AND UIF(I) = 1 THEN UINC(I) = .;
   IF FPMT(I) = 0 AND FPF(I) = 1 THEN FPMT(I) = .;
   IF SPMT(I) = 0 AND SPF(I) = 1 THEN SPMT(I) = .;
  END;
   DROP I;
RUN;

  /* RUN THE UPDATE PROCEDURE */

DATA LVUPD.LONGV;
  UPDATE LV1.VARA LV3.VARB2;
  BY SSN;
  /*CAN WE MOVE THIS DROP STATEMENT TO THE DATASTEP ABOVE?*/

 ARRAY CURCOMP (*) %DO MM=1 %TO &TOTMOS; CURCOMP&&YY&MM. %END;;

 /*NEW DAF13-REVERSING RECODING PERFORMED ABOVE*/
 DO I=1 TO DIM(CURCOMP);
    IF CURCOMP(I)=" " THEN CURCOMP(I)="0";
 END;
 DROP I;
RUN;

DATA OUT1.LONG;
   MERGE LFUPD.LONGF(IN=A)
        LONGF.MAXMIN
```

Appendix A.30
JCL/SAS Code: SSR2

```
        LVUPD.LONGV
        ;
    BY SSN;
    IF A;
    /*ADDING SSIYY*/
    /*TWO DIMENSIONAL ARRAY - YEAR BY MONTH*/
   ARRAY PSTAYYMM(&BEGYR.:&ENDYR.,1:12) %DO YEAR=&BEGYR. %TO &ENDYR.;
                                %LET YR=%SUBSTR(&YEAR.,3,2);
                                PSTA&YR.01-PSTA&YR.12
                              %END;;
   ARRAY SSIYY (&BEGYR.:&ENDYR.) %DO YEAR=&BEGYR. %TO &ENDYR.;
                             %LET YR=%SUBSTR(&YEAR.,3,2);
                             SSI&YR.
                           %END;;

   DO YR=&BEGYR. TO &ENDYR.;
     SSIYY(YR) = 0; *SET INITIAL SSIYY VALUE TO BE 0;
     DO MO=1 TO 12 UNTIL(SSIYY(YR)=1);
       IF PSTAYYMM(YR,MO) IN ("C01","M01","M02") THEN SSIYY(YR)=1;
      END;
   END;

   DROP MO;
  RUN;

  PROC PRINT DATA=OUT1.LONG (OBS=20); TITLE 'AFTER UPDATE'; RUN;
  RUN;
  PROC CONTENTS;
  RUN;

  %MEND PROCSSILF;
  %PROCSSILF;
```

Appendix A.31
JCL/SAS Code: SSIELIG

```
//#6502ELG   JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//           MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//*
//*     *-------------------------------------------------*
//*     |  OPDR.TG.PRD.ETTW.#6502.DAF18.SSR.PRDLIB(SSIELIG)
//*     *-------------------------------------------------*
//*
//* PURPOSE:TO CREATE TWO NEW VARIABLES FOR EARLIEST SSI
//*        ELIGIBILITY DATE AND EARLIEST ADULT SSI
//*        ELIGIBILITY DATE AND MERGE ON ADDITIONAL VARS
//*        AND BUILD PSTA_MR AND PSTA_MR_DATE
//* CONTACT ALEX BRYCE
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS030   EXEC SAS9,
//       WORK='120000,60000'             * SPACE IN BLKS *
//*
//SSR    DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.SSR2.SA.V1,DISP=SHR
//SSRB   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.SSR2B.SA.V1,DISP=SHR
//EXT    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSREXT.SA.V1,DISP=SHR
//OUT1   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSIELIG.SA.V1,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//TEMP   DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),
//        VOL=(,,,10),UNIT=TSILO
//SYSIN DD *

 OPTIONS NOCENTER LS=132 PS=60 COMPRESS=BINARY OBS = MAX MPRINT
 MACROGEN ;

 %LET DAFYR=2018;  /*CURRENT DAF YEAR*/
 %LET BEGYR=1994;
 %LET ENDYR=2018; /* CURRENT DAF YEAR */

 %MACRO DOIT;

 %INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

 DATA TEMP.SSIELIG (DROP = PSTA7: PSTA8:
                    PSTA90: PSTA91: PSTA92: PSTA93: );

  MERGE SSRB.LONG (KEEP=SSN PSTA: DOBSSR DODSSR)
```

Appendix A.31
JCL/SAS Code: SSIELIG

```
      SSR.LONG (IN=A)
      EXT.SSREXT(IN=B);

BY SSN;
IF A;

ARRAY PSTA (1974:&DAFYR.,1:12) %DO YEAR=1974 %TO &DAFYR.;
                        %LET YR=%SUBSTR(&YEAR.,3,2);
                        PSTA&YR.01-PSTA&YR.12
                      %END;;

 * SET EARLIEST SSI ELIGIBILITY DATE;

 STARTLOOP=MAX("01JAN1974"D   ,DOBSSR);
  STOPLOOP=MIN("31DEC&DAFYR."D,DODSSR);

 DO YR=YEAR(STARTLOOP) TO YEAR(STOPLOOP) UNTIL(SSIELIG_FIRST NE .);
   IF YR=YEAR(STARTLOOP) THEN STARTMO=MONTH(STARTLOOP);
                    ELSE STARTMO=1;
   IF YR=YEAR(STOPLOOP)  THEN ENDMO=MONTH(STOPLOOP);
                    ELSE ENDMO=12;

   DO MO=STARTMO TO ENDMO UNTIL(SSIELIG_FIRST NE .);
     IF PSTA(YR,MO) IN ('C01','M01','M02')
     THEN SSIELIG_FIRST=MDY(MO,1,YR);
   END;
 END;

 * SET EARLIEST SSI ADULT ELIGIBILITY DATE;
 _18YR = SUM(YEAR(DOBSSR),18);
 _18MO = MONTH(DOBSSR);
_18BDAY = MDY(_18MO,1,_18YR);
STARTSALOOP=MAX(_18BDAY, SSIELIG_FIRST, "01JAN1974"D);

* ONLY COMPUTE IF BENE BECOMES AN ADULT BEFORE END OF DAF YEAR;
IF _18BDAY LE MDY(12,31,&DAFYR.) THEN DO;
DO YR=YEAR(STARTSALOOP) TO YEAR(STOPLOOP) UNTIL(SSIELIG_ADULT NE .);
   IF YR=YEAR(STARTSALOOP) THEN STARTMO=MONTH(STARTSALOOP);
                    ELSE STARTMO=1;
   IF YR=YEAR(STOPLOOP)  THEN ENDMO=MONTH(STOPLOOP);
                    ELSE ENDMO=12;

   DO MO=STARTMO TO ENDMO UNTIL(SSIELIG_ADULT NE .);

     IF PSTA(YR,MO) IN ('C01','M01','M02') AND
```

Appendix A.31
JCL/SAS Code: SSIELIG

```
        YRDIF(DOBSSR,MDY(MO,1,YR),'AGE')>=18
        THEN SSIELIG_ADULT=MDY(MO,1,YR);

     END;
  END;
  END;

IF SSIELIG_ADULT AND SSIELIG_FIRST THEN
DATE_ERROR=(SSIELIG_ADULT < SSIELIG_FIRST);

*BUILD PSTA_MR ANALOGOUS TO TASK 8 LAF_MR;
ARRAY PSTA_ALL (*) $ %DO MM=1 %TO &TOTMOS; PSTA&&YY&MM. %END;;
LENGTH PSTA_MR $3. _NM $4.;
PSTA_MR = "";

DO I = DIM(PSTA_ALL) TO 1 BY -1 WHILE (PSTA_MR="");
    IF PSTA_ALL(I) NE "" THEN DO;
        PSTA_MR = PSTA_ALL(I);
        _NM = SUBSTR(VNAME(PSTA_ALL(I)),5,4);
        _YR = INPUT(SUBSTR(_NM,1,2),BEST.);
        IF _YR > 90 THEN _YR1=1900 + _YR;
        ELSE IF _YR > .Z THEN _YR1=2000 + _YR;
        _MN = INPUT(SUBSTR(_NM,3,2),BEST.);
        PSTA_MR_DATE = MDY(_MN,1,_YR1);
     END;
  END;

RUN;

*CHECK THAT SSIELIG_ADULT IS NEVER BEFORE SSIELIG_FIRST;
PROC FREQ DATA=TEMP.SSIELIG;
   TABLES DATE_ERROR/MISSING;
RUN;

*CHECK PSTA_MR CONSTRUCTION;
PROC FREQ DATA=TEMP.SSIELIG;
   TABLES PSTA_MR / LIST MISSING;
   TABLES PSTA_MR_DATE / LIST MISSING;
   FORMAT PSTA_MR_DATE YYMMD.;
RUN;

 PROC PRINT DATA=TEMP.SSIELIG (OBS=100); WHERE _YR = 18;
    VAR PSTA18: PSTA17: PSTA_:;
 RUN;
```

Appendix A.31
JCL/SAS Code: SSIELIG

```
*CHECK DATE CONSTRUCTION;
PROC PRINT DATA=TEMP.SSIELIG (OBS=100);
VAR DOBSSR _18YR _18MO _18BDAY SSIELIG_FIRST STARTSALOOP
   SSIELIG_ADULT;
FORMAT DOBSSR _18BDAY SSIELIG_FIRST STARTSALOOP SSIELIG_ADULT
      YYMMD.;
RUN;

DATA OUT1.SSIELIG (DROP= STARTLOOP STARTMO STARTSALOOP STOPLOOP
              I _MN _NM _YR _YR1 MO YR _18YR _18MO _18BDAY);
  SET TEMP.SSIELIG;
  LABEL
   PSTA_MR="SSI PAYMENT STATUS, MOST RECENT"
   PSTA_MR_DATE="DATE OF MOST RECENT SSI PAYMENT STATUS"
   ;
RUN;

PROC CONTENTS DATA=OUT1.SSIELIG;
RUN;

%MEND DOIT;
%DOIT;

//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:     ABRYCE@MATHEMATICA-MPR.COM
TO:       ABRYCE@MATHEMATICA-MPR.COM
SUBJECT:  SSIELIG (DAF18)
SSIELIG HAS FINISHED RUNNING
```

Appendix A.32
JCL/SAS Code: JCLYRSP

```
//#6502MSP JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//*
//*     *-------------------------------------------------*
//*     ¦  CALL THE MACRO SPLIT PROGRAM                   ¦
//*     *-------------------------------------------------*
//*
//*
//* CREATED BY: SERGE LUKASHANETS, 5/26/2016
//* MODIFIED BY: ALEX BRYCE 07/23/19
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//  SET REG='64M'
//*
//JS010  EXEC SAS9,
//      WORK='200000,100000', F10
//      REGION=&REG,
//      PARM='MEMSIZE=&REG'
//*
//***DATA FOR SPLIT
//IN1     DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSIELIG.SA.V1,DISP=SHR
//***OUT YEARLY FILES
//OUT94  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR1994.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT95  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR1995.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT96  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR1996.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT97  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR1997.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT98  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR1998.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT99  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR1999.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT00  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2000.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
```

Appendix A.32
JCL/SAS Code: JCLYRSP

```
//OUT01  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2001.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT02  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2002.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT03  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2003.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT04  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2004.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT05  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2005.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT06  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2006.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT07  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2007.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT08  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2008.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT09  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2009.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT10  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2010.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT11  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2011.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT12  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2012.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT13  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2013.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT14  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2014.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT15  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2015.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
```

Appendix A.32
JCL/SAS Code: JCLYRSP

```
//OUT16  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2016.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT17  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2017.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT18  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2018.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//SYSIN   DD *
OPTIONS NOCENTER COMPRESS=YES MPRINT OBS=MAX;

%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(MSPLIT)";

%OUTP(IN1.SSIELIG,OUT,SSR,1994,2018,
    SSN MFT SSI: PSTA_MR PSTA_MR_DATE);

PROC CONTENTS DATA=OUT94.SSR;RUN;
PROC CONTENTS DATA=OUT95.SSR;RUN;
PROC CONTENTS DATA=OUT96.SSR;RUN;
PROC CONTENTS DATA=OUT97.SSR;RUN;
PROC CONTENTS DATA=OUT98.SSR;RUN;
PROC CONTENTS DATA=OUT99.SSR;RUN;
PROC CONTENTS DATA=OUT00.SSR;RUN;
PROC CONTENTS DATA=OUT01.SSR;RUN;
PROC CONTENTS DATA=OUT02.SSR;RUN;
PROC CONTENTS DATA=OUT03.SSR;RUN;
PROC CONTENTS DATA=OUT04.SSR;RUN;
PROC CONTENTS DATA=OUT05.SSR;RUN;
PROC CONTENTS DATA=OUT06.SSR;RUN;
PROC CONTENTS DATA=OUT07.SSR;RUN;
PROC CONTENTS DATA=OUT08.SSR;RUN;
PROC CONTENTS DATA=OUT09.SSR;RUN;
PROC CONTENTS DATA=OUT10.SSR;RUN;
PROC CONTENTS DATA=OUT11.SSR;RUN;
PROC CONTENTS DATA=OUT12.SSR;RUN;
PROC CONTENTS DATA=OUT13.SSR;RUN;
PROC CONTENTS DATA=OUT14.SSR;RUN;
PROC CONTENTS DATA=OUT15.SSR;RUN;
PROC CONTENTS DATA=OUT16.SSR;RUN;
PROC CONTENTS DATA=OUT17.SSR;RUN;
PROC CONTENTS DATA=OUT18.SSR;RUN;
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
```

Appendix A.32
JCL/SAS Code: JCLYRSP

```
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 JCLYRSP FOR SSR IS COMPLETE
SSR SPLIT TO ANNUAL SSRS ARE COMPLETE.
```

Appendix A.33
JCL/SAS Code: C2LDSSR

```
//#6502C2L JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT: DAF17 CONSTRUCTION
//*
//* PROGRAM: OPDR.TG.PRD.ETTW.#6502.DAF18.SSR.PRDLIB(C2LDSSR)
//*
//* PURPOSE: READ SSR EXTRA VARIABLES FILE
//*
//* PROGRAMMER: ALEX BRYCE 07/11/2019
//* MPR PHONE 202 552-6454
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//SAS     EXEC SAS9,
//        WORK='120000,60000'
//*
//SSIEXT  DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.SSIADD.FL.V1,DISP=SHR
//TEMP    DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         UNIT=TSILO
//OUT     DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSIEXT.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN   DD *

%LET ENDYR=2018;

OPTIONS OBS=MAX MACROGEN MPRINT;

%MACRO DOIT;

DATA OUT.SSIEXT;
 INFILE SSIEXT TRUNCOVER;
  INPUT @01 HUN       $CHAR9.
        @10 SSN       $CHAR9.
        @19 SEQ       IBR1.
        @20 RCD_EST   ?? YYMMDD8.
        @28 NOE       $CHAR3.
        @31 CMTHMO    YYMMN6.
        @;
        * KEEP ONLY COMPUTATION MONTHS IN THE DAF;
        IF '01JAN1994'D<=CMTHMO<="31DEC&ENDYR."D;
        INPUT
```

Appendix A.33
JCL/SAS Code: C2LDSSR

```
        @37 BMF      $CHAR1.
        @38 FCI      7.2
        @45 PROFAC   $CHAR2.
        @47 DEEMAMT  7.2
        @54 DEEMCD   $CHAR1.
        @55 STUDM    $CHAR1.
        ;
    RUN;

    PROC CONTENTS DATA=OUT.SSIEXT; RUN;

    PROC FREQ DATA=OUT.SSIEXT;
    TABLES STUDM / LIST MISSING;
    RUN;

    PROC PRINT DATA=OUT.SSIEXT (OBS=10);
    WHERE RANUNI(1100) < 0.1;
    RUN;

    %MEND DOIT;
    %DOIT;

    //*************************************************
    //* SENDING EMAIL FROM HOST USING IEBGENER
    //*************************************************
    //SENDNOTE EXEC PGM=IEBGENER
    //SYSIN    DD DUMMY
    //SYSPRINT DD SYSOUT=*
    //SYSUT2   DD SYSOUT=(B,SMTP)
    //SYSUT1   DD *
    HELO MVSHOST
    MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
    RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
    DATA
    FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
    TO:     <ABRYCE@MATHEMATICA-MPR.COM>
    SUBJECT: DAF18 C2LDSSR IS COMPLETE
    DAF18 C2LDSSR PROGRAM HAS ENDED
```

Appendix A.34
JCL/SAS Code: SORTSSR

```
//#6502SRT  JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//*
//*     *-----------------------------------------------*
//*     ¦  OPDR.TG.PRD.ETTW.#6502.DAF18.SSR.PRDLIB(SORTSSR)
//*     *-----------------------------------------------*
//*
//* 1.  DIVIDE SSIEXT INTO SEGMENTS FOR SORTING
//* CONTACT ALEX BRYCE
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS030   EXEC SAS9,
//       WORK='120000,60000'             * SPACE IN BLKS *
//*
//SSIEXT  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSIEXT.SA.V1,DISP=SHR
//*
//TEMP1  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP2  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP3  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP4  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP5  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP6  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP7  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP8  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP9  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP10 DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP11 DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP12 DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP13 DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//OUT     DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSIEXTS.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//*
//SYSIN   DD *
OPTIONS NOCENTER COMPRESS=BINARY OBS=MAX;

%MACRO SORTDAT(BEGOBS= ,ENDOBS= ,RUN= );
PROC SORT DATA = SSIEXT.SSIEXT(FIRSTOBS=&BEGOBS. OBS=&ENDOBS.)
        OUT = TEMP&RUN..SSIEXTS;
  BY SSN RCD_EST CMTHMO;
RUN;
%MEND SORTDAT;
```

Appendix A.34
JCL/SAS Code: SORTSSR

```
%SORTDAT(BEGOBS = 1,         ENDOBS = 200000000,  RUN = 1);
%SORTDAT(BEGOBS = 200000001,  ENDOBS = 400000000,  RUN = 2);
%SORTDAT(BEGOBS = 400000001,  ENDOBS = 600000000,  RUN = 3);
%SORTDAT(BEGOBS = 600000001,  ENDOBS = 800000000,  RUN = 4);
%SORTDAT(BEGOBS = 800000001,  ENDOBS = 1000000000, RUN = 5);
%SORTDAT(BEGOBS = 1000000001, ENDOBS = 1200000000, RUN = 6);
%SORTDAT(BEGOBS = 1200000001, ENDOBS = 1400000000, RUN = 7);
%SORTDAT(BEGOBS = 1400000001, ENDOBS = 1600000000, RUN = 8);
%SORTDAT(BEGOBS = 1600000001, ENDOBS = 1800000000, RUN = 9);
%SORTDAT(BEGOBS = 1800000001, ENDOBS = 2000000000, RUN = 10);
%SORTDAT(BEGOBS = 2000000001, ENDOBS = 2200000000, RUN = 11);
%SORTDAT(BEGOBS = 2200000001, ENDOBS = 2400000000, RUN = 12);
%SORTDAT(BEGOBS = 2400000001, ENDOBS = MAX,       RUN = 13);

DATA OUT.SSIEXTS;
  SET TEMP1.SSIEXTS
     TEMP2.SSIEXTS
     TEMP3.SSIEXTS
     TEMP4.SSIEXTS
     TEMP5.SSIEXTS
     TEMP6.SSIEXTS
     TEMP7.SSIEXTS
     TEMP8.SSIEXTS
     TEMP9.SSIEXTS
     TEMP10.SSIEXTS
     TEMP11.SSIEXTS
     TEMP12.SSIEXTS
     TEMP13.SSIEXTS;
  BY SSN RCD_EST CMTHMO;
RUN;

PROC CONTENTS DATA=OUT.SSIEXTS; RUN;

PROC PRINT DATA=OUT.SSIEXTS (OBS = 20);
WHERE RANUNI(1100) < 0.1;
RUN;

//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
```

Appendix A.34
JCL/SAS Code: SORTSSR

```
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 SORTSSR ARE COMPLETE
```

Appendix A.35
JCL/SAS Code: D2PRSSR

```
//#6502D2P JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT: DAF18 CONSTRUCTION
//*
//* PROGRAM: OPDR.TG.PRD.ETTW.#6502.DAF18.SSR.PRDLIB(D2PRSSR)
//*
//* PURPOSE: READ SSR EXTRA VARIABLES FILE
//*
//* PROGRAMMER: ALEX BRYCE
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//SAS     EXEC SAS9,
//        WORK='120000,60000'
//*
//SSIEXTS DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSIEXTS.SA.V1,DISP=SHR
//OUT     DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSREXT.SA.V1,
//         DISP=(NEW,CATLG,DELETE),UNIT=TSILO
//SYSIN   DD *

OPTIONS OBS=MAX MACROGEN MPRINT;

%LET ENDYR=2018;/*CHANGE AS NEEDED*/

%MACRO DOIT;

DATA OUT.SSREXT;
   SET SSIEXTS.SSIEXTS;
   BY SSN;

   * SET UP OUTPUT ARRAYS;
   ARRAY DEEMINC (1994:&ENDYR.,1:12) %DO YEAR=1994 %TO &ENDYR;
                          %LET YR=%SUBSTR(&YEAR.,3,2);
                          DEEMINC&YR.01-DEEMINC&YR.12
                        %END;;
   ARRAY A_DEEMCD (1994:&ENDYR,1:12) $ %DO YEAR=1994 %TO &ENDYR;
                          %LET YR=%SUBSTR(&YEAR.,3,2);
                          DEEMCD&YR.01-DEEMCD&YR.12
                        %END;;
   ARRAY A_BMF   (1994:&ENDYR,1:12) %DO YEAR=1994 %TO &ENDYR;
                          %LET YR=%SUBSTR(&YEAR.,3,2);
                          BMF&YR.01-BMF&YR.12
                        %END;;
```

Appendix A.35
JCL/SAS Code: D2PRSSR

```
ARRAY A_FCI   (1994:&ENDYR,1:12) %DO YEAR=1994 %TO &ENDYR;
                %LET YR=%SUBSTR(&YEAR.,3,2);
                FCI&YR.01-FCI&YR.12
              %END;;
ARRAY A_PROFAC (1994:&ENDYR,1:12) %DO YEAR=1994 %TO &ENDYR;
                %LET YR=%SUBSTR(&YEAR.,3,2);
                PROFAC&YR.01-PROFAC&YR.12
              %END;;
ARRAY A_STUDM (1994:&ENDYR.,1:12) $ %DO YEAR=1994 %TO &ENDYR;
                %LET YR=%SUBSTR(&YEAR.,3,2);
                STUDM&YR.01-STUDM&YR.12
               %END;;

* KEEP YYMM VARIABLES ACROSS OBS WITH THE SAME SSN;
RETAIN DEEMINC: DEEMCD: BMF: FCI: PROFAC: STUDM:;

* INITIALIZE RETAINED VARIABLES WHEN AT THE FIRST OB WITH THIS SSN;
ARRAY NUMVARS (*)  %DO YEAR=1994 %TO &ENDYR;
        %LET YR=%SUBSTR(&YEAR.,3,2);
        DEEMINC&YR.01-DEEMINC&YR.12
        BMF&YR.01-BMF&YR.12
        FCI&YR.01-FCI&YR.12
        PROFAC&YR.01-PROFAC&YR.12
       %END;;
ARRAY CHARVARS  (*) $ %DO YEAR=1994 %TO &ENDYR;
          %LET YR=%SUBSTR(&YEAR.,3,2);
          DEEMCD&YR.01-DEEMCD&YR.12
          STUDM&YR.01-STUDM&YR.12
        %END;;
IF FIRST.SSN THEN DO;
   DO I=1 TO DIM(NUMVARS);
      NUMVARS(I)=.;
   END;
   DO I=1 TO DIM(CHARVARS);
      CHARVARS(I)='';
   END;
END;

* SET YYMM VARIABLES;
* EACH OB REPRESENTS AN SSN, RECORD ESTABLISHMENT DATE, AND
  COMPUTATION MONTH COMBINATION UNIQUELY.  SO WE CAN USE THE VALUE
  OF COMPUTATION MONTH TO ASSIGN THE YYMM VALUES.  WHEN TWO
  COMPUTATION MONTHS OVERLAP FROM ONE SSN-RECORD ESTABLIHMENT DATE
  COMBINATION THE DATA FROM THE LATER ESTABLISHED RECORDS OVERLAYS
  THAT FROM THE EARLIER ESTABLISHED RECORDS BECAUSE OF THE RETAIN
```

Appendix A.35
JCL/SAS Code: D2PRSSR

```
      STATEMENT USED ABOVE;

    IF CMTHMO NE . THEN DO;
       DEEMINC(YEAR(CMTHMO),MONTH(CMTHMO))=DEEMAMT;
       A_DEEMCD(YEAR(CMTHMO),MONTH(CMTHMO))=DEEMCD;
       A_BMF(YEAR(CMTHMO),MONTH(CMTHMO))=BMF;
       A_FCI(YEAR(CMTHMO),MONTH(CMTHMO))=FCI;
       A_PROFAC(YEAR(CMTHMO),MONTH(CMTHMO))=PROFAC;
       A_STUDM(YEAR(CMTHMO),MONTH(CMTHMO))=STUDM;
    END;

    * LAST OB FOR THIS SSN THEN OUTPUT;
    IF LAST.SSN THEN OUTPUT;

  RUN;

  PROC CONTENTS DATA=OUT.SSREXT;
  RUN;

  %MEND DOIT;
  %DOIT;
  //*************************************************
  //* SENDING EMAIL FROM HOST USING IEBGENER
  //*************************************************
  //SENDNOTE EXEC PGM=IEBGENER
  //SYSIN    DD DUMMY
  //SYSPRINT DD SYSOUT=*
  //SYSUT2   DD SYSOUT=(B,SMTP)
  //SYSUT1   DD *
  HELO MVSHOST
  MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
  RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
  DATA
  FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
  TO:     <ABRYCE@MATHEMATICA-MPR.COM>
  SUBJECT: DAF18 D2PRSSR ARE COMPLETE
```

Appendix A.36
JCL/SAS Code: SSRERNLD

```
//#6502SEL JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT: DAF18 CONSTRUCTION (50214)
//* PROJECT DIRECTOR: CASSANDRA PICKENS JEWELL
//* PROGRAM: OPDR.TG.PRD.ETTW.#6502.DAF18.SSR.PRDLIB(SSRERNLD)
//*
//* PURPOSE: READ SSR EARNINGS FOR DCF CORRECTIONS
//*
//* PROGRAMMER: ALEX BRYCE 07/11/2019
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//* MODIFIED:
//*****************************************************************
//*
//SAS     EXEC SAS9,
//        WORK='120000,60000'
//*
//EARN  DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.SSIERN.FL.V1,DISP=SHR
//TEMP  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP1 DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP2 DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP3 DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP4 DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//OUT   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSREARN1.V1,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD *

OPTIONS OBS=MAX MACROGEN MPRINT;

%MACRO DOIT;

 *READ IN SSR EARNINGS USING SSR RECORD LAYOUT;
DATA TEMP.SSREARN (COMPRESS=YES);
   INFILE EARN;
   INPUT
   @01 HUN $CHAR9.
   @10 PAN $CHAR9.
   @19 MFT $CHAR2.
   @21 TOA $CHAR2.
   @23 RIC $CHAR1.
   @24 RCDNO  IBR1.
   @25 RCD_EST_CCYYMMDD ?? YYMMDD8.
   @33 IESTART  ?? $CHAR6.
```

Appendix A.36
JCL/SAS Code: SSRERNLD

```
    @39 IESTOP   ?? $CHAR6.
    @45 IETYP      $CHAR1.
    @46 IEAMT     ?? S370FPD4.3
    @50 IEFRQ      $CHAR1.
    @51 IEVAR      $CHAR1.
    ;
    FORMAT
    RCD_EST_CCYYMMDD  MMDDYY10.
    IEAMT           DOLLAR11.2
    RCDNO $HEX2.
    ;
 RCD_EST_CCYY = YEAR(RCD_EST_CCYYMMDD);
 LAPSE = IESTOP - IESTART;
RUN;

 *QA;
 PROC FREQ DATA = TEMP.SSREARN;
 TITLE 'SSREARN QA ON IETYP IESTART IESTOP RCD_EST_CCYY';
 TABLES RCD_EST_CCYY / LIST MISSING;
 TABLES IETYP / LIST MISSING;
 TABLES IESTART / LIST MISSING;
 TABLES IESTOP / LIST MISSING;
 RUN;

 PROC FREQ DATA=TEMP.SSREARN;
 TITLE 'FREQ OF IEA LAPSE AND IEFRQ';
 TABLES LAPSE * IEFRQ / LIST MISSING;
 RUN;

 PROC FORMAT;
 VALUE AMT .='MISSING'
        0='0 IEAMT'
        LOW-<0='NEGATIVE IEAMT'
        0<-HIGH='POSITIVE IEAMT'
        OTHER='OTHER';
 RUN;

 PROC MEANS DATA=TEMP.SSREARN;
 TITLE 'MEANS OF IEAMT';
 VAR IEAMT;
 RUN;

 PROC FREQ DATA=TEMP.SSREARN;
 TITLE 'FREQ OF IEAMT AND IETYP';
 TABLES IEAMT * IETYP / LIST MISSING;
```

Appendix A.36
JCL/SAS Code: SSRERNLD

```
 FORMAT IEAMT AMT.;
 RUN;

 *CONFIRM NUMBER OF DISTINCT SSNS;
 PROC SQL;
 CREATE TABLE NEW AS
 SELECT COUNT(DISTINCT(PAN)) AS SSN_COUNT
 FROM TEMP.SSREARN;
 QUIT;

 PROC PRINT; TITLE 'NUMBER OF DISTINCT SSNS'; RUN;

%MEND DOIT;
%DOIT;

 /*SORT SSREARN DATA*/
%MACRO SORTDAT(BEGOBS= ,ENDOBS= ,RUN= );
PROC SORT DATA = TEMP.SSREARN (FIRSTOBS=&BEGOBS. OBS=&ENDOBS.)
        OUT = TEMP&RUN..SSREXTS;
  BY PAN RCD_EST_CCYYMMDD;
RUN;
%MEND SORTDAT;

%SORTDAT(BEGOBS = 1,         ENDOBS = 50000000,  RUN = 1);
%SORTDAT(BEGOBS = 50000001,   ENDOBS = 100000000, RUN = 2);
%SORTDAT(BEGOBS = 100000001,  ENDOBS = 150000000, RUN = 3);
%SORTDAT(BEGOBS = 150000001,  ENDOBS = MAX,       RUN = 4);

DATA OUT.SSREARN;
  SET TEMP1.SSREXTS (RENAME=(PAN=SSN RCD_EST_CCYYMMDD = RCD_EST))
      TEMP2.SSREXTS (RENAME=(PAN=SSN RCD_EST_CCYYMMDD = RCD_EST))
      TEMP3.SSREXTS (RENAME=(PAN=SSN RCD_EST_CCYYMMDD = RCD_EST))
      TEMP4.SSREXTS (RENAME=(PAN=SSN RCD_EST_CCYYMMDD = RCD_EST));
  BY SSN RCD_EST;
RUN;

PROC CONTENTS DATA=OUT.SSREARN; RUN;
TITLE 'CONTENTS OF SORTED SSREARN FILE';
RUN;

PROC PRINT DATA=OUT.SSREARN (OBS=10);
TITLE 'PRINT 10 RANDOM OBS FOR CHECK';
WHERE RANUNI(1100)<0.1;
RUN;
//*************************************************
```

Appendix A.36
JCL/SAS Code: SSRERNLD

```
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: SSRERNLD IS COMPLETE
DAF18 SSRERNLD IS COMPLETE.
```

Appendix A.37
JCL/SAS Code: SSRERNCR

```
//#6502SRE JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT: DAF18 CONSTRUCTION
//*
//* PROGRAM: OPDR.TG.PRD.ETTW.#6502.DAF18.SSR.PRDLIB(SSRERNCR)
//*
//* PURPOSE: GENERATE EARNYYMM VARIABLES FROM SSITXT
//*
//* PROGRAMMER: ALEX BRYCE
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//* MODIFIED:
//*****************************************************************
//*
//JS030   EXEC SAS9,
//        WORK='120000,60000'             * SPACE IN BLKS *
//*
//SSRERN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSREARN1.V1,DISP=SHR
//*
//TEMP1  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//*
//OUT     DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSRYYMM.SA.V1,
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO,VOL=(,,,10)
//*
//SYSIN   DD *

OPTIONS NOCENTER COMPRESS=BINARY MACROGEN OBS=MAX;

%LET ENDYR=2018;/*CHANGE AS NEEDED*/

%MACRO DOIT;


  /*WE SUBSET THE SSREARN FILE USING IESTART AND IESTOP.
    WE DO THIS IN A SEPARATE DATA SET SINCE WE NEED TO TRANSFORM
    IESTART AND IESTOP INTO NUMERIC DATE VARIABLES FIRST*/
DATA TEMP1.SSREARN;
  SET SSRERN.SSREARN;
  BY SSN;

  *TRANSFORM IESTART AND IESTOP INTO NUMERIC VARIABLES;
  IESTART_DATE = MDY(SUBSTR(IESTART,5,2), 1, SUBSTR(IESTART,1,4));
```

Appendix A.37
JCL/SAS Code: SSRERNCR

```
    IF IESTOP = '000000' THEN IESTOP_DATE = MDY(12,1,&ENDYR.);
    ELSE IESTOP_DATE = MDY(SUBSTR(IESTOP,5,2), 1, SUBSTR(IESTOP,1,4));

    *DROP IESTOPS BEFORE JAN 1994;
    IF NOT MISSING(IESTOP_DATE) AND IESTOP_DATE GE '01JAN1994'D;

    *DROP IESTARTS AFTER DEC OF LAST DAF YEAR;
    IF IESTART_DATE LE "31DEC&ENDYR."D;

    *RECODE START AND END DATES;
    IF IESTART_DATE < '01JAN1994'D THEN IESTART_DATE='01JAN1994'D;
    IF IESTOP_DATE > "01DEC&ENDYR."D THEN IESTOP_DATE="01DEC&ENDYR."D;

  RUN;

   PROC FREQ DATA=TEMP1.SSREARN;
   TITLE 'QA IE VARIABLES BEFORE RESHAPING';
   TABLES IESTART * IESTART_DATE / LIST MISSING;
   TABLES IESTOP * IESTOP_DATE / LIST MISSING;
   TABLES IETYP / LIST MISSING;
   RUN;

  DATA OUT.SSREARN;
    SET TEMP1.SSREARN;
    BY SSN;

   * SET UP OUTPUT ARRAYS;
   ARRAY T16EXLAMT (1994:&ENDYR.,1:12)
                %DO YEAR=1994 %TO &ENDYR;
                %LET YR=%SUBSTR(&YEAR.,3,2);
                T16EXLAMT&YR.01-T16EXLAMT&YR.12
                %END;;
   ARRAY T16EXPAMT (1994:&ENDYR,1:12)
                %DO YEAR=1994 %TO &ENDYR;
                %LET YR=%SUBSTR(&YEAR.,3,2);
                T16EXPAMT&YR.01-T16EXPAMT&YR.12
                %END;;
   ARRAY T16BEXPAMT (1994:&ENDYR,1:12)
                 %DO YEAR=1994 %TO &ENDYR;
                 %LET YR=%SUBSTR(&YEAR.,3,2);
                 T16BEXPAMT&YR.01-T16BEXPAMT&YR.12
                 %END;;
   ARRAY T16GRSAMT (1994:&ENDYR,1:12)
                %DO YEAR=1994 %TO &ENDYR;
                %LET YR=%SUBSTR(&YEAR.,3,2);
```

Appendix A.37
JCL/SAS Code: SSRERNCR

```
                T16GRSAMT&YR.01-T16GRSAMT&YR.12
                %END;;
ARRAY T16SEAMT (1994:&ENDYR,1:12)
               %DO YEAR=1994 %TO &ENDYR;
               %LET YR=%SUBSTR(&YEAR.,3,2);
               T16SEAMT&YR.01-T16SEAMT&YR.12
               %END;;
ARRAY T16NETAMT (1994:&ENDYR,1:12)
                %DO YEAR=1994 %TO &ENDYR;
                %LET YR=%SUBSTR(&YEAR.,3,2);
                T16NETAMT&YR.01-T16NETAMT&YR.12
                %END;;
ARRAY T16PASAMT (1994:&ENDYR,1:12)
                %DO YEAR=1994 %TO &ENDYR;
                %LET YR=%SUBSTR(&YEAR.,3,2);
                T16PASAMT&YR.01-T16PASAMT&YR.12
                %END;;
 * KEEP YYMM VARIABLES ACROSS OBS WITH THE SAME SSN;
 RETAIN T16EXLAMT: T16EXPAMT: T16BEXPAMT: T16GRSAMT:
      T16SEAMT:  T16NETAMT: T16PASAMT: ;

 * INITIALIZE RETAINED VARIABLES WHEN AT THE FIRST OB WITH THIS SSN;
 IF FIRST.SSN THEN DO;
    DO YR=1994 TO &ENDYR.;
       DO MO = 1 TO 12;
          T16EXLAMT(YR,MO)=.;
          T16EXPAMT(YR,MO)=.;
          T16BEXPAMT(YR,MO)=.;
          T16GRSAMT(YR,MO)=.;
          T16SEAMT(YR,MO)=.;
          T16NETAMT(YR,MO)=.;
          T16PASAMT(YR,MO)=.;
       END;
    END;
  END;

  * SET YYMM VARIABLES;
  * EACH OB REPRESENTS AN SSN, RECORD ESTABLISHMENT DATE, AND
    COMPUTATION MONTH COMBINATION UNIQUELY.  SO WE CAN USE THE VALUE
    OF COMPUTATION MONTH TO ASSIGN THE YYMM VALUES.  WHEN TWO
    COMPUTATION MONTHS OVERLAP FROM ONE SSN-RECORD ESTABLIHMENT DATE
    COMBINATION THE DATA FROM THE LATER ESTABLISHED RECORDS OVERLAYS
    THAT FROM THE EARLIER ESTABLISHED RECORDS BECAUSE OF THE RETAIN
    STATEMENT USED ABOVE;
```

Appendix A.37
JCL/SAS Code: SSRERNCR

```
      *SET START AND END POINTS;
       START_YR = YEAR(IESTART_DATE);  START_MO = MONTH(IESTART_DATE);
       END_YR   = YEAR(IESTOP_DATE);   END_MO   = MONTH(IESTOP_DATE);

      DO YR=START_YR TO END_YR;

         IF YR=START_YR THEN FIRSTMO = START_MO;
         ELSE FIRSTMO = 1;
         IF YR=END_YR THEN LASTMO = END_MO;
         ELSE LASTMO = 12;

         DO MO = FIRSTMO TO LASTMO;
            SELECT(IETYP);
            WHEN('W') T16GRSAMT(YR, MO)  = IEAMT;
            WHEN('B') T16EXLAMT(YR, MO)  = IEAMT;
            WHEN('C') T16BEXPAMT(YR, MO) = IEAMT;
            WHEN('T') T16EXPAMT(YR, MO)  = IEAMT;
            WHEN('S') T16SEAMT(YR, MO)   = IEAMT;
            WHEN('N') T16NETAMT(YR, MO)  = IEAMT;
            WHEN('D') T16PASAMT(YR, MO)  = IEAMT;
            OTHERWISE;
            END;
          END;
       END;
     * LAST OBS FOR THIS SSN THEN OUTPUT;
     IF LAST.SSN THEN OUTPUT;

   RUN;

   PROC CONTENTS DATA = OUT.SSREARN;
   TITLE 'CONTENTS OF FINAL SSIEXT FILE';
   RUN;

   PROC PRINT DATA = OUT.SSREARN (OBS=10);
   TITLE 'PRINT 10 RANDOM OBS FOR CHECK';
   WHERE RANUNI(1100)<0.1;
   RUN;

   %MEND;
   %DOIT;

   //*************************************************
   //* SENDING EMAIL FROM HOST USING IEBGENER
   //*************************************************
   //SENDNOTE EXEC PGM=IEBGENER
```

Appendix A.37
JCL/SAS Code: SSRERNCR

```
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 SSRERNCR COMPLETED
PROGRAM SSRERNCR IS COMPLETE.
```

Appendix A.38
JCL/SAS Code: SSRERNST

```
//#6502SRT JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT: DAF18 CONSTRUCTION
//*
//* PROGRAM: OPDR.TG.PRD.ETTW.#6502.DAF18.SSR.PRDLIB(SSRERNST)
//*
//* PURPOSE: MERGE EARNYYMM AND STUDMYYMM VARIABLES INTO ONE FILE
//*
//* PROGRAMMER: ALEX BRYCE
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS030   EXEC SAS9,
//       WORK='120000,60000'             * SPACE IN BLKS *
//*
//INEARN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSRYYMM.SA.V1,DISP=SHR
//INSTUD DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSREXT.SA.V1,DISP=SHR
//*
//TEMP1  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP2  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP3  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//*
//OUT     DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSREARN.SA.V1,
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO,VOL=(,,,10)
//*
//SYSIN   DD *

OPTIONS NOCENTER COMPRESS=BINARY MACROGEN OBS=MAX;

%LET ENDYR=2018;/*CHANGE AS NEEDED*/

%MACRO DOIT;

PROC SORT DATA=INEARN.SSREARN
OUT=TEMP1.SSREARN;
BY SSN;
RUN;

 /*SSREXT ALREADY STORTED BY SSN
PROC SORT DATA=INSTUD.SSREXT
OUT=TEMP2.SSREXT
   (KEEP = SSN STUDM:);
```

Appendix A.38
JCL/SAS Code: SSRERNST

```
BY SSN;
RUN;
 */

DATA TEMP3.SSREARN;
  MERGE TEMP1.SSREARN (IN=INEARN)
      INSTUD.SSREXT (IN=INSTUD KEEP=SSN STUDM:);
  BY SSN;

  *CHECK MERGE;
  IN_EARN = INEARN;
  IN_STUD = INSTUD;

   *QA ON STUDYYMM;
   ARRAY CHARVARS  (*) $ %DO YEAR=1994 %TO &ENDYR;
                  %LET YR=%SUBSTR(&YEAR.,3,2);
                  STUDM&YR.01-STUDM&YR.12
                 %END;;

   DO I=1 TO DIM(CHARVARS);

   *CHECKS FOR AT LEAST 1 NON-MISSING STUDMYYMM VALUE;
   IF NOT MISSING(CHARVARS(I)) THEN STUDM_NMISS = 1;

   *CHECKS FOR AT LEAST 1 STUDMYYMM = Y;
   IF CHARVARS(I) = 'Y' THEN STUDM_YES = 1;

   *IF AT LEAST 1 YES FOUND, JUMP TO END;
   IF STUDM_YES = 1 THEN I = DIM(CHARVARS);

   END;
RUN;

PROC FREQ DATA=TEMP3.SSREARN;
TITLE 'CHECK FOR AT LEAST 1 NON MISSING STUDMYYMM';
TABLES IN_EARN * IN_STUD / LIST MISSING;
TABLES STUDM_NMISS / LIST MISSING;
TABLES STUDM_YES / LIST MISSING;
RUN;

DATA OUT.SSREARN;
  SET TEMP3.SSREARN
  (DROP=IN_EARN IN_STUD STUDM_YES STUDM_NMISS);
RUN;
```

Appendix A.38
JCL/SAS Code: SSRERNST

```
PROC CONTENTS DATA = OUT.SSREARN;
TITLE 'CONTENTS OF FINAL SSREARN FILE';
RUN;

%MEND;
%DOIT;

//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 SSRERNST COMPLETED
PROGRAM SSRERNST IS COMPLETE.
```

Appendix A.39
JCL/SAS Code: MBRLOADA

```
//#4941LDA  JOB (12510000,T715,,SAS,,ITC9FL),MIAOMIAO-SHEN,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#4941
//*****************************************************************
//* PROJECT:     50214 DAF
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#4941.DAF18.MBR.PRDLIB(MBRLOADA)
//* DESCRIPTION: CHECK THE CURRENT MBR DATA LAYOUT
//*            THIS PROGRAM LOADS MBR RECORDS RETURNED FROM
//*            MBR FINDER PRELIMINARY TO ADDING UP BENEFITS
//*            OUTPUT FILE WILL BE PROCESSED TO ADD UP DEPENDENT
//*            BENEFIT AMOUNTS SORTED BY CAN AND BIC AND OUTPUT
//*            COMBINED FILE.
//* PROGRAMMER:  MIAOMIAO SHEN 6/19/2019 FOR DAF18
//* EMAIL:       MSHEN@MATHEMATICA-MPR.COM
//*            MIAOMIAO.SHEN@SSA.GOV
//*****************************************************************
//JS010   EXEC SAS9,
//        WORK='200000,100000'            * SPACE IN BLKS *
//*
//IN1  DD DSN=OPDR.TG.PRD.ETTW.DAF18.MBROUT.F1.R190606,DISP=SHR
//     DD DSN=OPDR.TG.PRD.ETTW.DAF18.MBROUT.F2.R190606,DISP=SHR
//     DD DSN=OPDR.TG.PRD.ETTW.DAF18.MBROUT.F3.R190606,DISP=SHR
//     DD DSN=OPDR.TG.PRD.ETTW.DAF18.MBROUT.F4.R190715,DISP=SHR
//     DD DSN=OPDR.TG.PRD.ETTW.DAF18.MBROUT.F5.R190606,DISP=SHR
//TEMP DD DSN=&&TEMPX,DISP=(NEW,DELETE,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.MBRLOADA.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        SPACE=(CYL,(1000,500),RLSE),VOL=(,,,10)
//*
//SYSIN  DD *
OPTIONS NOCENTER LS=132 PS=60 COMPRESS=BINARY OBS=MAX;

%LET BEGYR=1994;
%LET ENDYR=2018;  /* CHANGE END YEAR AS NEEDED  */

%MACRO START;

%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

 /* EXTRACT THE PAYMENT FIELDS FOR USE IN COMPUTING DEPENDENT AMTS */
 /* THE DATA WILL CONTAIN ALL AUXILIARIES */

DATA TEMP.MBR;
```

Appendix A.39
JCL/SAS Code: MBRLOADA

```
INFILE IN1 TRUNCOVER;
INPUT
  @001   CAN       $9.
  @061   BIC       $2.
  @305   BOAN      $9.
  @;

 POS = 7604;
 %DO MM=1 %TO &TOTMOS.;
   INPUT
   @POS MBC&&YY&MM 5.1 /* Monthly Benefit Credited */
   @;
   POS=POS+5;
 %END;

 POS = 11804;
 %DO MM=1 %TO &TOTMOS.;
   INPUT
   @POS BPD&&YY&MM $1./* BENEFIT PAYMENT DESIGNATION */
   @;
   POS=POS+1;
 %END;
  ;

  /*CREATE SSN*/
  IF SUBSTR(BIC,1,1) IN ('A') THEN SSN = CAN;
    ELSE SSN = BOAN;

  DROP POS;
RUN;

 /* CHECK THAT NO DUPLICATE RECORDS ARE IN THE FILE */
PROC SORT DATA=TEMP.MBR OUT=OUT.MBR NODUPKEY;
BY CAN BIC;
RUN;

PROC PRINT DATA=OUT.MBR (OBS=25);
 TITLE 'MBRLOADA';
RUN;

PROC FREQ DATA=OUT.MBR ; TABLES BIC; RUN;
RUN;

%MEND;
```

Appendix A.39
JCL/SAS Code: MBRLOADA

```
%START;
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<MSHEN@MATHEMATICA-MPR.COM>
RCPT TO:<MSHEN@MATHEMATICA-MPR.COM>
DATA
FROM:   <MSHEN@MATHEMATICA-MPR.COM>
TO:     <MSHEN@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 MBRLOADA IS COMPLETE
```

Appendix A.40
JCL/SAS Code: PHUSLOAD

```
//#4941PHU  JOB (12510000,T715,,SAS,,ITC9FL),MIAOMIAO-SHEN,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#4941
//*****************************************************************
//* PROJECT:     50214 DAF
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#4941.DAF18.MBR.PRDLIB(PHUSLOAD)
//* DESCRIPTION: CHECK THE CURRENT PHUS DATA LAYOUT
//*            THIS PROGRAM LOADS PHUS RECORDS RETURNED FROM
//*            MBR FINDERPRELIMINARY TO ADDING UP BENEFITS
//*            OUTPUT FILE WILL BE PROCESSED TO ADD UP DEPENDENT
//*            BENEFIT AMOUNTS SORTED BY CAN AND BIC AND OUTPUT
//*            COMBINED FILE.
//* PROGRAMMER:  MIAOMIAO SHEN 6/19/2019 FOR DAF18
//* EMAIL:       MSHEN@MATHEMATICA-MPR.COM
//*            MIAOMIAO.SHEN@SSA.GOV
//*****************************************************************
//*
//JS010   EXEC SAS9,
//        WORK='200000,100000'            * SPACE IN BLKS *
//*
//IN1   DD DSN=OPDR.TG.PRD.ETTW.DAF18.PHUSOUT.F1.R190606,DISP=SHR
//      DD DSN=OPDR.TG.PRD.ETTW.DAF18.PHUSOUT.F2.R190606,DISP=SHR
//      DD DSN=OPDR.TG.PRD.ETTW.DAF18.PHUSOUT.F3.R190606,DISP=SHR
//      DD DSN=OPDR.TG.PRD.ETTW.DAF18.PHUSOUT.F4.R190715,DISP=SHR
//      DD DSN=OPDR.TG.PRD.ETTW.DAF18.PHUSOUT.F5.R190606,DISP=SHR
//TEMP  DD DSN=&&TEMPX,DISP=(NEW,DELETE,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//TEMP1 DD DSN=&&TEMPX,DISP=(NEW,DELETE,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//TEMP2 DD DSN=&&TEMPX,DISP=(NEW,DELETE,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//TEMP3 DD DSN=&&TEMPX,DISP=(NEW,DELETE,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//TEMP4 DD DSN=&&TEMPX,DISP=(NEW,DELETE,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.PHUSLOAD.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO
//*
//SYSIN   DD *
OPTIONS NOCENTER LS=132 PS=60 COMPRESS=BINARY OBS=MAX;
%LET BEGYR=1994;
%LET ENDYR=2018;  /* CHANGE END YEAR AS NEEDED  */
*START YEAR FOR PHUS RECORDS IS 1984;
```

Appendix A.40
JCL/SAS Code: PHUSLOAD

```
%LET STARTPOS=%EVAL((&BEGYR-1984)*12);

%MACRO START;

%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

 /* THE DATA WILL CONTAIN ALL AUXILIARIES */

DATA TEMP.PHUS;

INFILE IN1 TRUNCOVER;
INPUT
   @01 CAN    $9.
   @10 BIC    $2.
   @;
  POS = 39+(&STARTPOS.*7);
  %DO MM=1 %TO &TOTMOS.;
     INPUT
     @POS DIRPAY&&YY&MM ZD7.1 /* Direct Pay */
     @;
     POS=POS+7;
  %END;
  POS = 2979+(&STARTPOS.*5);
  %DO MM=1 %TO &TOTMOS.;
     INPUT
     @POS MEDPREM&&YY&MM ZD5.1/* Medicare Premium */
     @;
     POS=POS+5;
  %END;
   ;

 DROP POS MM;

    /* SUM DIRECT PAY AND MEDICARE PREMIUM TO GET THE TOTAL AMT PAID */
 ARRAY PAYD (*) %DO MM=1 %TO &TOTMOS.; PAYD&&YY&MM %END;;
 ARRAY DIRPAY (*) %DO MM=1 %TO &TOTMOS.; DIRPAY&&YY&MM %END;;
 ARRAY MEDPREM (*) %DO MM=1 %TO &TOTMOS.; MEDPREM&&YY&MM %END;;

 DO MM = 1 TO &TOTMOS.;
  PAYD(MM) = SUM(DIRPAY(MM),MEDPREM(MM));
 END;
RUN;

%MACRO SORTD(BEGIN=,END=,RUN=);
PROC SORT DATA=TEMP.PHUS(FIRSTOBS=&BEGIN. OBS=&END.)
```

Appendix A.40
JCL/SAS Code: PHUSLOAD

```
OUT=TEMP&RUN..PHUS;
BY CAN BIC;
RUN;
%MEND SORTD;
%SORTD(BEGIN=1,END=12000000,RUN=1);
%SORTD(BEGIN=12000001,END=24000000,RUN=2);
%SORTD(BEGIN=24000001,END=36000000,RUN=3);
%SORTD(BEGIN=36000001,END=MAX,RUN=4);

DATA OUT.PHUS;
  SET TEMP1.PHUS
      TEMP2.PHUS
      TEMP3.PHUS
      TEMP4.PHUS;
  BY CAN BIC;
  IF LAST.BIC;
RUN;

PROC PRINT DATA=OUT.PHUS (OBS=25);
 TITLE 'PHUSLOAD';
RUN;
PROC FREQ DATA=OUT.PHUS ; TABLES BIC; RUN;
RUN;

%MEND;
%START;
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<MSHEN@MATHEMATICA-MPR.COM>
RCPT TO:<MSHEN@MATHEMATICA-MPR.COM>
DATA
FROM:   <MSHEN@MATHEMATICA-MPR.COM>
TO:     <MSHEN@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 PHUSLOAD IS COMPLETE
```

Appendix A.41
JCL/SAS Code: MRGPHUS

```
//#4941MRG  JOB (12510000,T715,,SAS,,ITC9FL),MIAOMIAO-SHEN,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#4941
//*****************************************************************
//* PROJECT:     50214 DAF
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#4941.DAF18.MBR.PRDLIB(MRGPHUS)
//* DESCRIPTION:
//*      1. MERGE PHUS DATA TO RESULT OF MBRLOAD1 BY CAN AND BIC
//*      2. THIS WILL ADD THE BOAN TO PHUS PRELIMINARY TO DOING
//*         MBRADDUP AND MBR SECOND READ - ADD TO CASES IN FINDER
//*      3. OUTPUT FULL FILE FOR ADDUP AND LINKED FILE FOR MBR
//* PROGRAMMER:  MIAOMIAO SHEN 7/24/2019 FOR DAF18
//* EMAIL:       MSHEN@MATHEMATICA-MPR.COM
//*              MIAOMIAO.SHEN@SSA.GOV
//* NOTE: IN DAF14 MRGPHUS1 AND MRGPHUS2 ARE COMBINED INTO MRGPHUS
//*****************************************************************
//*
//JS030   EXEC SAS9,
//        WORK='120000,60000'              * SPACE IN BLKS *
//*
//IN1   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.MBRLOADA.SA.V1,DISP=SHR
//IN2   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.PHUSLOAD.SA.V1,DISP=SHR
//LNK   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.LINKDI.SA.V1,DISP=SHR
//*
//TEMP  DD DSN=&&TEMP,
//        DISP=(NEW,DELETE,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//TEMP1 DD DSN=&&TEMP,
//        DISP=(NEW,DELETE,DELETE),
//        UNIT=TSILO
//TEMP2 DD DSN=&&TEMP,
//        DISP=(NEW,DELETE,DELETE),
//        UNIT=TSILO
//TEMP3 DD DSN=&&TEMP,
//        DISP=(NEW,DELETE,DELETE),
//        UNIT=TSILO
//TEMP4 DD DSN=&&TEMP,
//        DISP=(NEW,DELETE,DELETE),
//        UNIT=TSILO
//TEMP5 DD DSN=&&TEMP,
//        DISP=(NEW,DELETE,DELETE),
//        UNIT=TSILO
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.MBRPHUS.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
```

Appendix A.41
JCL/SAS Code: MRGPHUS

```
//        UNIT=TSILO,VOL=(,,,10)
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.PHUSSSN.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT3  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.PHUSLINK.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO
//*
//SYSIN DD *
OPTIONS NOCENTER COMPRESS=BINARY OBS=MAX;

 /* MERGE PHUS ONTO MBRLOAD1 DATA AND OUTPUT MBRADDUP FILE AND LINKED
    FILE TO MERGE ONTO 814 DATA */

DATA OUT1.MBRPHUS (DROP=BOAN)
     OUT2.PHUSSSN (KEEP=SSN BIC PAYD: DIRPAY: MEDPREM:);
 MERGE IN1.MBR (IN=M)
      IN2.PHUS (IN=P);
  BY CAN BIC;

  LENGTH HASPHUS $1;
  HASPHUS = 'N';
  IF P THEN HASPHUS = 'Y';

  IF M THEN DO;
    OUTPUT OUT1.MBRPHUS;
    IF SSN NE ' ' THEN OUTPUT OUT2.PHUSSSN;
  END;
RUN;

PROC FREQ DATA=OUT1.MBRPHUS; TABLES HASPHUS; TITLE'MERGED PHUS & MBR';
RUN;
PROC PRINT DATA=OUT1.MBRPHUS  (OBS=20);RUN;
PROC PRINT DATA=OUT2.PHUSSSN  (OBS=20);RUN;

 /*DIVIDE TEMP.PHUS IN ORDER TO SUCCEED IN SORTING IT */
%MACRO SORTDAT(BEGIN = ,END = ,RUN = );
PROC SORT DATA = OUT2.PHUSSSN(FIRSTOBS = &BEGIN. OBS=&END.)
         OUT = TEMP&RUN..PHUS;
   BY SSN BIC;
RUN;
%MEND SORTDAT;
%SORTDAT(BEGIN = 1 ,       END = 12000000 ,RUN = 1);
%SORTDAT(BEGIN = 12000001 ,END = 24000000 ,RUN = 2);
%SORTDAT(BEGIN = 24000001 ,END = 36000000 ,RUN = 3);
```

Appendix A.41
JCL/SAS Code: MRGPHUS

```
%SORTDAT(BEGIN = 36000001 ,END = MAX ,     RUN = 4);

DATA TEMP5.PHUS;
  SET TEMP1.PHUS
      TEMP2.PHUS
      TEMP3.PHUS
      TEMP4.PHUS;
BY SSN BIC;
RUN;

PROC SORT DATA=LNK.LINKDI(DROP=CAN) OUT=LINKDI NODUPKEY;
BY SSN BIC;
RUN;

DATA OUT3.LINKPHUS;
 MERGE TEMP5.PHUS(IN=P)
      LINKDI (IN=L);
 BY SSN BIC;
 IF L AND P;
RUN;

PROC PRINT DATA=OUT3.LINKPHUS (OBS=20);TITLE 'FINAL LINKED PHUS';
RUN;
//**************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<MSHEN@MATHEMATICA-MPR.COM>
RCPT TO:<MSHEN@MATHEMATICA-MPR.COM>
DATA
FROM:   <MSHEN@MATHEMATICA-MPR.COM>
TO:     <MSHEN@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 MRGPHUS IS COMPLETE
```

Appendix A.42
JCL/SAS Code: DUALPHUS

```
//#4941PHU  JOB (12510000,T715,,SAS,,ITC9FL),MIAOMIAO-SHEN,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#4941
//*****************************************************************
//* PROJECT:  DAF18 50214
//* DIRECTOR: CASSANDRA PICKENS JEWELL
//* PROGRAM:  OPDR.TG.PRD.ETTW.#4941.DAF18.MBR.PRDLIB(DUALPHUS)
//* DESCRIPTION:
//*     1.  OUTPUT SINGLE RECORDS IN SEPARATE FILE
//*     2.  PROCESS DUAL RECORDS AND OUTPUT SUMMED DUALS FILE
//* CONTACT  MIAOMIAO SHEN 7/30/2019 FOR DAF18
//* E-MAIL:  MSHEN@MATHEMATICA-MPR.COM
//*         MIAOMIAO.SHEN@SSA.GOV
//*****************************************************************
//*
//JS030   EXEC SAS9,
//       WORK='120000,60000'             * SPACE IN BLKS *
//*
//LNK  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.PHUSLINK.SA.V1,DISP=SHR
//TEMP DD DSN=&&TEMP,
//       DISP=(NEW,DELETE,DELETE),
//       SPACE=(CYL,(3000,3000),RLSE),VOL=(,,,10)
//OUT1 DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.PHUSSING.SA.V1,
//       DISP=(NEW,CATLG,DELETE),
//       UNIT=TSILO
//OUT2 DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.PHUSDUAL.SA.V1,
//       DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//       SPACE=(CYL,(3000,3000),RLSE)
//*
//SYSIN   DD *
OPTIONS NOCENTER COMPRESS=YES OBS=MAX;

%LET BEGYR=1994;
%LET ENDYR=2018;

%MACRO START;

%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

DATA OUT1.LINKPHUS
    TEMP.PHUSDUAL;
 SET LNK.LINKPHUS;
  BY SSN;
  IF FIRST.SSN AND LAST.SSN THEN OUTPUT OUT1.LINKPHUS;
    ELSE OUTPUT TEMP.PHUSDUAL;
```

Appendix A.42
JCL/SAS Code: DUALPHUS

```
RUN;

PROC PRINT DATA=TEMP.PHUSDUAL (OBS=100);
 TITLE 'PHUSDUAL BEFORE PROCESSING';
RUN;

DATA OUT2.PHUSDUAL;
  SET TEMP.PHUSDUAL
    (RENAME=(
    %DO MM=1 %TO &TOTMOS.;
        PAYD&&YY&MM=TPAYD&&YY&MM
        MEDPREM&&YY&MM=TMEDPREM&&YY&MM
        DIRPAY&&YY&MM=TDIRPAY&&YY&MM
    %END;))
     ;
    BY SSN;

  /* INPUT ARRAYS - RENAMED VARS */
 ARRAY TPAYD(*) %DO MM=1 %TO &TOTMOS.; TPAYD&&YY&MM %END;;
 ARRAY TMEDPREM(*) %DO MM=1 %TO &TOTMOS.; TMEDPREM&&YY&MM %END;;
 ARRAY TDIRPAY(*) %DO MM=1 %TO &TOTMOS.; TDIRPAY&&YY&MM %END;;

  /* OUTPUT ARRAYS - SUMMED PAYMENTS - ORIGINAL NAME */
 ARRAY PAYD(*) %DO MM=1 %TO &TOTMOS.; PAYD&&YY&MM %END;;
 ARRAY MEDPREM(*) %DO MM=1 %TO &TOTMOS.; MEDPREM&&YY&MM %END;;
 ARRAY DIRPAY(*) %DO MM=1 %TO &TOTMOS.; DIRPAY&&YY&MM %END;;

 RETAIN  %DO MM=1 %TO &TOTMOS.;
          PAYD&&YY&MM
          MEDPREM&&YY&MM
          DIRPAY&&YY&MM
        %END;;

 DO MM = 1 TO DIM(PAYD);
   /* INITIALIZE */
  IF FIRST.SSN THEN DO;
     PAYD(MM) = 0;
     MEDPREM(MM) = 0;
     DIRPAY(MM) = 0;
  END;
  /* SUM THE AMOUNTS ON SUBSEQUENT RECORDS */
  PAYD(MM)=SUM(PAYD(MM),TPAYD(MM));
  MEDPREM(MM)=SUM(MEDPREM(MM),TMEDPREM(MM));
  DIRPAY(MM)=SUM(DIRPAY(MM),TDIRPAY(MM));
END;
```

Appendix A.42
JCL/SAS Code: DUALPHUS

```
DROP TPAYD: TMEDPREM: TDIRPAY: MM;
IF LAST.SSN;

RUN;

PROC PRINT DATA=OUT2.PHUSDUAL (OBS=20);
TITLE 'PHUSDUAL AFTER PROCESSING';
RUN;

PROC PRINT DATA=OUT1.LINKPHUS (OBS=20);
TITLE 'PHUSSING AFTER PROCESSING';
RUN;
%MEND;
%START;
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<MSHEN@MATHEMATICA-MPR.COM>
RCPT TO:<MSHEN@MATHEMATICA-MPR.COM>
DATA
FROM:   <MSHEN@MATHEMATICA-MPR.COM>
TO:     <MSHEN@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 DUALPHUS IS COMPLETE
```

Appendix A.43
JCL/SAS Code: MBRADDUP

```
//#4941MAD  JOB (11710000,T715,,SAS,,ITC9FL),MIAOMIAO-SHEN,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#4941
//*****************************************************************
//* PROJECT:     50214 DAF
//* DIRECTOR:    LAURA KOSA
//* PROGRAM:     OPDR.TG.PRD.ETTW.#4941.DAF18.MBR.PRDLIB(MBRADDUP)
//* DESCRIPTION: MBR RECORDS WERE MERGED WITH PHUS RECORDS TO
//*            CREATE MBRPHUS.
//*            ON MBRPHUS RECORDS -  ADD UP NUMBER OF DEPENDENTS
//*            ADD UP BENEFIT AMOUNTS FOR TOTAL DEPENDENT AMOUNT
//*            ADD UP TOTAL PAYMENT AMOUNTS FOR DEPENDENTS (PHUS)
//*            FILE SORTED BY CAN BIC FOR LINKING TO MBR
//*            ORIGINAL RECORDS
//* PROGRAMMER:  MIAOMIAO SHEN 7/30/2019 FOR DAF18
//* EMAIL:       MSHEN@MATHEMATICA-MPR.COM
//*            MIAOMIAO.SHEN@SSA.GOV
//*****************************************************************
//*
// SET REG='128M'
//JS010   EXEC SAS9,
//       WORK='200000,100000',            * SPACE IN BLKS *
//       REGION=&REG,
//       PARM='MEMSIZE=&REG'
//*
//IN1   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.MBRPHUS.SA.V1,DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.SUMREC.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        SPACE=(CYL,(1000,100),RLSE),VOL=(,,,5)
//TEMP1 DD DSN=&&TEMP,
//        DISP=(NEW,DELETE,DELETE),
//        UNIT=TSILO,(VOL=,,,5)
//TEMP2 DD DSN=&&TEMP,
//        DISP=(NEW,DELETE,DELETE),
//        UNIT=TSILO,(VOL=,,,5)
//SYSIN DD *

OPTIONS NOCENTER LS=132 PS=60 COMPRESS=BINARY OBS = MAX;
%LET BEGYR=1994;
%LET ENDYR=2018;  /* CHANGE END YEAR AS NEEDED  */

%MACRO START;

%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";
```

Appendix A.43
JCL/SAS Code: MBRADDUP

```
DATA TEMP1.MBR (KEEP=CAN
            %DO MM=1 %TO &TOTMOS.;DUEO&&YY&MM
                        PAYO&&YY&MM
                        DPEN&&YY&MM %END;)
   TEMP2.IDENT (KEEP=CAN SSN BIC);
 /* THE FILE IS SORTED WITH THE PRIMARY (BIC=A) FIRST */
 /* SUBSEQUENT RECORDS FOR A GIVEN CAN ARE DEPENDENTS */
 /* OUTPUT FILE WILL HOLD DEPENDENT COUNTS AND AMOUNTS*/
 /* THESE WILL BE ATTACHED TO THE PRIMARIES IN DAF    */
 /* IF  FIRST BICS ARE NOT =  'A' THEY ARE DACS OR WIDOWS
   AND WILL NOT BE PROCESSED IN THE ADDUP PROCEDURE */

 SET IN1.MBRPHUS; BY CAN BIC;

  RETAIN  %DO MM=1 %TO &TOTMOS.;
         DUEO&&YY&MM DPEN&&YY&MM PAYO&&YY&MM %END;;

  ARRAY DUEO (*) %DO MM=1 %TO &TOTMOS.; DUEO&&YY&MM %END;;
  ARRAY PAYO (*) %DO MM=1 %TO &TOTMOS.; PAYO&&YY&MM %END;;
  ARRAY DPEN (*) %DO MM=1 %TO &TOTMOS.; DPEN&&YY&MM %END;;
  ARRAY BPD  (*) %DO MM=1 %TO &TOTMOS.; BPD&&YY&MM  %END;;
  ARRAY MBC  (*) %DO MM=1 %TO &TOTMOS.; MBC&&YY&MM  %END;;
  ARRAY PAYD (*) %DO MM=1 %TO &TOTMOS.; PAYD&&YY&MM %END;;


 IF FIRST.CAN THEN DO;

  DO MM = 1 TO DIM(DUEO);

   /* INITIALIZE THE FIELDS ON THE PRIMARY RECORD */

   DUEO(MM) = 0; /* SUMMED BENEFIT AMOUNT */
   PAYO(MM) = 0; /* SUMMED PAYED AMOUNT */
   DPEN(MM) = 0; /* SUMMED NUMBER OF DEPENDENTS */
  END;

 /* IF THE FIRST RECORD IS THE ONLY RECORD THE DEPENDENT VARS
    WILL = 0 */

 /* THE TEMP2.IDENT FILE WILL HAVE RECORDS ONLY FOR PRIMARIES
    IF THE FIRST BIC IS NOT A PRIMARY - AN ODD OCCURRENCE- THE
    RECORD IS NOT OUTPUT */

  IF SUBSTR(BIC,1,1) EQ 'A' THEN OUTPUT TEMP2.IDENT;
```

Appendix A.43
JCL/SAS Code: MBRADDUP

```
  END;

  ELSE DO; /* ADD UP THE BENEFITS FOR THE AUXILIARIES */

   DO MM = 1 TO DIM(DUEO);
    IF BPD(MM) = '1' THEN DO; /* BENEFIT PAID INDICATOR */
     DUEO(MM) = SUM(DUEO(MM),MBC(MM));
     DPEN(MM) = SUM(DPEN(MM),1);
     PAYO(MM) = SUM(PAYO(MM),PAYD(MM));
    END;
   END;
  END;
  IF LAST.CAN THEN OUTPUT TEMP1.MBR;
RUN;

DATA OUT.MBR;
 MERGE TEMP1.MBR TEMP2.IDENT (IN=I);
  BY CAN;
  /* ONLY PRIMARY RECORDS OUTPUT IN STEP 1 ARE KEPT AND MERGED WITH
     DEPENDENT AMOUNTS */
  IF I;
   NOSSN = 0;
   IF SSN = ' ' THEN NOSSN = 1;
RUN;

PROC FREQ DATA=OUT.MBR; TABLES NOSSN ; RUN;

%MEND;

%START;
//**************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<MSHEN@MATHEMATICA-MPR.COM>
RCPT TO:<MSHEN@MATHEMATICA-MPR.COM>
DATA
FROM:   <MSHEN@MATHEMATICA-MPR.COM>
TO:     <MSHEN@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 MBRADDUP IS COMPLETE
```

Appendix A.44
JCL/SAS Code: MBRLOADB

```
//#4941LDB  JOB (11710000,T715,,SAS,,ITC9FL),MIAOMIAO-SHEN,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#4941
//*****************************************************************
//* PROJECT:    50214 DAF
//* DIRECTOR:   LAURA KOSA
//* PROGRAM:    OPDR.TG.PRD.ETTW.#4941.DAF17.MBR.PRDLIB(MBRLOADB)
//* DESCRIPTION: SAS LOAD 5 SECTIONS OF MBR DATA
//*           ALL MBR FIELDS LOADED
//* DATE:       XIAO BARRY
//* UPDATE:     MIAOMIAO SHEN 4/27/2017
//* EMAIL:      MSHEN@MATHEMATICA-MPR.COM
//*           MIAOMIAO.SHEN@SSA.GOV
//*****************************************************************
//*
//MRGPROC   PROC
//JS010   EXEC SAS9,
//       WORK='200000,100000',          * SPACE IN BLKS *
//       PARM='SYSPARM="&SEG"'
//*
//IN1   DD DSN=OPDR.TG.PRD.ETTW.DAF18.MBROUT.F&SEG..R190606,DISP=SHR
//IN2   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.LINKDI.SA.V1,DISP=SHR
//TEMP  DD DSN=&&TEMP,
//       DISP=(NEW,DELETE,DELETE),
//       UNIT=TSILO,VOL=(,,,10)
//TEMP1 DD DSN=&&TEMP,
//       DISP=(NEW,DELETE,DELETE),
//       UNIT=TSILO,VOL=(,,,10)
//TEMP2 DD DSN=&&TEMP,
//       DISP=(NEW,DELETE,DELETE),
//       UNIT=TSILO,VOL=(,,,10)
//TEMP3 DD DSN=&&TEMP,
//       DISP=(NEW,DELETE,DELETE),
//       UNIT=TSILO,VOL=(,,,10)
//TEMP4 DD DSN=&&TEMP,
//       DISP=(NEW,DELETE,DELETE),
//       UNIT=TSILO,VOL=(,,,10)
//TEMP5 DD DSN=&&TEMP,
//       DISP=(NEW,DELETE,DELETE),
//       UNIT=TSILO,VOL=(,,,10)
//OUT   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.MBR&SEG..SA.V1,
//       DISP=(NEW,CATLG,DELETE),
//       UNIT=TSILO,VOL=(,,,10)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.MBR.PRDLIB(MBRREAD),
//       DISP=(SHR,PASS,KEEP)
```

Appendix A.44
JCL/SAS Code: MBRLOADB

```
//      PEND
//*
//RUN1    EXEC MRGPROC,SEG=1
//*RUN2    EXEC MRGPROC,SEG=2
//*RUN3    EXEC MRGPROC,SEG=3
//*RUN4    EXEC MRGPROC,SEG=4
//*RUN5    EXEC MRGPROC,SEG=5
//**************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//**************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<MSHEN@MATHEMATICA-MPR.COM>
RCPT TO:<MSHEN@MATHEMATICA-MPR.COM>
DATA
FROM:   <MSHEN@MATHEMATICA-MPR.COM>
TO:     <MSHEN@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 MBRLOADB SEGMENT 1 IS COMPLETE
```

Appendix A.45
JCL/SAS Code: MBRREAD

```
/*********************************************************
* FILENAME:   MBRREAD.SAS
* PROGRAMMER: MIRIAM LOEWENBERG
* PURPOSE:    TO READ IN THE MBR DATA
* EDITED:     06/08/16 BY XIAO BARRY
* THE INPUT FILE IS IN 5 SECTIONS
* THERE ARE DUAL ELIGIBLES AMONG THE RECORDS AND THERE WILL
* BE DUPLICATE SSN/BIC COMBINATIONS - THESE WILL BE PROCESSED
* SEPARATELY AS OUTPUT FROM PROGRAM LOAD2COM
* UPDATE:     MIAOMIAO SHEN 7/15/2019
*********************************************************/
OPTIONS NOCENTER COMPRESS=BINARY OBS=MAX;
%LET BEGYR=1994;
%LET ENDYR=2018;  /* CHANGE END YEAR AS NEEDED  */

%MACRO START;

%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";
DATA TEMP.MBR;
INFILE IN1 TRUNCOVER;
INPUT
  @001  CAN        $9.
  @010  TAC        $1. /* TYPE OF AWARD CODE */
  @011  RP         $1. /* RACE OF PRIMARY */
  @012  LSPA       5.2 /*LUMP SUM PAYMENT AMOUNT */
  @019  PNOB       $2. /* NUMBER OF BENES IN PAYMENT */
  @029  DOC_SSDI_MR $3. /* DISTRICT OFFICE CODE */
  @032  STATE      $2.
  @034  COUNTY     $3.
  @042  LSSC_DSALLW $1. /* LUMP SUM STATUS CODE -DISALLOWED */
  @043  LSSC_FUNR   $1. /* LUMP SUM STAT CODE -FUNERAL HOME */
  @044  LSSC_BURL   $1. /* LUMP SUM STAT CODE -BURIAL EXP */
  @045  LSSC_LVSPS  $1. /* LUMP SUM STAT CODE -LIVING W/SPOUSE*/
  @046  LSSC_AUTPMT $1. /* LUMP SUM STAT CODE -AUTHORIZED PYMT*/
  @047  LSSC_WID    $1. /* LUMP SUM STAT CODE -ENTITLED WIDOW*/
  @048  LSSC_CHLD   $1. /* LUMP SUM STAT CODE -ENTITLED CHILD*/
  @049  LSFDX      $6. /* LUMP SUM FILING DATE */
  @055  LSAP       5.2 /* LUMP SUM AWARD AMOUNT */
  @060  LSDC       $1. /* LUMP SUM DISALLOWANCE CODE */
  @061  BIC        $2. /* BENE IDENTIFICATION CODE */
  @063  LAF        $2. /* LEDGER ACCOUNT FILE */
  @065  DOBMBR     ??MMDDYY8. /* DATE OF BIRTH */
  @073  BGN        $15./* BENE GIVEN NAME */
  @088  BLN        $20./* BENE LAST NAME */
```

Appendix A.45
JCL/SAS Code: MBRREAD

```
@108  DOEIX      $6. /* EARLIEST MONTH ENTITLED TO BENEFITS */
@114  DOECX      $6. /* DATE OF CURRENT ENTITLEMENT */
@120  CEC        $1. /* CURRENT ENTITLEMENT CODE */
@129  DOSTX      $6. /* DATE OF SUSPENSION/TERMINATION */
@135  MBRSEX     $1. /* GENDER */
@136  RELATC     $1. /* RELATIONSHIP CODE */
@137  MBP        5.1 /* MONTHLY BENEFIT PAID */
@142  LANG       $1. /* WRITTEN LANGUAGE */
@143  TOC_NUM     2.  /* NUMBER OF TOC OCCURRENCES */
  @;
POS=145;
%DO I=1 %TO 20;
  INPUT
  @POS TOC&I $1. /* TYPE OF CLAIM */
  @;
  POS=POS+1;
%END;
POS=165;
%DO I=1 %TO 20;
  INPUT
  @POS TOC_STARX&I $6. /* TOC START DATE */
  @;
  POS=POS+6;
%END;
INPUT @285  RDD  $3. /* REASON FOR DISALLOWANCE/DENIAL */
@288  TOP       $1. /* TYPE OF PAYEE */
@289  CC        $1. /* TYPE OF PAYEE */
@290  GS        $1. /* GUARDIAN STATUS */
@291  RZIP      $5. /* RESIDENCE ZIP CODE */
@296  SIFT      $1. /* SECURITY INCOME FILE TYPE */
@297  SIEDX     $6. /* SSI TERMINATION DATE */
@303  SLAC      $1. /* SSI LIVING ARRANG CODE */
@304  SISC      $1. /* SSI INCOME STATUS CODE */
@305  BOAN      $9. /* BENE OWN ACCOUNT NUMBER */
@314  DODMBR    ??MMDDYY8. /* DATE OF DEATH */
@322  NDOF       2.  /* NUM OCCURRENCES DATE IF FILING */
  @;
POS=324;
%DO I=1 %TO 25;
  INPUT
  @POS BDOF&I    ??MMDDYY8. /* BENEFICIARY DATE OF FILING */
  @;
  POS=POS+8;
%END;
```

Appendix A.45
JCL/SAS Code: MBRREAD

```
POS=524;
%DO I=1 %TO 25;
  INPUT
  @POS BDOE_STARTX&I $6. /* BDOE START DATE */
  @;
  POS=POS+6;
%END;

POS=674;
%DO I=1 %TO 25;
  INPUT
  @POS BDOE_TERMX&I $6. /* BDOE TERM DATE */
  @;
  POS=POS+6;
%END;

POS=824;
%DO I=1 %TO 25;
  INPUT
  @POS HBIC&I $2./* HISTORIC BIC   */
  @;
  POS=POS+2;
%END;

POS=874;
%DO I=1 %TO 25;
  INPUT
  @POS HCEC&I $1./* HISTORIC CEC   */
  @;
  POS=POS+1;
%END;

INPUT @899  NHI  2. /* NUMBER OF HI OCCURENCE */
@;
POS=901;
%DO I=1 %TO 10;
INPUT
@POS HI_STARTX&I $6. /* HI START DATE */
@;
POS=POS+6;
%END;

POS=961;
%DO I=1 %TO 10;
INPUT
```

Appendix A.45
JCL/SAS Code: MBRREAD

```
@POS HI_TERMX&I $6. /* DATE OF HI TERMINATION */
@;
POS=POS+6;
%END;

INPUT @1021 NSMI  2. /* NUMBER OF SMI OCCURENCES */
@;

POS=1023;
%DO I=1 %TO 20;
INPUT
@POS SMI_STAX&I  $6. /* SMI ENROLLMENT START DATE */
@;
POS=POS+6;
%END;

POS=1143;
%DO I=1 %TO 20;
INPUT
@POS SMI_TERX&I  $6.  /* DATE OF SMI TERMINATION */
@;
POS=POS+6;
%END;

INPUT @1263  NPIA  3.
@;

IF SUBSTR(BIC,1,1) IN ('A') THEN SSN=CAN;
ELSE SSN=BOAN;

POS=1266;
%DO I=1 %TO 150;
  INPUT
  @POS PIEDX&I   $6. /* PIA EFFECTIVE DATE */
  @;
  POS=POS+6;
%END;

POS=2166;
%DO I=1 %TO 150;
  INPUT
  @POS PIA&I    5.1 /* PIA AMOUNT */
  @;
  POS=POS+5;
%END;
```

Appendix A.45
JCL/SAS Code: MBRREAD

```
POS=2916;
%DO I=1 %TO 150;
  INPUT
  @POS IME&I    4. /* AVERAGE INDEXED MONTHLY EARNINGS */
  @;
  POS=POS+4;
%END;

POS=3516;
%DO I=1 %TO 150;
 INPUT
 @POS PIARFC&I  $1. /* REASON FOR CHANGE IN PIA */
 @;
 POS=POS+1;
%END;

INPUT @5016 DLMX $6. /* DATE LAST INSURED FOR DISABILITY */
    @5022 NODF 2.
 @;
POS=5024;
%DO I=1 %TO 12;
  INPUT
  @POS    DDO&I   MMDDYY8. /* DATE OF DISABILITY ONSET */
  @;
  POS=POS+8;
%END;

POS=5120;
%DO I=1 %TO 12;
  INPUT
  @POS    DAC&I   $1. /* DISABILITY AWARD CODE */
  @;
  POS=POS+1;
%END;

POS=5132;
%DO I=1 %TO 12;
  INPUT
  @POS    LOD&I   $1. /* LEVEL OF DENIAL CODE */
  @;
  POS=POS+1;
%END;

POS=5144;
```

Appendix A.45
JCL/SAS Code: MBRREAD

```
%DO I=1 %TO 12;
  INPUT
  @POS    DOEDX&I   $6. /* DATE OF ENTITLEMENT TO DIB */
  @;
  POS=POS+6;
%END;

POS=5216;
%DO I=1 %TO 12;
  INPUT
  @POS   T2_DOEDX&I   $6. /* T2 DATE OF ENTITLEMENT TO DIB */
  @;
  POS=POS+6;
%END;

POS=5288;
%DO I=1 %TO 12;
  INPUT
  @POS    DDBCX&I   $6. /* DATE OF DISAB BENEFIT CESSATION */
  @;
  POS=POS+6;
%END;

POS=5360;
%DO I=1 %TO 12;
  INPUT
  @POS    DSDX&I   $6. /* DISAB ADJUDICATION DATE */
  @;
  POS=POS+6;
%END;

POS=5432;
%DO I=1 %TO 12;
  INPUT
  @POS    HDDX&I   $6. /* HEARING DECISION DATE */
  @;
  POS=POS+6;
%END;

POS=5504;
%DO I=1 %TO 12;
  INPUT
  @POS    SDSX&I   $6. /* SGA DISAB CESSATION */
  @;
  POS=POS+6;
```

Appendix A.45
JCL/SAS Code: MBRREAD

```
%END;

POS=5576;
%DO I=1 %TO 12;
  INPUT
  @POS    ADCX&I   $6. /* APPLICANTS DISAB CESSATION */
  @;
  POS=POS+6;
%END;

POS=5648;
%DO I=1 %TO 12;
  INPUT
  @POS    APSX&I   $6. /* APPEALS */
  @;
  POS=POS+6;
%END;

POS=5720;
%DO I=1 %TO 12;
  INPUT
  @POS    EBDX&I   $6. /* EPE BEGIN DATE */
  @;
  POS=POS+6;
%END;


POS=5792;
%DO I=1 %TO 12;
  INPUT
  @POS    BDC&I   $2. /* BASIS FOR DENIAL CODE */
  @;
  POS=POS+2;
%END;

POS=5816;
%DO I=1 %TO 12;
  INPUT
  @POS    CDR&I   $1. /* CESSATION DISAB REASON */
  @;
  POS=POS+1;
%END;

POS=5828;
%DO I=1 %TO 12;
```

Appendix A.45
JCL/SAS Code: MBRREAD

```
  INPUT
  @POS    CSA&I   $1. /* CURRENT SGA */
  @;
  POS=POS+1;
%END;

POS=5864;
%DO I=1 %TO 12;
  INPUT
  @POS    TDXPRI_MBR&I   $10. /* PRIMARY DIAGNOSIS */
  @;
  POS=POS+10;
%END;

POS=5984;
%DO I=1 %TO 12;
  INPUT
  @POS   TDXSEC_MBR&I   $10. /* SECONDARY DIAGNOSIS */
  @;
  POS=POS+10;
%END;

POS=6104;
%DO MM=1 %TO &TOTMOS.;
  INPUT
  @POS MBA&&YY&MM    5.1 /* MONTHLY BENEFIT AMOUNT  */
  @;
  POS=POS+5;
%END;

POS=7604;
%DO MM=1 %TO &TOTMOS.;
  INPUT
  @POS DUED&&YY&MM    5.1 /* MONTHLY BENEFIT CREDITED  */
  @;
  POS=POS+5;
%END;

POS=9104;
%DO MM=1 %TO &TOTMOS.;
  INPUT
  @POS MBP&&YY&MM    5.1 /* MONTHLY BENEFIT PAID  */
  @;
  POS=POS+5;
%END;
```

Appendix A.45
JCL/SAS Code: MBRREAD

```
POS=10604;
%DO MM=1 %TO &TOTMOS.;
  INPUT
  @POS HSA&&YY&MM    4.1 /* HISTORICAL SMI AMOUNT */
  @;
  POS=POS+4;
%END;

POS=11804;
%DO MM=1 %TO &TOTMOS.;
  INPUT
  @POS BPD&&YY&MM    $1. /* BENEFIT PAID DESIGNATION */
  @;
  POS=POS+1;
%END;

POS=12104;
%DO MM=1 %TO &TOTMOS.;
  INPUT
  @POS RFD&&YY&MM    $1. /* REASON FOR DEDUCTION */
  @;
  POS=POS+1;
%END;

POS=12404;
%DO MM=1 %TO &TOTMOS.;
  INPUT
  @POS WIC&&YY&MM    $1. /* WORK INDICATION CODE */
  @;
  POS=POS+1;
%END;

POS=12704;
%DO MM=1 %TO &TOTMOS.;
  INPUT
  @POS RFST&&YY&MM    $6. /* REASON FOR SUSPENSION */
  @;
  POS=POS+6;
%END;

POS=14504;
%DO MM=1 %TO &TOTMOS.;
  INPUT
  @POS LAF&&YY&MM    $2. /* MONTHLY LAF STATUS  */
```

Appendix A.45
JCL/SAS Code: MBRREAD

```
  @;
  POS=POS+2;
%END;

INPUT @15104  NHDEMO  2. /* NUMBER OF DEMONSTR. PROJECT OCCURENCE */
 @;

POS=15106;
%DO I=1 %TO 10;
  INPUT
  @POS   DPI&I   $2. /* DEMONSTRATION PROJECT INDICATOR */
  @;
  POS=POS+2;
%END;

POS=15126;
 %DO I=1 %TO 10;
 INPUT
 @POS DPI_STARX&I $6. /* DPI START DATE */
 @;
 POS=POS+6;
%END;

POS=15186;
 %DO I=1 %TO 10;
 INPUT
 @POS DPI_STOPX&I $6. /* DPI STOP DATE */
 @;
 POS=POS+6;
%END;

INPUT
 @15246  NINSD  2. /* NUMBER OF INSURED STATUS DATA OCCURENCES*/
 @;
 POS=15248;
 %DO I=1 %TO 15;
 INPUT
 @POS   DIBREQ&I   $2. /* DIB QUARTERS OF COVERAGE REQUIRED */
 @;
 POS=POS+2;
 %END;

 POS=15278;
 %DO I=1 %TO 15;
 INPUT
```

Appendix A.45
JCL/SAS Code: MBRREAD

```
  @POS   DIBHAS&I   $2. /* DIB QUARTERS OF COVERAGE POSSESSED */
  @;
  POS=POS+2;
  %END;
   ;
/* CHANGE THE MBR14   DATES FROM CHARACTER TO NUMERIC */

ARRAY OLD LSFDX DOEDX1-DOEDX12 SIEDX
     DDBCX1-DDBCX12 DSDX1-DSDX12 HDDX1-HDDX12 SDSX1-SDSX12
     ADCX1-ADCX12 APSX1-APSX12 EBDX1-EBDX12
     DOEIX DOECX
     DOSTX PIEDX1-PIEDX150
     HI_STARTX1-HI_STARTX10 HI_TERMX1-HI_TERMX10
     SMI_STAX1-SMI_STAX20 SMI_TERX1-SMI_TERX20
     TOC_STARX1-TOC_STARX20  DLMX T2_DOEDX1-T2_DOEDX12
     DPI_STARX1-DPI_STARX10 DPI_STOPX1-DPI_STOPX10
     BDOE_STARTX1-BDOE_STARTX25 BDOE_TERMX1-BDOE_TERMX25;

ARRAY NEW LSFD ENTDAT1-ENTDAT12 SIED
     DDBC1-DDBC12 DSD1-DSD12 HDD1-HDD12 SDS1-SDS12
     ADC1-ADC12 APS1-APS12 EBD1-EBD12
     DOEI DOEC
     DOST PIED1-PIED150
     HI_START1-HI_START10 HI_TERM1-HI_TERM10
     SMI_START1-SMI_START20 SMI_TERM1-SMI_TERM20
     TOC_START1-TOC_START20  DLM T2_DOED1-T2_DOED12
     DPI_START1-DPI_START10 DPI_STOP1-DPI_STOP10
     BDOE_START1-BDOE_START25 BDOE_TERM1-BDOE_TERM25;

DO I=1 TO DIM(OLD);
   NEW(I)=INPUT('01'||OLD(I),??DDMMYY8.);
END;

    /*CHANGE DIAGNOSIS LENGTH TO 4*/

ARRAY DIAGOLD (*) $ TDXPRI_MBR1-TDXPRI_MBR12 TDXSEC_MBR1-TDXSEC_MBR12;
ARRAY DIAGNEW (*) $4 DXPRI_MBR1-DXPRI_MBR12 DXSEC_MBR1-DXSEC_MBR12;

 DO I=1 TO DIM(DIAGOLD);
 DIAGNEW(I) =SUBSTRN(LEFT(TRIM(COMPRESS(DIAGOLD(I)))),1,4);
 END;

DROP LSFDX DOEDX1-DOEDX12 SIEDX
    DOEIX DOECX I POS
    DDBCX1-DDBCX12 DSDX1-DSDX12 HDDX1-HDDX12 SDSX1-SDSX12
```

Appendix A.45
JCL/SAS Code: MBRREAD

```
      HI_STARTX1-HI_STARTX10 HI_TERMX1-HI_TERMX10
      SMI_STAX1-SMI_STAX20 SMI_TERX1-SMI_TERX20
      ADCX1-ADCX12 APSX1-APSX12 EBDX1-EBDX12
      DOSTX PIEDX1-PIEDX150
      TOC_STARX1-TOC_STARX20  DLMX T2_DOEDX1-T2_DOEDX12
      DPI_STARX1-DPI_STARX10 DPI_STOPX1-DPI_STOPX10
      TDXPRI_MBR1-TDXPRI_MBR12 TDXSEC_MBR1-TDXSEC_MBR12
      BDOE_STARTX1-BDOE_STARTX25 BDOE_TERMX1-BDOE_TERMX25;
RUN;

%MACRO SORTD(BEGIN=,END=,RUN=);
PROC SORT DATA=TEMP.MBR(FIRSTOBS=&BEGIN. OBS=&END.)
OUT=TEMP&RUN..MBR;
BY SSN BIC;
RUN;
%MEND SORTD;
%SORTD(BEGIN=1,END=2300000,RUN=1);
 %SORTD(BEGIN=2300001,END=4600000,RUN=2);
  %SORTD(BEGIN=4600001,END=MAX,RUN=3);

DATA TEMP4.MBR;
   SET TEMP1.MBR
      TEMP2.MBR
      TEMP3.MBR;
BY SSN BIC;
RUN;

 /* SSN STAFF INDICATED THAT 2% OF RECORDS MAY HAVE THE WRONG
    BOANS */

PROC SORT DATA=IN2.LINKDI NODUPKEY
OUT=TEMP5.LINKDI;
BY SSN BIC;
RUN;

DATA OUT.MBR;
 MERGE TEMP4.MBR (IN=M) TEMP5.LINKDI (KEEP=SSN BIC IN=LINK);
  BY SSN BIC;
 IF M AND LINK;
RUN;

PROC CONTENTS DATA=OUT.MBR; RUN;

 /* CHANGE FOR TRF07 - WE ARE GOING TO PROCESS THE DUAL ELIGIBLES
    AFTER THE SEGMENTS HAVE BEEN COMBINED.  THERE WILL BE DUPLICATE
```

Appendix A.45
JCL/SAS Code: MBRREAD

```
   SSN/BIC COMBINATIONS IN EACH SEGMENT. THESE DUPLICATE RECORDS
   WILL BE PROCESSED SEPARATELY AND THE INFORMATION COMBINED INTO
   1 RECORD. */

PROC FREQ DATA=OUT.MBR ;TABLES BIC CEC TOC1 LAF NPIA NHDEMO; RUN;
PROC PRINT DATA=OUT.MBR (OBS=10 );
 FORMAT ENTDAT1-ENTDAT12 LSFD BDOF1-BDOF25 DOBMBR DODMBR DDO1-DDO12
      DDBC1-DDBC12 DSD1-DSD12 HDD1-HDD12 SDS1-SDS12
      ADC1-ADC12 APS1-APS12 EBD1-EBD12
      DOEI DOEC SIED
      DOST PIED1-PIED150 DLM TOC_START1-TOC_START20 T2_DOED1-T2_DOED12
      HI_START1-HI_START10 HI_TERM1-HI_TERM10
      DPI_START1-DPI_START10 DPI_STOP1-DPI_STOP10
      SMI_START1-SMI_START20 SMI_TERM1-SMI_TERM20 YYMMDD10.;
RUN;

%MEND;
%START;
```

Appendix A.46
JCL/SAS Code: LOADBCOM

```
//#4941LD2  JOB (12510000,T715,,SAS,,ITC9FL),MIAOMIAO-SHEN,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#4941
//*****************************************************************
//* PROJECT:     50214 DAF
//* DIRECTOR:    LAURA KOSA
//* PROGRAM:     OPDR.TG.PRD.ETTW.#4941.DAF18.MBR.PRDLIB(LOADBCOM)
//* DESCRIPTION:
//*      1.  COMBINE EACH SEGMENT OF MBR LOAD2 FILE (READMBR)
//*      2.  OUTPUT SINGLE RECORDS IN 1 FILE AND DUAL ELIG IN ANOTHER
//*      2.  SORTED BY SSN-BIC
//*      3.  READ814 SEGMENTS WERE SORTED BY SSN/BIC
//* PROGRAMMER:  MIAOMIAO SHEN 7/24/2019 FOR DAF18
//* EMAIL:       MSHEN@MATHEMATICA-MPR.COM
//*             MIAOMIAO.SHEN@SSA.GOV
//*****************************************************************
//*
//JS030   EXEC SAS9,
//        WORK='120000,60000'              * SPACE IN BLKS *
//*
//IN1   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.MBR1.SA.V1,DISP=SHR
//IN2   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.MBR2.SA.V1,DISP=SHR
//IN3   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.MBR3.SA.V1,DISP=SHR
//IN4   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.MBR4.SA.V1,DISP=SHR
//IN5   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.MBR5.SA.V1,DISP=SHR
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.MBR.SING.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.MBR.DUALS.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//SYSIN DD *

OPTIONS NOCENTER COMPRESS=YES;
DATA OUT1.MBR OUT2.DUALS;
 SET IN1.MBR
    IN2.MBR
    IN3.MBR
    IN4.MBR
    IN5.MBR;
    BY SSN BIC;
  WHERE SSN NE ' ';
  IF FIRST.SSN AND LAST.SSN THEN OUTPUT OUT1.MBR;
  ELSE OUTPUT OUT2.DUALS;
 RUN;
```

Appendix A.46
JCL/SAS Code: LOADBCOM

```
 PROC PRINT DATA=OUT1.MBR (OBS=25); TITLE 'SINGLE RECORDS';RUN;
 PROC PRINT DATA=OUT2.DUALS (OBS=25); TITLE 'DUAL RECORDS'; RUN;
 PROC FREQ DATA=OUT1.MBR; TABLES BIC TOC1; RUN;
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<MSHEN@MATHEMATICA-MPR.COM>
RCPT TO:<MSHEN@MATHEMATICA-MPR.COM>
DATA
FROM:   <MSHEN@MATHEMATICA-MPR.COM>
TO:     <MSHEN@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 LOADBCOM IS COMPLETE
```

Appendix A.47
JCL/SAS Code: PROCDUAL

```
//#4941DUA  JOB (11710000,T715,,SAS,,ITC9FL),MIAOMIAO-SHEN,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#4941
//*         RESTART=JS020.SAS9
//*****************************************************************
//* PROJECT:    50214 DAF
//* DIRECTOR:   CASSANDRA PICKENS JEWELL
//* PROGRAM:    OPDR.TG.PRD.ETTW.#4941.DAF18.MBR.PRDLIB(PROCDUAL)
//* DECRIPTION: PROCESS DUAL ELIGIBLE RECORDS
//*           ALL MBR FIELDS LOADED
//* PROGRAMMER: MIAOMIAO SHEN 7/25/2019 FOR DAF18
//*           MSHEN@MATHEMATICA-MPR.COM
//*           MIAOMIAO.SHEN@SSA.GOV
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='200000,100000'            * SPACE IN BLKS *
//*
//IN     DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.MBR.DUALS.SA.V1,DISP=SHR
//TEMP   DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(5000,5000),RLSE),VOL=(,,,10)
//TEMP1  DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(5000,5000),RLSE),VOL=(,,,10)
//TEMP2  DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(5000,5000),RLSE),VOL=(,,,10)
//TEMP3  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP31 DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(5000,5000),RLSE),VOL=(,,,10)
//TEMP32 DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(5000,5000),RLSE),VOL=(,,,10)
//TEMP33 DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(5000,5000),RLSE),VOL=(,,,10)
//TEMP4  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP5  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP6  DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(5000,5000),RLSE),VOL=(,,,10)
//TEMP7  DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
```

Appendix A.47
JCL/SAS Code: PROCDUAL

```
//        SPACE=(CYL,(5000,5000),RLSE),VOL=(,,,10)
//TEMP8  DD DSN=&&TEMP,
//        DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(5000,5000),RLSE),VOL=(,,,10)
//TEMP9  DD DSN=&&TEMP,
//        DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(5000,5000),RLSE),VOL=(,,,10)
//TEMP10 DD DSN=&&TEMP,
//        DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(5000,5000),RLSE),VOL=(,,,10)
//TEMP11 DD DSN=&&TEMP,
//        DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(5000,5000),RLSE),VOL=(,,,10)
//TEMP12 DD DSN=&&TEMP,
//        DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(5000,5000),RLSE),VOL=(,,,10)
//TEMP13 DD DSN=&&TEMP,
//        DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(5000,5000),RLSE),VOL=(,,,10)
//OUT    DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.PROCDUAL.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//SYSIN   DD *
OPTIONS NOCENTER COMPRESS=BINARY OBS = MAX;
%LET BEGYR=1994;
%LET ENDYR=2018;

%MACRO START;

%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

PROC PRINT DATA=IN.DUALS (OBS=20); TITLE 'BEFORE PROCESSING';
 VAR SSN CAN BIC NODF DOEI DOEC  ENTDAT1-ENTDAT3 PIED1 DUED: BPD:;
RUN;

 /* DELETE CASES WITH NO DISABILITY DATA.
    PUT ASIDE NEWLY CREATED SINGLE RECORDS AFTER DELETIONS
    ADD THESE TO THE FINAL PROCESSED FILE */
DATA TEMP1.FINAL SINGLE ;
  SET IN.DUALS(WHERE = (NODF NE 0));
  BY SSN BIC;
  IF FIRST.SSN AND LAST.SSN THEN OUTPUT SINGLE;
   ELSE OUTPUT TEMP1.FINAL;
RUN;
```

Appendix A.47
JCL/SAS Code: PROCDUAL

```
/* TAKE THE MOST RECENT RECORD (LATEST DOEC) - THE OTHER RECORDS ARE
   CONSIDERED SUPPLEMENTARY.  CERTAIN VARIABLES ARE RETAINED
   FROM THE SUPPLEMENTARY RECORDS AND RENAMED ENDING IN D.
   FOR THE CASES WHERE DOEC IS THE SAME ON BOTH RECORDS USE THE
   MOST RECENT (LATEST) FIRST ENTDATE.
   FOR THE CASES WHERE ENTDATE IS THE SAME ON BOTH RECORDS USE THE
   RECORD WITH LATEST PIED1.
   FOR THE REMAINDER SELECT THE RECORD WITH THE BIC = A.
   FOR THE FEW RECORDS REMAINING SORT BY BIC, PROCESS THE BENEFIT
   AMOUNTS, AND OUTPUT THE LAST RECORD.
      */

DATA TEMP1.FINAL FLAGDATA (KEEP=SSN DOECFLAG ENTFLAG PIEDFLAG BICAFLAG);
 SET TEMP1.FINAL;
  BY SSN BIC;

  /* GET THE FIRST ENTDATE - SOMETIMES THE FIRST IS BLANK AND A
    SUCCESIVE ONE IS POPULATED */
  FIRSTENT = .;
  ARRAY ENT(*) ENTDAT1-ENTDAT12;
   DO I = 1 TO DIM(ENT) UNTIL (ENT(I) GT .Z);
    FIRSTENT = ENT(I);
   END;

  /* CREATE VARIABLE FOR GROUPING BIC CODES AND SORTING LATER */
   BICNDEX = 0;
   IF SUBSTR(BIC,1,1) = 'A' THEN BICNDEX = 1;

  /* RETAIN TEMPORARY VARIABLES FOR COMPARISONS OF 1ST TO LAST RECORD */
  RETAIN CURRELIG  ENT1  PIEDD BICC;

  /* CREATE FLAGS TO SHOW WHEN DATES ARE NOT EQUAL ON ALL RECORDS */
  ARRAY FLGS(*) DOECFLAG ENTFLAG PIEDFLAG BICAFLAG;

  IF FIRST.SSN THEN DO;
   CURRELIG = DOEC;
   ENT1 = FIRSTENT;
   PIEDD = PIED1;
   BICC = SUBSTR(BIC,1,1);
   DO I = 1 TO DIM(FLGS);
    FLGS(I) = 0;
   END;
  END;
  /* CHECK ALL SUCCESSIVE RECORDS - COMPARISON  FIELDS ARE RETAINED */
  ELSE DO;
```

Appendix A.47
JCL/SAS Code: PROCDUAL

```
    IF CURRELIG NE DOEC THEN DOECFLAG = 1;
    ELSE IF ENT1 NE FIRSTENT THEN ENTFLAG = 1;
    ELSE IF PIEDD NE PIED1 THEN PIEDFLAG = 1;
    ELSE IF BICC = 'A' OR SUBSTR(BIC,1,1) = 'A' THEN BICAFLAG = 1;
  END;
   /* OUTPUT THE RECORDS */
  IF LAST.SSN THEN DO;

    OUTPUT FLAGDATA;

   END; /* LAST SSN */

 OUTPUT TEMP1.FINAL;

RUN;

 /* MERGE THE FLAGS BACK ONTO THE DATA */

DATA TEMP3.DIFFELIG DIFFENT DIFFPIED DIFFA SAMEALL;
 MERGE TEMP1.FINAL
 (DROP=DOECFLAG ENTFLAG PIEDFLAG BICAFLAG) FLAGDATA;
 BY SSN;

  /* USE THE LOGICAL SEQUENCE NOTED ABOVE TO OUTPUT SEPARATE DATA SETS*/

 IF DOECFLAG THEN OUTPUT TEMP3.DIFFELIG;
 ELSE IF ENTFLAG THEN OUTPUT DIFFENT;
 ELSE IF PIEDFLAG THEN OUTPUT DIFFPIED;
 ELSE IF BICAFLAG THEN OUTPUT DIFFA;
 ELSE OUTPUT SAMEALL;
RUN;

 /*THIS MACRO SELECTS THE KEPT RECORD FROM EACH OF THE DATA SETS CREATED
    ABOVE, SORTING THE DATA BY THE APPROPRIATE FLAGGED VARIABLE */

%MACRO CHOOSIT (FILE,SORTBY,SFILE,FFILE);
%IF &FILE=TEMP3.DIFFELIG %THEN %DO;
   %MACRO SORTD(BEGIN=,END=,RUN=);
     PROC SORT DATA=TEMP3.DIFFELIG(FIRSTOBS=&BEGIN. OBS=&END.)
            OUT=TEMP3&RUN..DIFFELIG;
     BY SSN &SORTBY;
     RUN;
   %MEND SORTD;
   %SORTD(BEGIN=1,END=300000,RUN=1);
   %SORTD(BEGIN=300001,END=600000,RUN=2);
```

Appendix A.47
JCL/SAS Code: PROCDUAL

```
    %SORTD(BEGIN=600001,END=MAX,RUN=3);

    DATA TEMP4.DIFFELIG;
      SET TEMP31.DIFFELIG
          TEMP32.DIFFELIG
          TEMP33.DIFFELIG;
    BY SSN &SORTBY;
    RUN;
  %END;
   %ELSE %DO;
    PROC SORT DATA=&FILE OUT=&SFILE; BY SSN &SORTBY; RUN;
   %END;


  DATA &FFILE;
  *KEEP THE SAME LENGTH FOR CONSTR. VARIABLES FOR COMBINING DATA SETS;
  LENGTH
  %DO MM=1 %TO &TOTMOS.;
  BPD&&YY&MM
  %END;
  $ 1;
   SET &SFILE
      (RENAME=(
      %DO MM=1 %TO &TOTMOS.;
          BPD&&YY&MM=BPDA&&YY&MM
          DUED&&YY&MM=DUEDA&&YY&MM
          MBA&&YY&MM=MBAA&&YY&MM
          MBP&&YY&MM=MBPA&&YY&MM
       %END;))
       ;
    BY SSN &SORTBY;
   RETAIN DOECT DOEIT;
   IF FIRST.SSN THEN DO;
    DOECT = .;
    DOEIT = .;
    DOECT = DOEC;
    DOEIT = DOEI;
   END;
   ELSE IF NOT LAST.SSN THEN DO;
    DOECT = DOEC;
    DOEIT = DOEI;
   END;
    /* SUM UP THE PAYMENT VARIABLES ON MULTIPLE RECORDS WHERE BENEFIT PAID
       DESIGNATOR (BPD) = 1 */
    /* INPUT VARIABLES */
```

Appendix A.47
JCL/SAS Code: PROCDUAL

```
 ARRAY BPDA(*) $ %DO MM=1 %TO &TOTMOS; BPDA&&YY&MM %END;;
 ARRAY DUEDA(*) %DO MM=1 %TO &TOTMOS; DUEDA&&YY&MM %END;;
 ARRAY MBAA(*) %DO MM=1 %TO &TOTMOS; MBAA&&YY&MM %END;;
 ARRAY MBPA(*) %DO MM=1 %TO &TOTMOS; MBPA&&YY&MM %END;;
  /*TEMPORARY VARIABLES */
 ARRAY MBAT(*) %DO MM=1 %TO &TOTMOS; MBAT&&YY&MM %END;;
 ARRAY DUEDT(*) %DO MM=1 %TO &TOTMOS; DUEDT&&YY&MM %END;;
 ARRAY MBPT(*) %DO MM=1 %TO &TOTMOS; MBPT&&YY&MM %END;;
 ARRAY BPDT(*) $ %DO MM=1 %TO &TOTMOS; BPDT&&YY&MM %END;;
  /*OUTPUT VARIABLES */
 ARRAY BPD(*) $ %DO MM=1 %TO &TOTMOS; BPD&&YY&MM %END;;
 ARRAY MBA(*) %DO MM=1 %TO &TOTMOS; MBA&&YY&MM %END;;
 ARRAY DUED(*) %DO MM=1 %TO &TOTMOS; DUED&&YY&MM %END;;
 ARRAY MBPO(*) %DO MM=1 %TO &TOTMOS; MBP&&YY&MM %END;;

/* PROCESS THE BENEFIT AMOUNTS-DETERMINE WHETHER TO ADD THE AMOUNT
   ON BOTH OF THE DUAL RECORDS */

RETAIN  %DO MM=1 %TO &TOTMOS;
DUEDT&&YY&MM MBAT&&YY&MM MBPT&&YY&MM BPDT&&YY&MM
       %END;;

DO MM = 1 TO &TOTMOS;
 IF FIRST.SSN THEN DO;
   MBAT(MM) = 0;
   DUEDT(MM) = 0;
   MBPT(MM) = 0;
   BPDT(MM) = '0';

 /* THESE TEMPORARY VARS WILL BE COMPUTED ONLY IF BPD = 1 ON EITHER
    OR BOTH RECORDS.
    IF BPD IS NEVER = 1 ON ANY OF THE RECORDS WE
    STILL WANT TO RETAIN THE VALUES ON THE LAST RECORD ACCORDING TO
    THE SORT - AMOUNT VALUES ARE ON THE RECORDS EVEN IF PAYMENTS
    ARE IN SUSPENSION - SEE PROCESSING FOR LAST.SSN */

   IF BPDA(MM) = '1' THEN DO;
    BPDT(MM) = '1';
    MBAT(MM) = MBAA(MM);
    DUEDT(MM) = DUEDA(MM);
    MBPT(MM) = MBPA(MM);
   END;
  END;
  ELSE IF NOT FIRST.SSN THEN DO; /* SUBSEQUENT RECORDS */
   /* THIS WILL SUM WITH WHAT IS ON THE PREVIOUS RECORD */
```

Appendix A.47
JCL/SAS Code: PROCDUAL

```
    IF BPDA(MM) = '1' THEN DO;
     BPDT(MM) = '1';
     MBAT(MM) = SUM(MBAT(MM),MBAA(MM));
     DUEDT(MM) = SUM(DUEDT(MM),DUEDA(MM));
     MBPT(MM) = SUM(MBPT(MM),MBPA(MM));
    END;
   END;

END; /* WHOLE ARRAY */

/* ARRAYS FOR THE DISABILITY FIELDS - WE CHOOSE THE LAST POPULATED */
ARRAY DDO (*) DDO1-DDO12;
ARRAY DAC (*) $ DAC1-DAC12;
ARRAY LOD (*) $ LOD1-LOD12;
ARRAY ENT (*) ENTDAT1-ENTDAT12;
ARRAY DDBC (*) DDBC1-DDBC12;
ARRAY DSD (*) DSD1-DSD12;
ARRAY HDD (*) HDD1-HDD12;
ARRAY SDS (*) SDS1-SDS12;
ARRAY ADC (*) ADC1-ADC12;
ARRAY APS (*) APS1-APS12;
ARRAY EBD (*) EBD1-EBD12;
ARRAY BDC (*) $ BDC1-BDC12;
ARRAY CDR (*) $ CDR1-CDR12;
ARRAY CSA (*) $ CSA1-CSA12;
ARRAY DXPRI_MBR (*) $ DXPRI_MBR1-DXPRI_MBR12;
ARRAY DXSEC_MBR (*) $ DXSEC_MBR1-DXSEC_MBR12;

 /* THE FOLLOWING MACROS CREATE THE NEW VARIABLE WE ARE GOING TO
    KEEP FROM THE (PREVIOUS) SUPPLEMENTARY RECORD ON THE KEPT RECORD.
    THE DATA IS SORTED BY THE VARIABLE WHOSE LATEST VALUE WE
    HAVE CHOSEN AS FLAGGING THE RECORD WE WANT TO RETAIN.
    SINCE WE RETAIN THE NEW VARIABLE IN PROCESSING ALL THE RECORDS
    EXCEPT THE LAST ONE, THE PREVIOUS RETAINED VALUE WILL BE KEPT
    ON THE LAST (KEPT) RECORD. EACH DATA SET OUTPUT USING THE FLAGS
    ABOVE IS PROCESSED SEPARATELY */

 %MACRO LASTIT (ARR,VAR); /* FOR NUMERIC VARIABLES */

 /* INTITALIZE THE VARIABLES BECAUSE THEY ARE ALL MISSING ON MANY
    RECORDS */
  RETAIN &VAR;
  IF FIRST.SSN THEN &VAR = .;
  IF NOT LAST.SSN THEN DO;
   DO I = 1 TO DIM(&ARR);
```

Appendix A.47
JCL/SAS Code: PROCDUAL

```
    /* WE HAVE TO LOOP THRU ALL VARS BECAUSE EARLIER VAR MAY BE MISSING
       AND LATER VAR POPULATED */
     IF &ARR(I) GT .Z THEN &VAR = &ARR(I);
    END;
   END;

  %MEND LASTIT;
  %LASTIT(DDO,DDODT);
  %LASTIT(ENT,ENTDATDT);
  %LASTIT(DDBC,DDBCDT);
  %LASTIT(DSD,DSDDT);
  %LASTIT(HDD,HDDDT);
  %LASTIT(SDS,SDSDT);
  %LASTIT(ADC,ADCDT);
  %LASTIT(APS,APSDT);
  %LASTIT(EBD,EBDDT);

   %MACRO LASTIT1(ARR,VAR); /* FOR CHARACTER VARIABLES */
  LENGTH BDCDT $2 DXPRI_MBRDT DXSEC_MBRDT $4;

   /* INTITALIZE THE VARIABLES BECAUSE THEY ARE ALL MISSING ON MANY
      RECORDS */
   RETAIN &VAR;
   IF FIRST.SSN THEN &VAR = ' ';
   IF NOT LAST.SSN THEN DO;
    DO I = 1 TO DIM(&ARR);
     IF &ARR(I) NE ' ' THEN &VAR = &ARR(I);
    END;
   END;

  %MEND LASTIT1;
  %LASTIT1(DAC,DACDT);
  %LASTIT1(LOD,LODDT);
  %LASTIT1(BDC,BDCDT);
  %LASTIT1(CDR,CDRDT);
  %LASTIT1(CSA,CSADT);
  %LASTIT1(DXPRI_MBR,DXPRI_MBRDT);
  %LASTIT1(DXSEC_MBR,DXSEC_MBRDT);

  /* NOW PROCESS THE CHOSEN RECORD */
 IF LAST.SSN THEN DO;
  /* TAKE THE OUTCOMES OF THE AMOUNT VARS AND BPD.
    IF THE AMOUNTS HAVE BEEN SUMMED INTO THE TEMP VARS THEN TAKE
    THE SUMMED VALUE AS THE FINAL AMOUNT. ELSE TAKE THE ORIGINAL
    AMOUNT ON THE RECORD WHICH BECOMES THE LAST RECORD IN THE SORT */
```

Appendix A.47
JCL/SAS Code: PROCDUAL

```
 DO MM = 1 TO &TOTMOS;
  BPD(MM) = BPDT(MM);
  IF BPDT(MM) = ' ' THEN BPD(MM) = BPDA(MM);
  IF MBAT(MM) GT 0 THEN MBA(MM) = MBAT(MM);
  ELSE MBA(MM) = MBAA(MM);
  IF DUEDT(MM) GT 0 THEN DUED(MM) = DUEDT(MM);
  ELSE DUED(MM) = DUEDA(MM);
  IF MBPT(MM) GT 0 THEN MBPO(MM) = MBPT(MM);
  ELSE MBPO(MM) = MBPA(MM);
 END;

/* TAKE  RETAINED PREVIOUS  VALUE FOR SUPPLEMENTARY VARIABLES */
LENGTH BDCD $2 DXPRI_DUAL DXSEC_DUAL $4;
DOECD = DOECT;
DOEID = DOEIT;
DDOD = DDODT;
DACD = DACDT;
LODD = LODDT;
ENTDATD = ENTDATDT;
DDBCD = DDBCDT;
DSDD = DSDDT;
HDDD = HDDDT;
SDSD = SDSDT;
ADCD = ADCDT;
APSD = APSDT;
EBDD = EBDDT;
BDCD = BDCDT;
CDRD = CDRDT;
CSAD = CSADT;
DXPRI_DUAL = DXPRI_MBRDT;
DXSEC_DUAL = DXSEC_MBRDT;

DROP DOECFLAG ENTFLAG PIEDFLAG BICAFLAG I
   MBAA: DUEDA: MBPA: BPDA:
   MBAT: DUEDT: MBPT: BPDT:
   PIEDD
   CURRELIG
   ENT1 FIRSTENT
   DOECT
   DOEIT
   DDODT
   DACDT
   LODDT
   ENTDATDT
```

Appendix A.47
JCL/SAS Code: PROCDUAL

```
      DDBCDT
      DSDDT
      HDDDT
      SDSDT
      ADCDT
      APSDT
      EBDDT
      BDCDT
      CDRDT
      CSADT
      DXPRI_MBRDT
      DXSEC_MBRDT
      BICNDEX;

  OUTPUT;

 END;

RUN;

TITLE "AFTER PROCESSING - &FFILE RECORDS";
PROC PRINT DATA=&FFILE (OBS=20);
  VAR SSN BIC DOEC: DOEI: ENTDAT1-ENTDAT3
  ENTDATD DDO1-DDO3 DDOD DAC1-DAC3 DACD LOD1-LOD3 LODD DUED: BPD:;
RUN;

%MEND CHOOSIT;

%CHOOSIT(TEMP3.DIFFELIG,DOEC,    TEMP4.DIFFELIG,TEMP5.DIFFELIG);
%CHOOSIT(DIFFENT,       FIRSTENT,TEMP6.DIFFENT, TEMP7.DIFFENT);
%CHOOSIT(DIFFPIED,      PIED1,   TEMP8.DIFFPIED,TEMP9.DIFFPIED);
%CHOOSIT(DIFFA,         BICNDEX, TEMP10.DIFFA,  TEMP11.DIFFA);
%CHOOSIT(SAMEALL,       BIC,     TEMP12.SAMEALL,TEMP13.SAMEALL);

 /* COMBINE ALL FILES FOR FINAL DATASET */
 DATA OUT.DUALS;
  SET SINGLE TEMP5.DIFFELIG TEMP7.DIFFENT
      TEMP9.DIFFPIED TEMP11.DIFFA TEMP13.SAMEALL;
   BY SSN;
 RUN;
 TITLE 'FINAL SELECTED RECORDS';
PROC CONTENTS DATA=OUT.DUALS; RUN;
PROC PRINT DATA=OUT.DUALS (OBS=20); RUN;
%MEND;
%START;
```

Appendix A.47
JCL/SAS Code: PROCDUAL

```
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<MSHEN@MATHEMATICA-MPR.COM>
RCPT TO:<MSHEN@MATHEMATICA-MPR.COM>
DATA
FROM:   <MSHEN@MATHEMATICA-MPR.COM>
TO:     <MSHEN@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 PROCDUAL IS COMPLETE
```

Appendix A.48
JCL/SAS Code: MRGDUALS

```
//#4941MRG  JOB (11710000,T715,,SAS,,ITC9FL),MIAOMIAO-SHEN,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#4941
//*****************************************************************
//* PROJECT:     50214 DAF
//* DIRECTOR:    LAURA KOSA/CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#4941.DAF18.MBR.PRDLIB(MRGDUALS)
//* PURPOSE:     PROCESS DUAL ELIGIBLE RECORDS
//*              ALL MBR FIELDS LOADED
//* PROGRAMMER:  MIAOMIAO SHEN 7/30/2019 FOR DAF18
//* E-MAIL:      MSHEN@MATHEMATICA-MPR.COM
//*              MIAOMIAO.SHEN@CMS.GOV
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='200000,100000'            * SPACE IN BLKS *
//*
//IN1    DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.MBR.SING.SA.V1,DISP=SHR
//IN2    DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.PROCDUAL.SA.V1,DISP=SHR
//IN3    DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.PHUSSING.SA.V1,DISP=SHR
//IN4    DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.PHUSDUAL.SA.V1,DISP=SHR
//TEMP1  DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//TEMP2  DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT    DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.MBR.COMB.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//SYSIN  DD *
OPTIONS NOCENTER COMPRESS=YES OBS = MAX;
DATA TEMP1.MBR;
 MERGE IN1.MBR (IN=S) IN2.DUALS (IN=D DROP=BICC);
  BY SSN;
   /* BUILD DUAL ELIGIBLE FLAG */
  IF D THEN DUALELIG = 1;ELSE DUALELIG = 0;
RUN;

DATA TEMP2.PHUS;
 MERGE IN3.LINKPHUS(IN=S) IN4.PHUSDUAL (IN=D);
  BY SSN;
   /* BUILD DUAL ELIGIBLE FLAG */
  IF D THEN DUALELIG = 1;ELSE DUALELIG = 0;
RUN;
```

Appendix A.48
JCL/SAS Code: MRGDUALS

```
DATA OUT.MBR;
 MERGE TEMP1.MBR(IN=M) TEMP2.PHUS;
   BY SSN;
   IF M;
RUN;

TITLE 'FINAL MERGED MBR DATA WITH DUALS AND PHUS';
PROC FREQ DATA=OUT.MBR; TABLES DUALELIG; RUN;
PROC CONTENTS DATA=OUT.MBR; RUN;
PROC PRINT DATA=OUT.MBR (OBS=20); RUN;
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<MSHEN@MATHEMATICA-MPR.COM>
RCPT TO:<MSHEN@MATHEMATICA-MPR.COM>
DATA
FROM:   <MSHEN@MATHEMATICA-MPR.COM>
TO:     <MSHEN@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 MRGDUALS IS COMPLETE
```

Appendix A.49
JCL/SAS Code: PROCMBR

```
//#6266PRM  JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//* PROJECT:     50214 DAF
//* DIRECTOR:    LAURA KOSA/CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#3592.DAF15.MBR.PRDLIB(PROCMBR)
//* PURPOSE:     TO CREATE MONTHLY VARS FROM MBR DATA FOR TTW
//*              ADD NEW VARIABLES TO OUTPUT FILE
//* WRITTEN BY:  MIRIAM LOEWENBERG
//* UPDATED:     XIAO BARRY
//* UPDATED:     6/2/2017 MIAOMIAO SHEN
//* UPDATED:     8/6/2019 SERGE LUKASHANETS FOR DAF18
//* E-MAIL:      SLUKASHANETS@MATHEMATICA-MPR.COM
//*              SIARHEI.LUKASHANETS@SSA.GOV
//*****************************************************************
//*
//JS010   EXEC SAS9,
//        WORK='120000,60000'
//*
//IN1    DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.MBR.COMB.SA.V1,DISP=SHR
//IN2    DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.SUMREC.SA.V1,DISP=SHR
//TEMP   DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.PROCMBR.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//*
//SYSIN  DD *
OPTIONS NOCENTER LS=132 PS=60 COMPRESS=YES  OBS = MAX;

%LET BEGYR=1994;
%LET ENDYR=2018; /* CHANGE AS NEEDED */

%MACRO START;
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

DATA TEMP.MBR;
 SET IN1.MBR;
   BY SSN;

  /* SET UP ARRAYS FOR CREATING VARIABLES */
  /* CREATE ARRAYS FOR MONTHLY VARIABLES */
  /* NEW VARIABLES */
```

Appendix A.49
JCL/SAS Code: PROCMBR

```
ARRAY DX1{*} $4 %DO MM=1 %TO &TOTMOS; DXPRI_DIMBR&&YY&MM %END;;
ARRAY DX2{*} $4 %DO MM=1 %TO &TOTMOS; DXSEC_DIMBR&&YY&MM %END;;
ARRAY CDRN {*} $1 %DO MM=1 %TO &TOTMOS; CDR&&YY&MM %END;;
ARRAY CYEAR (*) $ %DO MM=1 %TO &TOTMOS; C&&YY&MM %END;;
ARRAY NYEAR (*) %DO MM=1 %TO &TOTMOS; N&&YY&MM %END;;

/* OLD VARIABLES */
ARRAY DIAG1{*} $ %DO I=1 %TO 12; DXPRI_MBR&I %END;;
ARRAY DIAG2{*} $ %DO I=1 %TO 12; DXSEC_MBR&I %END;;
ARRAY DDO (*)  %DO I = 1 %TO 12; DDO&I %END;; /* ONSET DATES */
ARRAY ENTDAT (*)  %DO I = 1 %TO 12; ENTDAT&I %END;;
                        /* DISABILITY ENTITLE DATE */
ARRAY DDBC (*)  %DO I = 1 %TO 12; DDBC&I %END;;
                        /* DISABILITY CESS DATE */
ARRAY APS (*)  %DO I = 1 %TO 12; APS&I %END;; /* APPEAL DATES */
ARRAY BDC (*) $ %DO I = 1 %TO 12; BDC&I %END;; /* DENIAL CODES */
ARRAY CDR (*) $ %DO I = 1 %TO 12; CDR&I %END;; /* DIS CESS REASON */

 /* INTITIALIZE MONTHLY VARS TO MISSING */
   DO I = 1 TO &TOTMOS;
    DX1(I) = ' ';
    DX2(I) = ' ';
    CDRN(I) = ' ';
  END;

 /* LOOP THROUGH THE NUMBER (NODF) OF DISABILITY FIELDS */
DO K = 1 TO NODF;

 /* THE FOLLOWING ROUTINE CREATES MONTHLY REFERENCE DATES FROM
   JAN 1994 TO CURRENT YEAR */
J=1;
Y=&BEGYR;

 /* IF THERE IS A TERMINATION DATE IN LATEST ENTRY - END MONTHLIES */
DO I = 1 TO DIM(CYEAR); /* LOOP THROUGH ALL MONTH/YEAR REFERENCES */

 CYEAR(I) = PUT(Y,4.)||(PUT(J,Z2.));
 IF INT(I/12)=I/12 THEN DO;
   J=1;
   Y=Y+1;
 END;
 ELSE J=J+1;

 NYEAR(I)=INPUT(SUBSTR(CYEAR(I),1,4)||SUBSTR(CYEAR(I),5,2),YYMMN6.);
```

Appendix A.49
JCL/SAS Code: PROCMBR

```
/* REVISION - IF THERE IS A DISABILITY CESSATION DATE THEN USE IT
   TO LIMIT THE RANGE OF THE VARIABLES.
   ELSE ALLOW THE RANGE TO EXTEND THE ENTIRE PERIOD OF DISABILITY */

IF ENTDAT(K) > .Z  THEN DO;
  IF ENTDAT(K) LE NYEAR(I) AND DDBC(K) GT NYEAR(I) THEN DO;
   DX1(I) = DIAG1(K);
   DX2(I) = DIAG2(K);
   CDRN(I) = CDR(K);
  END;
  ELSE IF DDBC(K) = . AND ENTDAT(K) LE NYEAR(I) THEN DO;
   DX1(I) = DIAG1(K);
   DX2(I) = DIAG2(K);
   CDRN(I) = CDR(K);
  END;

 END; /* DATE FALLS WITHIN REFERENCE MONTH */
 END; /* MONTH/YEAR REFERENCE VARIABLES */
END; /* DISABILITY FIELDS (DO K= 1 TO NODF) */

 DROP I J K Y
  %DO MM = 1 %TO &TOTMOS; C&&YY&MM N&&YY&MM %END;;

 RUN;

DATA OUT.MBR;
 MERGE TEMP.MBR(IN=M) IN2.MBR
        ;
  BY SSN ;
  IF M;

   *SET TO MISSING INSURED DATA FOR DUAL ELIGIBLE RECORDS;
  ARRAY INSV (*) $ DIBREQ1-DIBREQ15 DIBHAS1-DIBHAS15;

  IF DUALELIG = 1 THEN DO;
  NINSD = . ;
  DO I = 1 TO DIM(INSV);
   INSV(I) = '  ';
   END;
  END;

*BUILD THE SSDI COMMON VARIABLE FOR DAF;
ARRAY LAFYYMM(&BEGYR.:&ENDYR.,1:12) %DO YEAR=&BEGYR. %TO &ENDYR.;
                    %LET YR=%SUBSTR(&YEAR.,3,2);
                    LAF&YR.01-LAF&YR.12
```

Appendix A.49
JCL/SAS Code: PROCMBR

```
                    %END;;
ARRAY SSDIYY (&BEGYR.:&ENDYR.) %DO YEAR=&BEGYR. %TO &ENDYR.;
                    %LET YR=%SUBSTR(&YEAR.,3,2);
                    SSDI&YR.
                    %END;;
DO YR=&BEGYR. TO &ENDYR.;
  SSDIYY(YR) = 0; *SET INITIAL SSDIYY VALUE TO BE 0;
  DO MO=1 TO 12 UNTIL(SSDIYY(YR)=1);
    IF LAFYYMM(YR,MO) IN ("C","E") THEN SSDIYY(YR)=1;
  END;
END;

SSDI_ONSET=MIN(OF DDO1-DDO12,DDOD);
SSDI_ONSET_LAST =MAX(OF DDO1-DDO12,DDOD);
RUN;

PROC CONTENTS; RUN;
%MEND;
%START;
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<SLUKASHANETS@MATHEMATICA-MPR.COM>
RCPT TO:<SLUKASHANETS@MATHEMATICA-MPR.COM>
DATA
FROM:   <SLUKASHANETS@MATHEMATICA-MPR.COM>
TO:     <SLUKASHANETS@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 PROCMBR IS COMPLETE
```

Appendix A.50
JCL/SAS Code: RSTRCTN

```
//#6266RST JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//* PROJECT:  50214 DAF
//* DIRECTOR: LAURA KOSA/CASSANDRA PICKENS JEWELL
//* PROGRAM:  OPDR.TG.PRD.ETTW.#3592.DAF15.MBR.PRDLIB(RSTRCTN)
//* PURPOSE:  RESTRICT NUMBER OF N VARIABLES TO 50 FOR PIA,PIED,
//*          IME,PIARFC VARIABLES IN MBR DATA
//* CONTACT:  XIAO BARRY
//* UPDATED:  6/2/2017 MIAOMIAO SHEN
//* UPDATED:  5/29/2018 MIAOMIAO SHEN FOR DAF17
//* UPDATED:  8/19/2019 SERGE LUKASHANETS FOR DAF18
//* E-MAIL:   MSHEN@MATHEMATICA-MPR.COM
//*          MIAOMIAO.SHEN@CMS.GOV
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='120000,60000'
//*
//TEMP    DD DSN=&&TEMPX,DISP=(NEW,DELETE,DELETE),
//          UNIT=TSILO,VOL=(,,,10)
//IN1     DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.PROCMBR.SA.V1,
//          DISP=SHR
//OUT     DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.MBRREST.SA.V1,
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO,VOL=(,,,10)
//*

OPTIONS NOCENTER LS=132 PS=60 COMPRESS=BINARY OBS=MAX MPRINT;

%LET MAXT=150; /*NUMBER OF OCCURRENCES FROM MBR DATA*/
%LET OLDREST = 50; /*NUMBER OF OCCURENCES FROM PREEVIOUS DAF */

*DETERMINE MAX NUM OF ADJUDICATIONS FOR CURRENT DAF;
PROC MEANS DATA=IN1.MBR P99;
  VAR NPIA;
  OUTPUT OUT=STATIS (DROP = _TYPE_ _FREQ_)
  P99(NPIA)=P99NPIA;
RUN;

%MACRO START;
* CREATE A MACRO VARIABLE TO INDEX MAX OF RESTRICT N IN ALL FILE*;
*THE RESTRICT NUMBER OF N VAIABLES IS MAX OF 99TH PERCENTILE
 AND THE NUMBER FROM LAST YEAR*;
```

Appendix A.50
JCL/SAS Code: RSTRCTN

```
DATA _NULL_;
 SET STATIS;
   CALL SYMPUT('REST',MAX(ROUND(P99NPIA),&OLDREST.));
 STOP;
RUN;

*** PRINT RECORDS PRIOR TO PROCESSING IN ORDER TO CHECK THAT ***;
*** OUTPUT IS WHAT WE EXPECT ***;

PROC PRINT DATA=IN1.MBR(OBS=25);
   VAR SSN NPIA PIA: PIED: IME: ;
   WHERE NPIA GT &REST.;
   TITLE "CHECK VARIABLES PRIOR TO PROCESSING";
   TITLE2 "RECORDS WITH MORE THAN &REST. OCCURRENCES";
RUN;

PROC PRINT DATA=IN1.MBR(OBS=25);
   VAR SSN NPIA PIA: PIED: IME: ;
   TITLE2 " ";
RUN;

DATA OUT.MBR(DROP=I J NPIA_START);
   SET IN1.MBR;

   LENGTH
   %DO I = 1 %TO &REST;
   HOLDPIARFC&I %END; $1;

   *** STEP 1 IS TO CREATE AN ADDITIONAL VARIABLE THAT IS ***;
   *** SET TO THE EARLIEST OCCURRENCE OF EACH N VARIABLE  ***;

   *INPUT ARRAY;
   ARRAY IME(*)      %DO I=1 %TO &MAXT; IME&I %END;;
   ARRAY PIED(*)     %DO I=1 %TO &MAXT; PIED&I %END;;
   ARRAY PIA(*)      %DO I=1 %TO &MAXT; PIA&I %END;;
   ARRAY PIARFC(*) $ %DO I=1 %TO &MAXT; PIARFC&I %END;;

   *OUTPUT ARRAY;
   ARRAY HOLDIME(*)      %DO I=1 %TO &REST; HOLDIME&I %END;;
   ARRAY HOLDPIED(*)     %DO I=1 %TO &REST; HOLDPIED&I %END;;
   ARRAY HOLDPIA(*)      %DO I=1 %TO &REST; HOLDPIA&I %END;;
   ARRAY HOLDPIARFC(*) $  %DO I=1 %TO &REST; HOLDPIARFC&I %END;;

   %MACRO HOLDVAR(AR=);
```

Appendix A.50
JCL/SAS Code: RSTRCTN

```
*** STEP 1 IS TO CREATE AN ADDITIONAL VARIABLE THAT IS ***;
*** SET TO THE EARLIEST OCCURRENCE OF EACH N VARIABLE  ***;
FIRST&AR.=&AR.1;

*** IF NPI <= REST NUM, SET FIRST N OCCURRENCES TO THE ***;
*** HOLD VARIABLES ***;
IF NPIA <= &REST THEN DO I=1 TO &REST;
  HOLD&AR.(I)=&AR.(I);
END;

*** IF NPIA > REST NUM THEN SET THE LAST N OCCURRENCES TO THE ***;
*** HOLD VARIABLES ***;

IF NPIA > &REST THEN DO;
  NPIA_START=NPIA-(&REST-1);

  DO I = NPIA_START TO NPIA;
    J = I-(NPIA_START-1);
      HOLD&AR(J) = &AR.(I);
  END;
END;

DROP
 %DO I = 1 %TO &MAXT;
 &&AR.&I
 %END;;

 RENAME
  %DO I = 1 %TO &REST;
  HOLD&&AR.&I=&&AR.&I
  %END;;

%MEND HOLDVAR;
%HOLDVAR(AR=IME);
%HOLDVAR(AR=PIED);
%HOLDVAR(AR=PIA);
%HOLDVAR(AR=PIARFC);

NPIA_ORIG = NPIA;
NPIA_NEW = NPIA;
IF NPIA GT &REST. THEN NPIA_NEW = &REST.;
DROP NPIA;

RUN;
```

Appendix A.50
JCL/SAS Code: RSTRCTN

```
*** PRINT RECORDS AFTER FINAL PROCESSING IN ORDER TO CHECK THAT ***;
*** OUTPUT IS WHAT WE EXPECT ***;

PROC PRINT DATA=OUT.MBR(OBS=25);
  VAR SSN NPIA: PIA: PIED: IME: FIRST:;
  WHERE NPIA_ORIG > &REST;
  TITLE "CHECK VARIABLES AFTER FINAL PROCESSING";
  TITLE2 "RECORDS WITH MORE THAN 50 N OCCURRENCES";
RUN;

PROC PRINT DATA=OUT.MBR(OBS=25);
  VAR SSN NPIA: PIA: PIED: IME: FIRST:;
  TITLE "CHECK VARIABLES AFTER FINAL PROCESSING";
  TITLE2 " ";
RUN;
%MEND START;
%START;

PROC CONTENTS DATA=OUT.MBR;
  TITLE "CONTENTS OF RSTRCTN";
RUN;
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<SLUKASHANETS@MATHEMATICA-MPR.COM>
RCPT TO:<SLUKASHANETS@MATHEMATICA-MPR.COM>
DATA
FROM:   <SLUKASHANETS@MATHEMATICA-MPR.COM>
TO:     <SLUKASHANETS@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 RSTRCTN IS COMPLETE
```

Appendix A.51
JCL/SAS Code: JCLYRSP

```
//#4941MSP JOB (12510000,T715,,SAS,,ITC9FL),MIAOMIAO-SHEN,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#4941
//*****************************************************************
//*
//*     *-------------------------------------------------*
//*     ¦  THE MACRO SPLIT PROGRAM                        ¦
//*     *-------------------------------------------------*
//*
//* CREATED BY: SERGE LUKASHANETS, 5/26/2016
//* MODIFIED BY: MIAOMIAO SHEN 6/23/2017
//* UPDATED: MIAOMIAO SHEN 8/20/2019 FOR DAF18
//* E-MAIL MSHEN@MATHEMATICA-MPR.COM
//*****************************************************************
//  SET REG='64M'
//*
//JS010  EXEC SAS9,
//      WORK='200000,100000', F10
//      REGION=&REG,
//      PARM='MEMSIZE=&REG'
//*
//***DATA FOR SPLIT
//IN1     DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.MBRREST.SA.V1,DISP=SHR
//***OUT YEARLY FILES
//OUT94  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR1994.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT95  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR1995.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT96  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR1996.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT97  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR1997.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT98  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR1998.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT99  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR1999.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT00  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2000.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
```

Appendix A.51
JCL/SAS Code: JCLYRSP

```
//OUT01  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2001.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT02  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2002.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT03  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2003.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT04  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2004.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT05  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2005.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT06  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2006.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT07  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2007.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT08  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2008.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT09  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2009.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT10  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2010.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT11  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2011.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT12  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2012.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT13  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2013.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT14  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2014.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT15  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2015.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
```

Appendix A.51
JCL/SAS Code: JCLYRSP

```
//OUT16  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2016.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT17  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2017.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT18  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2018.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//SYSIN  DD *
OPTIONS NOCENTER COMPRESS=YES MPRINT OBS=MAX;

%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(MSPLIT)";

%OUTP(IN1.MBR,OUT,MBR,1994,2018,
    SSN HI_START: HI_TERM: SMI_STAR: SMI_TERM: SSDI:);

PROC CONTENTS DATA=OUT94.MBR;RUN;
PROC CONTENTS DATA=OUT95.MBR;RUN;
PROC CONTENTS DATA=OUT96.MBR;RUN;
PROC CONTENTS DATA=OUT97.MBR;RUN;
PROC CONTENTS DATA=OUT98.MBR;RUN;
PROC CONTENTS DATA=OUT99.MBR;RUN;
PROC CONTENTS DATA=OUT00.MBR;RUN;
PROC CONTENTS DATA=OUT01.MBR;RUN;
PROC CONTENTS DATA=OUT02.MBR;RUN;
PROC CONTENTS DATA=OUT03.MBR;RUN;
PROC CONTENTS DATA=OUT04.MBR;RUN;
PROC CONTENTS DATA=OUT05.MBR;RUN;
PROC CONTENTS DATA=OUT06.MBR;RUN;
PROC CONTENTS DATA=OUT07.MBR;RUN;
PROC CONTENTS DATA=OUT08.MBR;RUN;
PROC CONTENTS DATA=OUT09.MBR;RUN;
PROC CONTENTS DATA=OUT10.MBR;RUN;
PROC CONTENTS DATA=OUT11.MBR;RUN;
PROC CONTENTS DATA=OUT12.MBR;RUN;
PROC CONTENTS DATA=OUT13.MBR;RUN;
PROC CONTENTS DATA=OUT14.MBR;RUN;
PROC CONTENTS DATA=OUT15.MBR;RUN;
PROC CONTENTS DATA=OUT16.MBR;RUN;
PROC CONTENTS DATA=OUT17.MBR;RUN;
PROC CONTENTS DATA=OUT18.MBR;RUN;
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
```

Appendix A.51
JCL/SAS Code: JCLYRSP

```
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<MSHEN@MATHEMATICA-MPR.COM>
RCPT TO:<MSHEN@MATHEMATICA-MPR.COM>
DATA
FROM:   <MSHEN@MATHEMATICA-MPR.COM>
TO:     <MSHEN@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 JCLYRSP IS COMPLETE
```

Appendix A.52
JCL/SAS Code: LAFMR

```
//#4941LAF JOB (12510000,T715,,SAS,,ITC9FL),MIAOMIAO-SHEN,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#4941
//*****************************************************************
//* PROJECT:   50214 DAF
//* DIRECTOR:
//* PROGRAM:   OPDR.TG.PRD.ETTW.#4941.DAF17.MBR.PRDLIB(LAFMR)
//* PURPOSE:   CREATE THE MOST RECENT VALUE OF LAF
//* CONTACT:   MIAOMIAO SHEN 6/18/2018 FOR DAF17
//* MPR PHONE: 202 552-6422
//* E-MAIL:    MSHEN@MATHEMATICA-MPR.COM
//*           MIAOMIAO.SHEN@SSA.GOV
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000'
//*
//IN1   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.MBRREST.SA.V1,DISP=SHR
//TEMP  DD DSN=&&TEMPX,DISP=(NEW,DELETE,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.LAFMR.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//SYSIN DD *

OPTIONS NOCENTER LS=142 PS=60 COMPRESS=BINARY OBS=MAX;
  /* UPDATE CURRENT DAF YEAR AND PREVIOUS DAF YEAR */
 %LET CURRYR=18; /* CHANGE AS NEEDED */
 %LET PREVYR=17; /* CHANGE AS NEEDED */

 %LET BEGYR=1994;
 %LET ENDYR=2018; /* CHANGE AS NEEDED */

%MACRO START;

%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

DATA TEMP.LAFMR;
SET IN1.MBR (KEEP = SSN %DO MM=1 %TO &TOTMOS; LAF&&YY&MM %END;);

ARRAY LAF (*) $ %DO MM=1 %TO &TOTMOS; LAF&&YY&MM %END;;

LENGTH LAF_MR $2.;

LAF_MR = "";
```

Appendix A.52
JCL/SAS Code: LAFMR

```
DO I = DIM(LAF) TO 1 BY -1 WHILE (LAF_MR="");
  IF LAF(I) NE "" THEN DO;
    LAF_MR = LAF(I);
    _MN=SUBSTR(VNAME(LAF(I)),4,2);
    _YR=SUBSTR(VNAME(LAF(I)),6,2);
    LAF_MR_DATE = MDY(_MN,1,_YR);
  END;
END;
RUN;

PROC PRINT DATA=TEMP.LAFMR (OBS=100);
  WHERE _YR = "&CURRYR.";
  VAR LAF&CURRYR.: LAF&PREVYR.: LAF_:;
RUN;
PROC PRINT DATA=TEMP.LAFMR (OBS=100); RUN;
PROC FREQ DATA=TEMP.LAFMR;
  TABLES LAF_MR / LIST MISSING;
RUN;

DATA OUT1.LAFMR;
SET TEMP.LAFMR (KEEP=SSN LAF_:);
LABEL
LAF_MR="LEDGER ACCOUNT FILE STATUS, MOST RECENT"
LAF_MR_DATE="DATE OF MOST RECENT LEDGER ACCOUNT FILE STATUS"
;
RUN;

PROC CONTENTS DATA=OUT1.LAFMR;
RUN;

%MEND;
%START;

//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<MSHEN@MATHEMATICA-MPR.COM>
RCPT TO:<MSHEN@MATHEMATICA-MPR.COM>
```

Appendix A.52
JCL/SAS Code: LAFMR

```
DATA
FROM:   <MSHEN@MATHEMATICA-MPR.COM>
TO:     <MSHEN@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 LAFMR IS COMPLETE
```

Appendix A.53
JCL/SAS Code: DCFDMG

```
//#6502DCF JOB (12510000,T715,,SAS,,ITC9TH),BRYCE,CLASS=T,
//        MSGCLASS=1,MSGLEVEL=(1,1),REGION=4096K,NOTIFY=#6502
/*SSAMAIN SASBASIC
//*****************************************************************
//* PROJECT:     BUILD DAF15 (50214)
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.DEMO.PRDLIB(DCFDMG)
//* DESCRIPTION: CREATES EXTRACT OF DCF CLAIM FILE
//*              TO OBTAIN THE TWP COMPLETION MONTHS FOR DEMO
//* CONTACT: ALEX BRYCE
//* UPDATED: ALEX BRYCE 5/14/2019 FOR DAF18
//* EMAIL:   ABRYCE@MATHEMATICA-MPR.COM
//*          ALEX.BRYCE@SSN.GOV
//*****************************************************************
//S1   EXEC SAS9,LOAD='DBP8.DB2.SDSNLOAD',SORT='15000',
//         WORK='15000,15000',COND=EVEN
//CLM  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DCFCLM.SA.V1,
//        DISP=(,CATLG,DELETE),
//        UNIT=TSILO,
//        VOL=(,,,255),
//        DCB=(BLKSIZE=6144,DSORG=PS,LRECL=6144,RECFM=FS)
//HCLM DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DCFHCLM.SA.V1,
//        DISP=(,CATLG,DELETE),
//        UNIT=AFF=CLM,
//        VOL=(,,,255),
//        DCB=(BLKSIZE=6144,DSORG=PS,LRECL=6144,RECFM=FS)
//MED  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DCFMED.SA.V1,
//        DISP=(,CATLG,DELETE),
//        UNIT=AFF=CLM,
//        VOL=(,,,255),
//        DCB=(BLKSIZE=6144,DSORG=PS,LRECL=6144,RECFM=FS)
//HMED DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DCFHMED.SA.V1,
//        DISP=(,CATLG,DELETE),
//        UNIT=AFF=CLM,
//        VOL=(,,,255),
//        DCB=(BLKSIZE=6144,DSORG=PS,LRECL=6144,RECFM=FS)
//SYSIN DD *

OPTIONS NOCENTER;

LIBNAME CLM  TAPE;
LIBNAME HCLM TAPE;
LIBNAME MDCF DB2 SSID=DBP8 SCHEMA=MDCF ;
```

Appendix A.53
JCL/SAS Code: DCFDMG

```
* CREATE SAS EXTRACT OF CLAIM GROUP DATA;
PROC SQL;
CREATE TABLE CLM.CLM AS
SELECT * FROM MDCF.CLM;
QUIT;
RUN;

* CREATE SAS EXTRACT OF HISTORY CLAIM GROUP DATA;
PROC SQL;
CREATE TABLE HCLM.HCLM AS
SELECT * FROM MDCF.HCLM;
QUIT;
RUN;

PROC CONTENTS DATA=CLM.CLM ;
RUN;
PROC CONTENTS DATA=HCLM.HCLM ;
RUN;

LIBNAME MED  TAPE;
LIBNAME HMED TAPE;
LIBNAME MDCF DB2 SSID=DBP8 SCHEMA=MDCF ;

* CREATE SAS EXTRACT OF CLAIM MEDICAL DATA;
PROC SQL;
CREATE TABLE MED.MED AS
SELECT * FROM MDCF.MEDICAL;
QUIT;
RUN;

* CREATE SAS EXTRACT OF HISTORY MEDICAL GROUP DATA;
PROC SQL;
CREATE TABLE HMED.HMED AS
SELECT * FROM MDCF.HMEDICAL;
QUIT;
RUN;

PROC CONTENTS DATA=MED.MED;
RUN;
PROC CONTENTS DATA=HMED.HMED;
RUN;

//**************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//**************************************************
```

Appendix A.53
JCL/SAS Code: DCFDMG

```
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 DCFDMG IS COMPLETE
```

Appendix A.54
JCL/SAS Code: TWPCMPL

```
//#6502TWP  JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     BUILD DAF18 (50214)
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.DEMO.PRDLIB(TWPCMPL)
//* DESCRIPTION: GET TWP_CMPL_MNTH VARIABLES, BY SSN, ORDERED FROM
//*              OLDEST TO NEWEST
//*             (OBTAIN TRIAL WORK PERIOD COMPLETION MONTH
//*              INFORMATION FROM THE DCF CLAIM TABLE)
//* CONTACT:     ALEX BRYCE ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//SAS   EXEC SAS9,
//          WORK='120000,60000'
//IN1   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DCFCLM.SA.V1,DISP=SHR
//FIND  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MASTFIND.SA.V1,DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.TWPCMPL.SA.V1,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//TEMP1 DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN DD *

OPTIONS NOCENTER OBS=MAX;

* MERGE DCF CLAIM FILE WITH DEMO SSN LINK FILE TO ELIMINATE SSNS
  THAT ARE NOT IN THE DAF;
PROC SORT DATA=IN1.CLM(KEEP=COSSN TWP_CMPL_MDT
                    WHERE=(TWP_CMPL_MDT NE .))
   OUT=TEMP1.CLM;
   BY COSSN;
RUN;

DATA TEMP1.TRFCLAIM;
    MERGE TEMP1.CLM(IN=CLAIM RENAME=(COSSN=SSN))
          FIND.MASTFIND(IN=FIND KEEP=SSN)
          ;
    BY SSN;
    IF CLAIM AND FIND;
RUN;

PROC SORT DATA=TEMP1.TRFCLAIM;
    BY SSN TWP_CMPL_MDT;
```

Appendix A.54
JCL/SAS Code: TWPCMPL

```
RUN;

DATA TEMP1.TRFCLAIM;
   SET TEMP1.TRFCLAIM;
   BY SSN TWP_CMPL_MDT;
   IF FIRST.TWP_CMPL_MDT THEN OUTPUT;
RUN;

PROC TRANSPOSE DATA=TEMP1.TRFCLAIM OUT=OUT.TWPCMPL PREFIX=TWPCMPLMNTH;
   BY SSN;
   VAR TWP_CMPL_MDT;
RUN;

PROC CONTENTS DATA=OUT.TWPCMPL;
RUN;

PROC FORMAT;
VALUE MISSFMT .='MISSING' OTHER='NOT MISSING';
RUN;

TITLE "CHECK FREQUENCY OF TWPCMPLMNTH FOR MISSING OR NOT MISSING";
PROC FREQ DATA=OUT.TWPCMPL;
FORMAT _NUMERIC_ MISSFMT.;
TABLES TWPCMPLMNTH:/MISSING;
RUN;
TITLE;

//**************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//**************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 TWPCMPL IS COMPLETE
```

Appendix A.55
JCL/SAS Code: DCFMED

```
//#6502MED  JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF18 CONSTRUCTION
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.DEMO.PRDLIB(DCFMED)
//* DESCRIPTION: GET BLND_ONST_DT VARIABLES ORDERED BY SSN AND
//*            GET MIE RELATED DATA AVAILABLE ON THE DCF MEDICAL
//*            TABLE, CREATE MONTHLY IMPROVEMENT CODE (MEDEXYYMM)
//* DATE:       06/07/2019 FOR DAF18
//* CONTACT:     ALEX BRYCE
//* MPR EMAIL:   ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//SAS      EXEC SAS9,
//        WORK='120000,60000'
//* INPUT
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DCFMED.SA.V1,DISP=SHR
//FIND  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MASTFIND.SA.V1,DISP=SHR
//* OUTPUT
//OUT   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIEDCF.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO
//TEMP1 DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP2 DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP3 DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP4 DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMPS1 DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN DD *

OPTIONS LS=132 COMPRESS=YES MPRINT MACROGEN NOCENTER OBS=MAX;

%LET BEGYR=1994;
%LET ENDYR=2018; /* CHANGE AS NEEDED */

%MACRO START;
* MERGE DCF MED FILE WITH DEMO SSN LINK FILE TO ELIMINATE SSNS
  THAT ARE NOT IN THE DAF *;
PROC SORT DATA=MED.MED(KEEP=COSSN BLND_ONST_DT
```

Appendix A.55
JCL/SAS Code: DCFMED

```
                    WHERE=(BLND_ONST_DT GT .Z)) NODUPKEY
          OUT=TEMP1.BLIND;
     BY COSSN BLND_ONST_DT;
   RUN;

   *KEEP THE EARLIEST BLIND DATE RECORDS FOR SSNS;
   DATA TEMP1.BLIND_FINAL;
    SET TEMP1.BLIND;
    BY COSSN BLND_ONST_DT;
    IF FIRST.COSSN THEN OUTPUT;
   RUN;

   *SELECT SUBSET OF DCFMED WE NEED TO REDUCE STRAIN ON SQL PROCESSING;
   DATA TEMPS1.MED_SUBSET
       (KEEP=COSSN CTL_DT DETN_SEQ_NUM MED_STDT LU_TS MDR DRY_PERM_CD)
        ;
     SET MED.MED
        (WHERE=(LU_PGM_NM NE 'CDCNVCLM' AND
              CID = '00'            AND
              MED_STDT NE .))
        ;
   RUN;

   PROC SORT DATA=TEMPS1.MED_SUBSET;
   BY COSSN;
   RUN;

   * MERGE MED WITH MASTFIND BY SSN *;
   PROC SQL;
     CREATE TABLE TEMP2.DCF AS
     SELECT A.SSN,
          B.CTL_DT,
          B.DETN_SEQ_NUM,
          B.MED_STDT,
          B.LU_TS,
          B.MDR,
          B.DRY_PERM_CD,
          C.BLINDDT
     FROM FIND.MASTFIND AS A
     LEFT JOIN
         (SELECT COSSN AS SSN,
               CTL_DT,
               DETN_SEQ_NUM,
               MED_STDT,
               LU_TS,
```

Appendix A.55
JCL/SAS Code: DCFMED

```
            MDR,
            DRY_PERM_CD
        FROM TEMPS1.MED_SUBSET) AS B
  ON B.SSN=A.SSN
  LEFT JOIN
      (SELECT COSSN AS SSN,
            BLND_ONST_DT AS BLINDDT
        FROM TEMP1.BLIND_FINAL) AS C
  ON C.SSN=A.SSN
;
QUIT;

* SORT MERGED DATASET *;
* BY SSN,CTL_DT,DETN_SEQ_NUM,MED_STDT AND LU_TS *;
PROC SORT DATA=TEMP2.DCF;
  BY SSN CTL_DT DETN_SEQ_NUM MED_STDT LU_TS;
RUN;

* FIND THE MOST RECENT LU_TS *;
PROC SQL;
  CREATE TABLE TEMP3.DCF AS
  SELECT *,
       MAX(LU_TS) AS LU_TS_MAX
  FROM TEMP2.DCF
  GROUP BY SSN,CTL_DT,DETN_SEQ_NUM,MED_STDT;
QUIT;

* OUTPUT DATASET WITH MOST LU_TS *;
DATA TEMP3.DCF(DROP=LU_TS_MAX);
  SET TEMP3.DCF;

  * RESET MED_STDT TO THE FIRST DAY OF THE MONTH *;
  MED_STDT_FIRST=MDY(MONTH(MED_STDT),01,YEAR(MED_STDT));

  IF LU_TS=LU_TS_MAX THEN OUTPUT;
RUN;

PROC SORT DATA=TEMP3.DCF;
  BY SSN CTL_DT DETN_SEQ_NUM MED_STDT_FIRST LU_TS;
RUN;

* CREATE MEDEX AND MONTHLY MEDEX VARIABLES *;
DATA TEMP4.MIEDCF;
  SET TEMP3.DCF;
```

Appendix A.55
JCL/SAS Code: DCFMED

```
    BY SSN /*CTL_DT DETN_SEQ_NUM MED_STDT_FIRST LU_TS*/;

    * CREATE MEDEX VARIABLE *;
    IF MDR='3' THEN MEDEX='P';
    ELSE IF MDR IN ('V','W','X') THEN DO;
      IF DRY_PERM_CD='P' THEN MEDEX='N';
      ELSE IF DRY_PERM_CD NE 'P' THEN MEDEX='P';
    END;
    ELSE IF MDR IN ('5','7') THEN MEDEX='N';
    ELSE IF MDR IN ('A','B','C','D','E','F','G','H','I','J',
                'K','L','M','N','O','P','Q','R','S','T',
                'U','Y','Z') THEN MEDEX='E';
    ELSE MEDEX='0';

    * CREATE MONTHLY MEDEX *;
    * SET ARRAY FOR ASSIGNING THE MEDEXYYMM FOR THE FIRST MONTH OF MEDEX
      CHANGES.  IN OTHER WORDS NOT THE CARRYFORWARD FROM START MONTH TO
      SUBSEQUENT START MONTH;
    ARRAY MEDEXA (&BEGYR.:&ENDYR.,1:12) $
              %DO YEAR=&BEGYR %TO &ENDYR;
              %LET YR=%SUBSTR(&YEAR.,3,2);
              MEDEX&YR.01-MEDEX&YR.12
              %END;;

    IF MED_STDT_FIRST NE . THEN DO;
       IF MED_STDT_FIRST<"01JAN&BEGYR."D THEN MEDEXA(1994,1)=MEDEX;
       ELSE IF MED_STDT_FIRST<="31DEC&ENDYR."D THEN
         MEDEXA(YEAR(MED_STDT_FIRST),MONTH(MED_STDT_FIRST))=MEDEX;
    END;

    * SET ARRAY FOR ASSIGINING THE MEDEXYYMM BETWEEN ON START MONTH TO
      THE NEXT START MONTH OF MEDEX;
    ARRAY MEDEXB (*) $
              %DO YEAR=&BEGYR %TO &ENDYR;
              %LET YR=%SUBSTR(&YEAR.,3,2);
              MEDEX&YR.01-MEDEX&YR.12
              %END;;

    DO I=2 TO DIM(MEDEXB);
       IF MEDEXB(I)='' THEN MEDEXB(I)=MEDEXB(I-1);
    END;

  RUN;

  * CHECK CREATION OF MEDEX *;
```

Appendix A.55
JCL/SAS Code: DCFMED

```
TITLE "CHECK CREATION OF MEDEX";
PROC FREQ DATA=TEMP4.MIEDCF;
  TABLES MDR*DRY_PERM_CD*MEDEX / LIST MISSING;
RUN;
TITLE;

* COLLAPSE ALL DATA INTO ONE RECORDS PER EACH BENE *;
DATA OUT.MIEDCF;
  UPDATE TEMP4.MIEDCF(OBS=0 KEEP=SSN BLINDDT MEDEX:)
       TEMP4.MIEDCF(KEEP=SSN BLINDDT MEDEX:);
  BY SSN;
RUN;

TITLE "CONTENTS FOR OUT MIEDCF";
PROC CONTENTS DATA=OUT.MIEDCF;
RUN;
TITLE;

%MEND;
%START;

//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DCFMED IS COMPLETE
```

Appendix A.56
JCL/SAS Code: SPMIE

```
//#6502MIE JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:    BUILD DAF18 (50214)
//* DIRECTOR:   CASSANDRA PICKENS JEWELL
//* PROGRAM:    OPDR.TG.PRD.ETTW.#6502.DAF18.DEMO.PRDLIB(SPMIE)
//* DESCRIPTION: SPLIT FILE INTO ANNUAL FILES
//* PROGRAMMER:  ALEX BRYCE FOR DAF18
//* EMAIL:      ABRYCE@MATHEMATICA-MPR.COM
//*            ALEX.BRYCE@SSA.GOV
//*****************************************************************
//*
//  SET REG='64M'
//*
//JS010  EXEC SAS9,
//      WORK='200000,100000', F10
//      REGION=&REG,
//      PARM='MEMSIZE=&REG'
//*
//***DATA FOR SPLIT
//IN1    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIEDCF.SA.V1,DISP=SHR
//***OUT YEARLY FILES
//OUT94  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE1994.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT95  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE1995.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT96  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE1996.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT97  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE1997.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT98  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE1998.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT99  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE1999.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT00  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2000.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT01  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2001.SA.V1,
```

Appendix A.56
JCL/SAS Code: SPMIE

```
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT02  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2002.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT03  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2003.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT04  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2004.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT05  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2005.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT06  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2006.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT07  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2007.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT08  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2008.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT09  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2009.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT10  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2010.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT11  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2011.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT12  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2012.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT13  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2013.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT14  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2014.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT15  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2015.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT16  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2016.SA.V1,
```

Appendix A.56
JCL/SAS Code: SPMIE

```
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT17  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2017.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT18  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2018.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//SYSIN   DD *
OPTIONS NOCENTER COMPRESS=YES MPRINT OBS=MAX;

%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(MSPLIT)";

%OUTP(IN1.MIEDCF,OUT,MIEDCF,1994,2018,SSN);

PROC CONTENTS DATA=OUT94.MIEDCF;RUN;
PROC CONTENTS DATA=OUT95.MIEDCF;RUN;
PROC CONTENTS DATA=OUT96.MIEDCF;RUN;
PROC CONTENTS DATA=OUT97.MIEDCF;RUN;
PROC CONTENTS DATA=OUT98.MIEDCF;RUN;
PROC CONTENTS DATA=OUT99.MIEDCF;RUN;
PROC CONTENTS DATA=OUT00.MIEDCF;RUN;
PROC CONTENTS DATA=OUT01.MIEDCF;RUN;
PROC CONTENTS DATA=OUT02.MIEDCF;RUN;
PROC CONTENTS DATA=OUT03.MIEDCF;RUN;
PROC CONTENTS DATA=OUT04.MIEDCF;RUN;
PROC CONTENTS DATA=OUT05.MIEDCF;RUN;
PROC CONTENTS DATA=OUT06.MIEDCF;RUN;
PROC CONTENTS DATA=OUT07.MIEDCF;RUN;
PROC CONTENTS DATA=OUT08.MIEDCF;RUN;
PROC CONTENTS DATA=OUT09.MIEDCF;RUN;
PROC CONTENTS DATA=OUT10.MIEDCF;RUN;
PROC CONTENTS DATA=OUT11.MIEDCF;RUN;
PROC CONTENTS DATA=OUT12.MIEDCF;RUN;
PROC CONTENTS DATA=OUT13.MIEDCF;RUN;
PROC CONTENTS DATA=OUT14.MIEDCF;RUN;
PROC CONTENTS DATA=OUT15.MIEDCF;RUN;
PROC CONTENTS DATA=OUT16.MIEDCF;RUN;
PROC CONTENTS DATA=OUT17.MIEDCF;RUN;
PROC CONTENTS DATA=OUT18.MIEDCF;RUN;

//**************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
```

Appendix A.56
JCL/SAS Code: SPMIE

```
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 SPMIE COMPLETE
```

Appendix A.57
JCL/SAS Code: DXPROC

```
//#6502DXP  JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//JOB01  EXEC SAS9,
//      WORK='180000,90000'
//*****************************************************************
//* PROJECT:     BUILD DAF18 (50214)
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.DEMO.PRDLIB(DXPROC)
//* DESCRIPTION: TO CREATE DIAGNOSIS VARIABLES FOR DAF
//* CONTACT:     DAWN PHELPS
//* EMAIL:       DPHELPS@MATHEMATICA-MPR.COM
//*              DAWN.PHELPS@SSA.GOV
//*****************************************************************
//*
//IN1   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.ALLCDCOM.SA.V1,DISP=SHR
//IN2   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.MBRREST.SA.V1,DISP=SHR
//IN3   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSIELIG.SA.V1,DISP=SHR
//TEMP  DD DSN=&&TEMPX,DISP=(NEW,DELETE,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPROC.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//SYSIN DD *

OPTIONS NOCENTER LS=132 PS=60 COMPRESS=BINARY OBS=MAX;

%LET BEGYR=1994;
%LET ENDYR=2018;  /* CHANGE AS NEEDED */
%LET ENDMN=12;    /* CHANGE AS NEEDED */

  /* STEP TO ASSIGN MACRO VARIABLES TO HANDLE TIME SERIES DATA */
%MACRO START;
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

DATA OUT.DXPROC;
MERGE
  IN1.ALLCDCOM(IN = IN1 KEEP = SSN DX:)
  IN2.MBR (IN=IN2 KEEP=SSN DX:)
  IN3.SSIELIG (IN=IN3 KEEP=SSN DIB_DIG DIB_DIG2)
  ;
  BY SSN;

 LENGTH
  %DO MM = 1 %TO &TOTMOS;
```

Appendix A.57
JCL/SAS Code: DXPROC

```
    DXPRI_DI&&YY&MM DXSEC_DI&&YY&MM
    DXPRIBEST&&YY&MM DXSECBEST&&YY&MM
   %END;
    DXPRI_DI DXSEC_DI
    DXPRI_SSI DXSEC_SSI
    DXPRIBEST DXSECBEST
  $4;

  /*INPUT ARRAYS*/
ARRAY ARPRI_DI831(*) $ %DO MM = 1 %TO &TOTMOS; DXPRI_DI831&&YY&MM %END;;
ARRAY ARSEC_DI831(*) $ %DO MM = 1 %TO &TOTMOS; DXSEC_DI831&&YY&MM %END;;
ARRAY ARPRI_DIMBR(*) $ %DO MM = 1 %TO &TOTMOS; DXPRI_DIMBR&&YY&MM %END;;
ARRAY ARSEC_DIMBR(*) $ %DO MM = 1 %TO &TOTMOS; DXSEC_DIMBR&&YY&MM %END;;
ARRAY ARPRI_SSI(*)   $ %DO MM = 1 %TO &TOTMOS; DXPRI_SSI&&YY&MM %END;;
ARRAY ARSEC_SSI(*)   $ %DO MM = 1 %TO &TOTMOS; DXSEC_SSI&&YY&MM %END;;

  /* NEW ARRAYS */
ARRAY ARPRI_DI(*) $ %DO MM = 1 %TO &TOTMOS; DXPRI_DI&&YY&MM %END;;
ARRAY ARSEC_DI(*) $ %DO MM = 1 %TO &TOTMOS; DXSEC_DI&&YY&MM %END;;
ARRAY ARPRIBEST(*) $ %DO MM = 1 %TO &TOTMOS; DXPRIBEST&&YY&MM %END;;
ARRAY ARSECBEST(*) $ %DO MM = 1 %TO &TOTMOS; DXSECBEST&&YY&MM %END;;

DO I = 1 TO &TOTMOS;
 ARPRI_DI(I) = ' ';
 ARSEC_DI(I) = ' ';
 ARPRIBEST(I) = ' ';
 ARSECBEST(I) = ' ';
END;

*CREATE DI MONTHLY DIAGNOSIS VARIABLES DXPRI_DIYYMM AND DXSEC_DIYYMM;
*POPULATE USING 831 CODES FIRST;
DO I = 1 TO DIM(ARPRI_DI831);
  IF ARPRI_DI831(I) NE ' ' THEN DO;
    ARPRI_DI(I) = ARPRI_DI831(I);
    ARSEC_DI(I) = ARSEC_DI831(I);
  END;
  ELSE DO;
    ARPRI_DI(I) = ARPRI_DIMBR(I);
    ARSEC_DI(I) = ARSEC_DIMBR(I);
  END;
END;

*CREATE BEST MONTHLY DIAGNOSIS VARIABLES;
*POPULATE FIRST USING DI CODES, IF DI CODE IS MISSING THEN POPULATE;
*SSI CODE;
```

Appendix A.57
JCL/SAS Code: DXPROC

```
DO I = 1 TO DIM(ARPRI_DI);
  IF ARPRI_DI(I) NE ' ' THEN DO;
    ARPRIBEST(I) = ARPRI_DI(I);
    ARSECBEST(I) = ARSEC_DI(I);
  END;
  ELSE DO;
    ARPRIBEST(I) = ARPRI_SSI(I);
    ARSECBEST(I) = ARSEC_SSI(I);
  END;
END;

  /*CREATE THE MOST RECENT DIAGNOSIS CODES*/
%MACRO FINDMR(VAR = );

DO I = &TOTMOS TO 1 BY -1 UNTIL(DX&VAR. NE '');
DX&VAR. = AR&VAR.(I);
END;

%MEND FINDMR;
%FINDMR(VAR = PRI_DI);
%FINDMR(VAR = SEC_DI);
%FINDMR(VAR = PRI_SSI);
%FINDMR(VAR = SEC_SSI);
%FINDMR(VAR = PRIBEST);
%FINDMR(VAR = SECBEST);

IF DXPRI_SSI='' THEN DXPRI_SSI=DIB_DIG;
IF DXSEC_SSI='' THEN DXSEC_SSI=DIB_DIG2;
IF DXPRIBEST='' THEN DXPRIBEST=DIB_DIG;
IF DXSECBEST='' THEN DXSECBEST=DIB_DIG2;

RUN;
%MEND;
%START;

PROC CONTENTS; RUN;

//**************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//**************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.57
JCL/SAS Code: DXPROC

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<DPHELPS@MATHEMATICA-MPR.COM>
RCPT TO:<DPHELPS@MATHEMATICA-MPR.COM>
DATA
FROM:   <DPHELPS@MATHEMATICA-MPR.COM>
TO:     <DPHELPS@MATHEMATICA-MPR.COM>
SUBJECT: DXPROC IS COMPLETE
```

Appendix A.58
JCL/SAS Code: SPLIT2AN

```
//#6502SPL JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:    BUILD DAF18 (50214)
//* DIRECTOR:   CASSANDRA PICKENS JEWELL
//* PROGRAM:    OPDR.TG.PRD.ETTW.#6502.DAF18.DEMO.PRDLIB(SPLIT2AN)
//* PURPOSE:    SPLIT DXPROC INTO ANNUAL FILES
//* CREATED:    SERGE LUKASHANETS 5/26/2016
//* E-MAIL:     ABRYCE@MATHEMATICA-MPR.COM
//*           ALEX.BRYCE@SSA.GOV
//*****************************************************************
//  SET REG='64M'
//*
//JS010  EXEC SAS9,
//      WORK='200000,100000', F10
//      REGION=&REG,
//      PARM='MEMSIZE=&REG'
//*
//IN1     DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPROC.SA.V1,DISP=SHR
//OUT94   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY94.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUT95   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY95.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUT96   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY96.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUT97   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY97.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUT98   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY98.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUT99   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY99.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUT00   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY00.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUT01   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY01.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUT02   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY02.SA.V1,
```

Appendix A.58
JCL/SAS Code: SPLIT2AN

```
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO
//OUT03    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY03.SA.V1,
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO
//OUT04    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY04.SA.V1,
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO
//OUT05    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY05.SA.V1,
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO
//OUT06    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY06.SA.V1,
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO
//OUT07    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY07.SA.V1,
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO
//OUT08    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY08.SA.V1,
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO
//OUT09    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY09.SA.V1,
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO
//OUT10    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY10.SA.V1,
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO
//OUT11    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY11.SA.V1,
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO
//OUT12    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY12.SA.V1,
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO
//OUT13    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY13.SA.V1,
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO
//OUT14    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY14.SA.V1,
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO
//OUT15    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY15.SA.V1,
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO
//OUT16    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY16.SA.V1,
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO
//OUT17    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY17.SA.V1,
```

Appendix A.58
JCL/SAS Code: SPLIT2AN

```
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO
//OUT18    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY18.SA.V1,
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO
//TEMP     DD DSN=&&TEMP,
//          DISP=(NEW,DELETE,DELETE),
//          SPACE=(CYL,(3000,3000),RLSE)
//TEMP1    DD DSN=&&TEMP,
//          DISP=(NEW,DELETE,DELETE),
//          SPACE=(CYL,(3000,3000),RLSE)
//SYSIN   DD *
OPTIONS NOCENTER COMPRESS=YES MPRINT OBS=MAX;

%LET BEGYR=1994;
%LET ENDYR=2018;

* GET VARIABLE LIST FROM INPUT DATASET *;
PROC CONTENTS DATA=IN1.DXPROC NOPRINT
          OUT=TEMP.CONTS(KEEP=NAME);
RUN;

%MACRO SPLITV;

* KEEP ONLY VARIABLES WITHOUT YYMM *;
DATA TEMP.CONTS(DROP=YR MO YYMM);
  SET TEMP.CONTS;
  DO YR=&BEGYR. TO &ENDYR.;
    DO MO=1 TO 12;
    IF MO<=9 THEN YYMM=SUBSTR(STRIP(YR),3,2)||"0"||STRIP(MO);
    ELSE YYMM=SUBSTR(STRIP(YR),3,2)||STRIP(MO);

    IF LENGTH(NAME)>=4 THEN DO;
      IF REVERSE(SUBSTR(REVERSE(STRIP(NAME)),1,4))
        EQ YYMM THEN DELETE;
    END;

    END; /*END OF MO LOOP*/
  END; /*END OF YR LOOP*/
RUN;

PROC SORT DATA=TEMP.CONTS NODUPKEY OUT=TEMP1.CONTS;
  BY NAME;
RUN;
```

Appendix A.58
JCL/SAS Code: SPLIT2AN

```
* CREATE MACRO VARIABLE WHICH CONTAINS ALL COMMON VARIABLES *;
PROC SQL;
  SELECT NAME INTO :COMMVAR SEPARATED BY ' '
  FROM TEMP1.CONTS;
QUIT;

%PUT COMMON VARIABLES=&COMMVAR;

%INCLUDE "OPDR.TG.PRD.ETTW.#6502.DAF18.DEMO.PRDLIB(SPLITCAL)";

%OUTP(IN1.DXPROC,OUT,DXPROC,&BEGYR,&ENDYR,&COMMVAR);

%DO YEAR=&BEGYR %TO &ENDYR;
%LET YR=%SUBSTR(&YEAR,3,2);
TITLE "CONTENTS OF &YEAR DXPROC DATA";
PROC CONTENTS DATA=OUT&YR..DXPROC;
RUN;
TITLE;
%END;

%MEND SPLITV;
%SPLITV;
```

Appendix A.59
JCL/SAS Code: SPLITCAL

```
/* THIS MACRO SPLITS THE MULTI-YEAR DATA INTO YEAR-SPECIFIC FILES;
   INCLUDE IT INTO YOUR PROGRAM;

INSTRUCTIONS:
1. TO RUN THIS MACRO CREATE A PROGRAM WITH JCL NAMES FOR INPUT
   AND OUTPUT DATA SETS, THEN INCLUDE THIS MACRO;
2. SET YOUR PARAMETERS CORRECTLY;

PARAMETERS:
1. OLDFILE - YOUR EXISTING MULTI-YEAR DATA (NNNN.NNNN)
2. FILELOC - JCL LOCATION FOR YOUR YEARLY FILES,
   IT SHOULD CONSIT OF NAME STUB + YEAR
   (E.G., FOR NUM99, NUM00, NUM01, ETC. FILELOC = NUM)
3. FILENAME - SAS DATASET NAMES FOR YOUR YEARLY FILES
   (IT SHOULD BE THE SAME FOR ALL NEW FILES)
4. START_YEAR - THE FIRST YEAR FOR NEW FILES
5. END_YEAR - THE LAST YEAR FOR NEW FILES
6. REGVARS - THE LIST OF NON-YEAR-SPECIFIC VARIABLES,
   WHICH SHOULD BE KEPT IN EACH OF NEW FILES

EXAMPLE:
<OLD FILE>
//IN1      DD DSN=OPDR.TG.PRD.ETTW.<*>.SA.V1,DISP=SHR
<NEW FILES, FROM 1994 TO 2012>
//OUT94    DD DSN=OPDR.TG.PRD.ETTW.<*>.NUMDAT94.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUT95    DD DSN=OPDR.TG.PRD.ETTW.<*>.NUMDAT95.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUT96   DD DSN=OPDR.TG.PRD.ETTW.<*>.NUMDAT96.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
<***>
//OUT12    DD DSN=OPDR.TG.PRD.ETTW.<*>.NUMDAT12.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
<*OTHER NECESSARY JCL STATEMENTS*>

%INCLUDE ...

%OUTP(IN1.ALLYEARS,OUT,YEARF,1994,2012,SSN REC ...);
*/
```

Appendix A.59
JCL/SAS Code: SPLITCAL

```
OPTIONS NOSYMBOLGEN MPRINT;
%MACRO OUTP (OLDFILE,FILELOC,FILENAME,START_YEAR,END_YEAR,REGVARS);

PROC CONTENTS DATA=&OLDFILE OUT=CONT_A ORDER=VARNUM;RUN;

%LET CHNUM = "0" "1" "2" "3" "4" "5" "6" "7" "8" "9";

DATA CONT_A1 (KEEP = BODY);
LENGTH BODY $15.;
SET CONT_A (KEEP=NAME);

IF SUBSTR(NAME,LENGTH(NAME),1) IN (&CHNUM.)
& SUBSTR(NAME,LENGTH(NAME)-1,1) IN (&CHNUM.)
THEN _MNTH = INPUT(SUBSTR(NAME,LENGTH(NAME)-1,2),BEST.);

/*CHECK THAT WE HAVE 12 MONTHS*/
RETAIN COUNT_MNTH;
IF _MNTH = 1 THEN COUNT_MNTH = _MNTH;
ELSE IF _MNTH > 1 THEN COUNT_MNTH +1;
ELSE IF _MNTH < 1 THEN COUNT_MNTH = .;

IF COUNT_MNTH = 12 &
SUBSTR(NAME,LENGTH(NAME)-2,1) IN (&CHNUM.)
& SUBSTR(NAME,LENGTH(NAME)-3,1) IN (&CHNUM.)
THEN DO;
 IF SUBSTR(NAME,LENGTH(NAME)-3,1) IN ("0" "1") THEN
  _YR = INPUT(SUBSTR(NAME,LENGTH(NAME)-3,2),BEST.) + 2000;
 ELSE IF SUBSTR(NAME,LENGTH(NAME)-3,1)="9" THEN
  _YR = INPUT(SUBSTR(NAME,LENGTH(NAME)-3,2),BEST.) + 1900;
 IF &START_YEAR. <= _YR <= &END_YEAR. THEN DO;
  BODY = SUBSTR(NAME,1,LENGTH(NAME)-4);
  OUTPUT;
 END;
 END;

RUN;

PROC FREQ DATA=CONT_A1;
TABLES BODY / NOPRINT OUT=CONT_A2;
RUN;

DATA _NULL_;
SET CONT_A2 END = _A_;
PUT "ALL 12 MONTHS OF " BODY "AVAILABLE FOR " COUNT "YEARS";
CALL SYMPUT("BODY"||LEFT(_N_),TRIM(LEFT(BODY)));
```

Appendix A.59
JCL/SAS Code: SPLITCAL

```
IF _A_ THEN DO;
 CALL SYMPUT("N_BODIES",_N_);
END;
RUN;

/*SPLIT THE DATA*/
DATA
 %DO I = &START_YEAR %TO &END_YEAR;
  %LET J = %SYSFUNC(SUBSTR(&I.,3,2));

   %LET YEARVARS = ;
    %DO B = 1 %TO &N_BODIES.;
     %LET YEARVARS = &YEARVARS &&BODY&B..&J.:;
    %END;

   %PUT &I. : &YEARVARS;
   &FILELOC&J..&FILENAME (KEEP = &REGVARS &YEARVARS)
    %END;
    ;
    SET &OLDFILE;
    RUN;
   %MEND;
```

Appendix A.60
JCL/SAS Code: CRDMG

```
//#7429DMG  JOB (12510000,T715,,SAS,,ITC9FL),COLIP-BRITTANY,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#7429
//JOB01  EXEC SAS9,
//      WORK='180000,90000'
//*****************************************************************
//* PROJECT:   DAF 50214
//* DIRECTOR:  JODY SCHIMMEL HYDE
//* PROGRAM:   OPDR.TG.PRD.ETTW.#7429.DAF18.DEMO.PRDLIB(CRDMG)
//* PURPOSE:   TO CREATE DEMOGRAPHIC VARIABLES FILE FOR DAF
//* CONTACT:   BRITTANY COLIP
//* MPR PHONE: 202 552-6454
//* E-MAIL:    BCOLIP@MATHEMATICA-MPR.COM
//*           BRITTANY.COLIP@SSA.GOV
//*****************************************************************
//*
//* PREVIOUS YEAR DEMO FILE (USE THE FINAL VERSION)
//DEM    DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.DMG,DISP=SHR
//*
//SSR    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSIELIG.SA.V1,DISP=SHR
//MBR    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.MBRREST.SA.V1,DISP=SHR
//NUM    DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.NUMCOMB.SA.V1,DISP=SHR
//T831   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.ALLCDCOM.SA.V1,DISP=SHR
//CER    DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.COMBCER.SA.V1,DISP=SHR
//T833   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.RSTRCT16.SA.V1,DISP=SHR
//FIN    DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MASTFIND.SA.V1,DISP=SHR
//TWP    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.TWPCMPL.SA.V1,DISP=SHR
//MED    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIEDCF.SA.V1,DISP=SHR
//DXP    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPROC.SA.V1,DISP=SHR
//TEMP   DD DSN=&&TEMPX,DISP=(NEW,DELETE,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT1   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18I.DMG.SA.V1,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//OUT2   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN  DD *

OPTIONS NOCENTER LS=132 PS=60 COMPRESS=BINARY OBS=MAX
      MPRINT MACROGEN;

%LET BEGYR=1994;
%LET ENDYR=2018;  /* CHANGE AS NEEDED */
%LET ENDMN=12;    /* CHANGE AS NEEDED */
```

Appendix A.60
JCL/SAS Code: CRDMG

```
%LET DAFYR=18;    /* CHANGE AS NEEDED */

 /* OLD_DOB IS THE MACRO VARIABLE NEEDED BY THE FRACALC PROGRAM
    THAT CALCULATED THE FRADATE AND THE FULL RETIREMENT AGE (FRA
    VARIABLES */
%LET OLD_DOB=DOBBEST;   /* CHANGE AS NEEDED */

%MACRO START;

 /* STEP TO ASSIGN MACRO VARIABLES TO HANDLE TIME SERIES DATA */
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

 /* MACRO VAR TO SET STARTING POINT FOR SORD PROCESSING. WE ONLY
    WE ONLY PROCESS THE CURRENT SORD YEAR IN EACH ITERATION OF
    DAF. ADJUST THIS EACH NEW ITERATION */

%LET SORDSTART=%EVAL((&ENDYR - &BEGYR)*12+1);

 /*CONVERT CHARACTER VARIABLES TO NUMERIC IN ALLCDCOME
   BEFORE MERGE. */
DATA TEMP.ALLCDCOM (DROP=FIRSTPDDOLD PDDOLD:);
  SET T831.ALLCDCOM (KEEP=SSN DODEC: JUDLV: RDT: RID: RB:
                DPM: BFD: DOC: EPE: DD: DT: PD: RFC:
                VRA: DR: FIRST:QD: DSICLAIM:
                %DO YEAR=&BEGYR. %TO 2007;
                %LET YR=%SUBSTR(&YEAR.,3,2);
                  %DO MO=1 %TO 9;
                  MIEX&YR.0&MO
                  %END;
                  %DO MO=10 %TO 12;
                  MIEX&YR.&MO
                  %END;
                %END;
                %DO YEAR=2008 %TO 2008;
                %LET YR=%SUBSTR(&YEAR.,3,2);
                  %DO MO=1 %TO 4;
                  MIEX&YR.0&MO
                  %END;
                %END;
                RENAME=(PDD1-PDD16 = PDDOLD1-PDDOLD16
                      FIRSTPDD = FIRSTPDDOLD
                      %DO YEAR=&BEGYR. %TO 2007;
                      %LET YR=%SUBSTR(&YEAR.,3,2);
                        %DO MO=1 %TO 9;
```

Appendix A.60
JCL/SAS Code: CRDMG

```
                    MIEX&YR.0&MO=MEDEX&YR.0&MO
                    %END;
                    %DO MO=10 %TO 12;
                    MIEX&YR.&MO=MEDEX&YR.&MO
                    %END;
                  %END;
                  %DO YEAR=2008 %TO 2008;
                  %LET YR=%SUBSTR(&YEAR.,3,2);
                    %DO MO=1 %TO 4;
                    MIEX&YR.0&MO=MEDEX&YR.0&MO
                    %END;
                  %END;));

  ARRAY OLD  FIRSTPDDOLD PDDOLD1-PDDOLD16;
  ARRAY NEW  FIRSTPDD PDD1-PDD16;

  DO I = 1 TO DIM(OLD);
    IF OLD(I) NE . THEN
    NEW(I) = MDY(SUBSTR(OLD(I),5,2),1,SUBSTR(OLD(I),1,4));
  END;
RUN;

DATA OUT1.DMG
   OUT2.DMSTW(KEEP = SSN CAN DOBBEST DODBEST TWPCMPLMNTH1
              TOA MFT FRA FRADATE SEX DOEI PST_MR
              SSDI_ONSET SSIELIG_FIRST SSIELIG_ADULT);
   LENGTH AGE18_CDR DOBCER 8;

MERGE
  DEM.DMG (IN=IND RENAME = (SEX=OSEX))
  FIN.MASTFIND (IN=MAST)
  SSR.SSIELIG(IN=INL KEEP = SSN HUN TOA COMP_STA MFT SEXSSR
              START_RD DOBSSR DODSSR LAF CURSTAT
              ELG_RD APP_RD _8080_JD CLM_FIL DISPAYCD
              DIB_MDR DIB_DPM PDSCC PDZIP PDZIP6_9
              REPPAYTP STOP_RD MAX_80JD MAXAPPRD MAXCLMFL
              MAXELGRD MAXFRSTP MAXSTPRD MAXSTRRD LANGSSR
              MIN_80JD MINAPPRD MINCLMFL
              MINFRSTP MINSTPRD MINSTRRD DOC_SSI_MR
              SSI%SUBSTR(&BEGYR.,3,2)-SSI99
              SSI00-SSI%SUBSTR(&ENDYR.,3,2)
              SSIELIG_FIRST SSIELIG_ADULT)

  T833.RSTRCT16(KEEP=SSN AGE18_CDR AGE18REDDT
          T16APPL: T16START: T16STOP:)
```

Appendix A.60
JCL/SAS Code: CRDMG

```
MBR.MBR (IN=INM KEEP=SSN CAN BGN BIC TAC DUALELIG BLN COUNTY
        ADC: APS: BDC: BDOE: BDOF: DAC: DDBC: DDO:
        DSD: EBD: ENTDATD: HBIC: HDD: IME: LOD: PIA:
        PIED: SDS: SMI: HI: TOC: NHI NSMI FIRST:
        LANG DOEID DOECD MBRSEX STATE  TOP
        NPIA: NODF LSAP LSDC LSFD LSPA SIFT SISC
        DOBMBR DOC_SSDI_MR LAF PNOB RDD RP RZIP SLAC
        DOEI DOEC DOST DODMBR CDR1-CDR12 CDRD DPI: NHDEMO
        DXPRI_MBR1-DXPRI_MBR12
        DXSEC_MBR1-DXSEC_MBR12
        DXPRI_DUAL DXSEC_DUAL
        NINSD DIBREQ: DIBHAS:
        SSDI%SUBSTR(&BEGYR.,3,2)-SSDI99
        SSDI00-SSDI%SUBSTR(&ENDYR.,3,2)
        SSDI_ONSET)

 NUM.NUMCOMB(IN=INU KEEP=SSN DOD FRSTNAME LASTNAME
              NAMESUFX DOBNUM NSEX
              POBFORID POBSC
           RENAME=(DOD=DODNUM
                POBFORID=FOREIGN_BORN
                POBSC=COUNTRY_OF_BIRTH)
           )
 TEMP.ALLCDCOM(IN=INC)
 CER.CER(IN=INR KEEP=SSN  DOBCER RSEX STATECD_ENDYR
        /*START WITH JAN OF DAF YEAR*/
        %DO MM=&SORDSTART %TO &TOTMOS;
        CIT&&YY&MM RDX&&YY&MM
        %END;)

 TWP.TWPCMPL(IN=INTW KEEP=SSN TWPCMPLMNTH:)
 MED.MIEDCF(KEEP=SSN BLINDDT
         %DO YEAR=2008 %TO 2008;
         %LET YR=%SUBSTR(&YEAR.,3,2);
           %DO MO=5 %TO 9;
           MEDEX&YR.0&MO
           %END;
           %DO MO=10 %TO 12;
           MEDEX&YR.&MO
           %END;
         %END;
         %DO YEAR=2009 %TO &ENDYR.;
         %LET YR=%SUBSTR(&YEAR.,3,2);
           %DO MO=1 %TO 9;
```

Appendix A.60
JCL/SAS Code: CRDMG

```
            MEDEX&YR.0&MO
            %END;
            %DO MO=10 %TO 12;
            MEDEX&YR.&MO
            %END;
          %END;)

DXP.DXPROC(IN=INDX KEEP=SSN DXPRI_SSI DXSEC_SSI
            DXPRI_DI DXSEC_DI DXPRIBEST DXSECBEST)
;
BY SSN;

/* SUBSET TO VALID SSN'S IN THE MASTER FINDER FILE */
IF MAST AND SSN GT '000000000';

/* SCREEN OUT CASES WHICH HAVE THE WRONG DATA BECAUSE
  2% OF MBR RECORDS HAVE THE WRONG BOAN. WE WILL CHECK
  MBR BIRTH YEAR AND FIRST NAME AGAINST NUMIDENT BIRTH
  YEAR AND FIRST NAME.WHERE THE FIRST NAME IS DIFFERENT
  AND THE BIRTH YEARS ARE MORE THAN 2 YEARS APART WE WILL
  DELETE THE RECORD. THE CHECK ON FIRST NAME MAKES SENSE
  BECAUSE THESE CASES WILL MOST OFTEN OCCUR FOR DEPENDENTS
  WHERE THE PRIMARY HAS THE SAME LAST NAME */

IF DOBMBR NE . THEN MBRYR = YEAR(DOBMBR);

/*ERROR MESSAGE IF DOBNUM HAS MISSING YEAR 042319XX*/
/*AND NUMYR WILL BE MISSING */
NUMYR = INPUT(SUBSTR(DOBNUM,5,4),8.);

IF MBRYR GT .Z AND NUMYR GT .Z THEN DO;
IF BGN NE FRSTNAME AND ABS(MBRYR-NUMYR) > 2 THEN DELETE;
END;

/* CREATE THE BEST DATE OF BIRTH - DOBBEST
  THE NUMIDENT DATA OF BIRTH IS A CHARACTER VARIABLE.
  IF NUMIDENT HAS VALID DATE VALUE, THEN DOBBEST=DOBNUM.
  IF NUMIDENT HAS MISSING DAY/MONTH AND VALID YEAR, THEN
  COMPARE THE YEAR TO DOBSSR, DOBMBR AND DOBCER IN ORDER.
  WHERE AN EQUAL YEAR IS FOUND FILL IN THE MONTH AND DAY.
  IF NO MATCHED YEAR FOUND, THEN SELECT THE FIRST
  NONMISSING DATE VALUE FROM DOBSSR, DOBMBR AND DOBCER
  IN ORDER. AT THE END OF THE PROCESS, IF DOBBEST IS
  STILL MISSING AND NUMIDENT YEAR IS VALID, SET JAN 1 AS
  THE MONTH AND DAY, CREATE DOBFLAG TO MARK THOSE CASES. */
```

Appendix A.60
JCL/SAS Code: CRDMG

```
/*ERROR MESSAGE IF DOBNUM HAS INVALID MONTH/DAY VALUE*/
/*NUMMO AND NUMDAY WILL BE MISSING, DOBBEST WILL BE MISSING*/
NUMMO = INPUT(SUBSTR(DOBNUM,1,2),8.);
NUMDAY = INPUT(SUBSTR(DOBNUM,3,2),8.);
DOBBEST = MDY(NUMMO,NUMDAY,NUMYR);

DOBFLAG = 0;

IF DOBBEST = . THEN DO;
  IF NUMYR NE . THEN DO;
      IF YEAR(DOBSSR) = NUMYR THEN DOBBEST = DOBSSR;
  ELSE IF YEAR(DOBMBR) = NUMYR  THEN DOBBEST = DOBMBR;
  ELSE IF YEAR(DOBCER) = NUMYR  THEN DOBBEST = DOBCER;
  END;
  /*IF NO MATCH IS FOUND SELECT THE FIRST VALID DOB FROM
    THE THREE OTHER DATES*/
  ELSE DOBBEST=COALESCE(DOBSSR,DOBMBR,DOBCER);
END;
/*IF AT THE END OF THE PROCESS, NUMIDENT YEAR IS THE
 ONLY INFO AVAILABLE, CERATE DUMMY MONTH AND DAY, USE
 THE NUMYR FOR DOBBEST. CREATE A FLAG FOR THESE CASES.*/
IF DOBBEST = . AND NUMYR NE . THEN DO;
  IF NUMMO NE . THEN DOBBEST = MDY(NUMMO,1,NUMYR);
  ELSE DOBBEST = MDY(1,1,NUMYR);
  DOBFLAG = 1;
END;

/* CREATE THE BEST DATE OF DEATH - DODBEST
  THE NUMIDENT DATA OF DEATH IS A CHARACTER VARIABLE.
  IF NUMIDENT HAS VALIE DATE VALUE, THEN DODBEST=DODNUM.
  IF NUMIDENT HAS MISSING DAY/MONTH AND VALID YEAR, THEN
  COMPARE THE YEAR TO DODSSR AND DODMBR IN ORDER. WHERE
  AN EQUAL YEAR IS FOUND FILL IN THE MONTH AND DAY.
  IF NO MATCHED YEAR FOUND, THEN SELECT THE FIRST NONMISSING
  DATE VALUE FROM DODSSR AND DODMBR IN ORDER.
  AT THE END OF THE PROCESS, ID DODBEST IS TILL MISSING
  AND NUMIDENT YEAR IS VALID, SET JAN 1 AS THE MONTH AND
  DAY, CREATE DODFLAG TO MARK THOSE CASES.*/

/*ERROR MESSAGE IF DODNUM HAS MISSING YEAR 042319XX*/
/*AND NUMYRD,NUMMOD AND NUMDAYD WILL BE MISSING*/
/*DODBEST WILL BE MISSING*/
NUMYRD = INPUT(SUBSTR(DODNUM,5,4),8.);
NUMMOD = INPUT(SUBSTR(DODNUM,1,2),8.);
```

Appendix A.60
JCL/SAS Code: CRDMG

```
NUMDAYD = INPUT(SUBSTR(DODNUM,3,2),8.);
DODBEST = MDY(NUMMOD,NUMDAYD,NUMYRD);

DODFLAG = 0;

IF DODBEST = . THEN DO;
  IF NUMYRD NE . THEN DO;
        IF YEAR(DODSSR) = NUMYRD THEN DODBEST = DODSSR;
    ELSE IF YEAR(DODMBR) = NUMYRD     THEN DODBEST = DODMBR;
  END;
  /*IF NO MATCH IS FOUND SELECT THE FIRST VALID DODNUM FROM
    THE TWO OTHER DATES */
  ELSE DODBEST = COALESCE(DODSSR,DODMBR);
END;
/* IF AT THE END OF THE PROCESS, NUMIDENT YEAR IS THE ONLY
  INFO AVAILABLE, CREATE DUMMY MONTH AND DAY AND USE THE
  YEAR FOR DODBEST.CREATE A FLAG FOR THESE CASES */
IF DODBEST = . AND NUMYRD NE . THEN DO;
  IF NUMMOD NE . THEN DODBEST = MDY(NUMMOD,1,NUMYRD);
  ELSE DODBEST = MDY(1,1,NUMYRD);
  DODFLAG = 1;
END;

/* CALCULATE FULL RETIREMENT AGE */
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(FRACALC)";

/* CREATE JUDGEMENT INDICATOR (FROM DODEC) VARIABLES
  FROM 831 DATA */
ARRAY DOD1(*) DODEC1-DODEC16;
ARRAY LEV(*) JUDLVL1-JUDLVL16;
ARRAY RDT(*) RDT1-RDT16;
ARRAY RID(*) RID1-RID16;

DO I = DIM(DOD1) TO 1 BY -1 UNTIL(DOD1(I) GT .Z);
  LAST_DODEC = DOD1(I);
END;

/* ESTABLISH THE DATE OF THE FIRST MIE */
/* USE THE VNAME FUNCTION TO CREATE THE VALUE FOR YEAR
  AND MONTH */
ARRAY MEDEXA (&BEGYR.:&ENDYR.,1:12) $
          %DO YEAR=&BEGYR %TO &ENDYR;
          %LET YR=%SUBSTR(&YEAR.,3,2);
          MEDEX&YR.01-MEDEX&YR.12
          %END;;
```

Appendix A.60
JCL/SAS Code: CRDMG

```
LENGTH MIENAME $8;
LENGTH MIE_BEFORE_CDR $1.;

MIENAME = ' ';

/* INITIALIZE INDICATOR VARIABLE FOR MIE TO BLANK.
  IF THERE IS A RECORD IN THE ALLCDR FILE THEN
  INITIALIZE TO 'N'. */
MIE_BEFORE_CDR = ' ';
IF INC THEN MIE_BEFORE_CDR = 'N';

DO YR=&BEGYR. TO &ENDYR. UNTIL (MIENAME NE ' ');
  DO MO=1 TO 12 UNTIL (MIENAME NE ' ');
    IF MEDEXA(YR,MO)='E' THEN DO;
      MIENAME = VNAME(MEDEXA(YR,MO));
      FIRSTMIE=MDY(MO,01,YR);
    END;
  END;
END;

/* DETERMINE IF MIE BEFORE THE FIRST CONTINUING DISABILITY
  REVIEW. THE MIE MONTHS ARE SET FROM THE DATE OF ENTITLEMENT
  TO DISABILTY OR THE DODEC FIELD IF THE FIRST IS MISSING.
  THE DATE OF ENTITLEMENTIS SET AFTER THE JUDGMENT AFFIRMS
  DISABILITY AND IS MOST OFTEN EARLIER THAN THE JUDGMENT DATE
  SINCE IT TAKES TIME FOR A JUDGMENT TO BE MADE. THEREFORE
  WE CHECK WHETHER THE FIRST MIE OCCURS EARLIER OR ON THE
  SAME DATE AS ANY ADJUDICATION EVENT ON THE 833 FILE. THERE
  MAY BE MANY DENIALS BEFORE A CLAIM IS APPROVED SO WE NEED
  TO CHECK THE RESULT OF DETERMINATION FIELD (RDT). THE DAY
  PORTION OF THE FIRST MIE FIELD IS SET TO "1" SO IT WILL
  ALWAYS BE LESS THAN OR = TO DODECN. BUT WE HAVE MONTHLY
  MIE'S ONLY FROM 1994 - IF THE FIRST DODEC IS BEFORE THEN
  WE ARE LIMITED IN ESTABLISHING MIE BEFORE CDR. */
IF FIRSTMIE NE . THEN DO;
/* STOP LOOPING WHEN AN 833 EVENT OCCURS */
  DO I = 1 TO DIM(DOD1) WHILE (RID(I) IN ('2' 'R'));
    IF FIRSTMIE LE DOD1(I) AND RDT(I) = 'A'
      THEN MIE_BEFORE_CDR = 'Y';
    /* IF MIE DATE IS JAN 1 1994 WE CANNOT DETERMINE ITS
      RELATIONSHIP TO A CDR DATE AND SO WE SET THE VARIABLE
      TO MISSING */
    IF FIRSTMIE EQ '01JAN1994'D THEN MIE_BEFORE_CDR = ' ';
  END;
```

Appendix A.60
JCL/SAS Code: CRDMG

```
END;

DROP MIENAME;

/* CREATE REPRESENTATIVE PAYEE INDICATOR FOR SSI */
IF REPPAYTP IN (' ','SEL') THEN REPPYSSI = 0;
ELSE IF REPPAYTP > ' ' THEN REPPYSSI = 1;
ELSE REPPYSSI = .;

/* CREATE REPRESENTATIVE PAYEE INDICATOR */
IF TOP IN (' ','A') THEN REPPYSSD = 0;
ELSE IF TOP > ' ' THEN REPPYSSD = 1;
ELSE REPPYSSD = .;

LENGTH REPPYSSI REPPYSSD  3;

/* TRIAL WORK PERIOD INDICATOR MOVED TO DCF */
IF MAXSTRRD = . AND MAXELGRD NE . THEN MAXSTRRD = MAXELGRD;
ELSE IF MAXSTRRD = . AND MAXELGRD = . THEN  MAXSTRRD = .;

/* PROCESS SORD VARIABLES */
/* ONLY FOR CURRENT ONGOING AND NEW CASES */
IF INR THEN DO;

  ARRAY REMDX{*} $ %DO MM=&SORDSTART %TO &TOTMOS;
            RDX&&YY&MM
            %END;;
  ARRAY REMCT{*} $ %DO MM=&SORDSTART %TO &TOTMOS;
            CIT&&YY&MM
            %END;;

  DO I=1 TO DIM(REMDX);
    IF REMDX{I} NE '' THEN REMDIG1N=REMDX{I};
    IF REMCT{I} NE '' THEN CITIZENN=REMCT{I};
  END;

  DROP %DO MM=&SORDSTART %TO &TOTMOS;
      RDX&&YY&MM CIT&&YY&MM
      %END;;
END; /* INR */

/* SET THE SORD VARIABLES - DO NOT OVERWRITE WITH BLANK */
IF CITIZEN = ' ' THEN CITIZEN = CITIZENN;
IF REMDIG1 = ' ' THEN REMDIG1 = REMDIG1N;
DROP CITIZENN REMDIG1N ;
```

Appendix A.60
JCL/SAS Code: CRDMG

```
/* RECODE NUMIDENT SEX */
    IF NSEX = '1' THEN NUM_SEX = 'M';
ELSE IF NSEX = '2' THEN NUM_SEX = 'F';

/* GET SEX AS THE FIRST NONMISSING VALUE FROM NUMIDENT,
   SEXSSR, MBRSEX, RSEX AND OSEX IN ORDER. */
LENGTH SEX $1.;
SEX = COALESCEC(NUM_SEX,SEXSSR,MBRSEX,RSEX,OSEX);

DROP SEXSSR MBRSEX NSEX RSEX NUM_SEX OSEX;

/* CREATE INDICATOR VARIABLE FOR MALE */
    IF SEX = 'M' THEN MALE = 1;
ELSE IF SEX = 'F' THEN MALE = 0;
ELSE                  MALE = .;

/* CREATE INDICATOR VARIABLE FOR MISSING SEX */
SEXMISS = 0;
IF SEX = ' ' THEN SEXMISS = 1;

/*CREATE BOND PARTICIPATION INDICATOR*/
ARRAY DPI(*) $ DPI1 - DPI10;

BOND = .;
DO I = 1 TO DIM(DPI) UNTIL (BOND NE .);
   IF DPI(I) = "DD" THEN BOND = 1;
END;
IF INM = 1 AND BOND NE 1 THEN BOND = 0;

/*CREATE MOST RECENT DATES FOR HI AND SMI*/
HI_START_MR = MAX(OF HI_START1-HI_START10);
HI_TERM_MR = MAX(OF HI_TERM1-HI_TERM10);
SMI_START_MR = MAX(OF SMI_START1-SMI_START20);
SMI_TERM_MR = MAX(OF SMI_TERM1-SMI_TERM20);

/*CREATE THE MOST RECENT MBR DIG1 AND DIG2 VALUES*/
LENGTH DIG_MR SDIG_MR $4;
ARRAY DIGAR1(12) DXPRI_MBR1-DXPRI_MBR12;
ARRAY DIGAR2(12) DXSEC_MBR1-DXSEC_MBR12;

DO I  = 12 TO 1 BY -1 UNTIL(DIGAR1(I) NE ' ');
   DIG_MR = DIGAR1(I);
END;
```

Appendix A.60
JCL/SAS Code: CRDMG

```
    DO I  = 12 TO 1 BY -1 UNTIL(DIGAR2(I) NE ' ');
      SDIG_MR = DIGAR2(I);
    END;

    DROP MBRYR NUMYR NUMDAY NUMMO NUMYRD NUMDAYD NUMMOD I
        %DO MM=1 %TO &TOTMOS; MEDEX&&YY&MM %END;;

RUN;
%MEND;
%START;

PROC CONTENTS DATA=OUT1.DMG;
TITLE "DEMO FOR DAF&DAFYR.";
RUN;

TITLE 'DEMO FREQS';
PROC FREQ DATA=OUT1.DMG;
  TABLES SEX: CITIZEN LANG LANGSSR
        FIRSTMIE MIE_BEFORE_CDR DUALELIG
        DOBBEST DOBFLAG DODBEST DODFLAG
        DPI1 BOND FIRSTPDD PDD1-PDD16
        SSIELIG_FIRST SSIELIG_ADULT;
  FORMAT DOBBEST DODBEST FIRSTMIE
        SSIELIG_FIRST SSIELIG_ADULT YYMMN6.;
RUN;

//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<BCOLIP@MATHEMATICA-MPR.COM>
RCPT TO:<BCOLIP@MATHEMATICA-MPR.COM>
DATA
FROM:   <BCOLIP@MATHEMATICA-MPR.COM>
TO:     <BCOLIP@MATHEMATICA-MPR.COM>
SUBJECT: SUBMISSION DAF18 CRDMG IS COMPLETE
CRDMG IS COMPLETE.
```

Appendix A.61
JCL/SAS Code: FINDMG

```
//#7429FDM  JOB (12510000,T715,,SAS,,ITC9FL),COLIP-BRITTANY,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#7429
//JOB01     EXEC SAS9,
//         WORK='180000,90000'
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    JODY SCHIMMEL-HYDE
//* PROGRAM:     OPDR.TG.PRD.ETTW.#7429.DAF18.DEMO.PRDLIB(FINDEMO)
//* DESCRIPTION: FINALIZE DMG FILE, CREATE 10% FILE
//* DATE:
//* UPDATE:      11/01/2019 MIAOMIAO SHEN FOR DAF18
//*****************************************************************
//*
//DEM   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18I.DMG.SA.V1,DISP=SHR
//COM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//* GET PST_MR FROM PSTMR DATASET CREATED DURING INTERMEDIATE
//*  ANNUALS PROCESSING
//PST   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.PSTMR.SA.V1,DISP=SHR
//LAF   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.LAFMR.SA.V1,DISP=SHR
//* ALSO BRINGING IN THE PSTA_MR AND PSTA_MR_DATE, WHICH WERE
//*   CREATED DURING THE SSR PROCESSING (THIS SHOULD PROBABLY
//*     JUST BE KEPT ON THE INTERMEDIATE DMG NEXT YEAR);
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSIELIG.SA.V1,DISP=SHR
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.DMG,
//         DISP=(MOD,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMGCON.SA.V1,
//         DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//OUT3  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10DMG,
//         DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//OUT4  DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.P10DCON.SA.V1,
//         DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD *

OPTIONS NOCENTER LS=132 PS=60 COMPRESS=BINARY OBS=MAX
      MPRINT MACROGEN;

%LET BEGYR=1994; /*CHANGE AS NEEDED*/
%LET ENDYR=2018; /*CHANGE AS NEEDED*/

%MACRO START;
```

Appendix A.61
JCL/SAS Code: FINDMG

```
DATA OUT1.DMG;
  MERGE DEM.DMG ( IN=INFIN
            DROP= BOND LAF
                REMDIG1 STATECD_ENDYR
            WHERE=(YEAR(DODBEST)>=1996 OR
                 YEAR(DODBEST)=.))
      /* BRING IN PSTA_MR AND PSTA_MR_DATE */
      SSR.SSIELIG(KEEP=SSN PSTA_:)
      COM.COMVARS
      PST.PSTMR /* THIS ONLY HAS SSN AND PST_MR VARS */
      LAF.LAFMR
      ;
  BY SSN;

  %INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.DEMO.PRDLIB(DEMOLBLS)";

  IF INFIN;

  /* COLLAPSE GROUPS OF VALUES */
  ARRAY RB(*)$  FIRSTRB RB1-RB16;

  DO I=1 TO DIM(RB);
       IF RB(I) IN ("K1","L1","M3","M5","M7","Z1") THEN RB(I)="W1";
    ELSE IF RB(I) IN ("K2","L2","M4","M6","M8","Z2") THEN RB(I)="W2";
    ELSE IF RB(I) IN ("36","37","38","39") THEN RB(I)="99";
  END;

  IF RDD IN ("0L1","0L2","0M5","0M6","0K1","0K2","0M3","0M4",
         "0M7","0M8","0Z1","0Z2","0X3") THEN RDD="OTH";

  ARRAY BDC(*)$  BDC1 - BDC12;

  DO J=1 TO DIM(BDC);
    IF BDC(J) IN ("L1","L2","M5","M6","K1","K2","M3","M4",
              "M7","M8","Z1","Z2","0X3") THEN BDC(J)="TH";
  END;

  IF CURSTAT IN ("N10","N11","N12","N17","N18","N20","N36",
            "N37","N38","N39","N47","N48","N49","N50")
    THEN CURSTAT="W01";

  ARRAY CDR(*)$  CDRD CDR1 - CDR12;

  DO K=1 TO DIM(CDR);
```

Appendix A.61
JCL/SAS Code: FINDMG

```
      IF CDR(K) IN ("F","N","W") THEN CDR(K)="X";
    END;

    DROP I J K
        DODEC_INDEX _8080_JD MAXAPPRD RP MO YR
        ;

    RENAME APP_RD=MAXAPPRD;
  RUN;

  TITLE "CONTENTS OF DMG FILE";
  PROC CONTENTS DATA=OUT1.DMG OUT=OUT2.DMGCON;
  RUN;
  TITLE;

   /* CREATE THE SIMPLE 10% EXTRACT DATA MART FOR DEMO */
  DATA OUT3.P10DEMO;
    SET OUT1.DMG;
    IF (SUBSTR(SSN,8,1) IN ('0', '2', '4', '7', '9')) AND
      (SUBSTR(SSN,9,1) IN ('0', '5'));
  RUN;

  TITLE "CONTENTS OF 10% DMG FILE";
  PROC CONTENTS DATA=OUT3.P10DEMO OUT=OUT4.P10DCON;
  RUN;
  TITLE;

  %MEND START;
  %START;

  //*************************************************
  //* SENDING EMAIL FROM HOST USING IEBGENER
  //*************************************************
  //SENDNOTE EXEC PGM=IEBGENER
  //SYSIN    DD DUMMY
  //SYSPRINT DD SYSOUT=*
  //SYSUT2   DD SYSOUT=(B,SMTP)
  //SYSUT1   DD *
  HELO MVSHOST
  MAIL FROM:<BCOLIP@MATHEMATICA-MPR.COM>
  RCPT TO:<BCOLIP@MATHEMATICA-MPR.COM>
  DATA
  FROM:   <BCOLIP@MATHEMATICA-MPR.COM>
  TO:     <BCOLIP@MATHEMATICA-MPR.COM>
  SUBJECT: DMG FINALIZATION COMPLETE
```

Appendix A.62
JCL/SAS Code: DEMOLBLS

```
 %MACRO GETLB;
LABEL
ADCD="SSDI DUAL ELIG-DISAB CESSATION DATE-SUPPLEMENTARY RECORD"
ADC1="SSDI DISABILITY CESSATION DATE 1"
ADC10="SSDI DISABILITY CESSATION DATE 10"
ADC11="SSDI DISABILITY CESSATION DATE 11"
ADC12="SSDI DISABILITY CESSATION DATE 12"
ADC2="SSDI DISABILITY CESSATION DATE 2"
ADC3="SSDI DISABILITY CESSATION DATE 3"
ADC4="SSDI DISABILITY CESSATION DATE 4"
ADC5="SSDI DISABILITY CESSATION DATE 5"
ADC6="SSDI DISABILITY CESSATION DATE 6"
ADC7="SSDI DISABILITY CESSATION DATE 7"
ADC8="SSDI DISABILITY CESSATION DATE 8"
ADC9="SSDI DISABILITY CESSATION DATE 9"
AGE18_CDR="SSI ADULT REDETERMINATION INDICATOR"
AGE18REDDT="SSI FAVORABLE AGE 18 REDETERMINATION DATE"
APP_RD="SSI APPLICATION DATE (MOST RECENT)"
APSD="SSDI DUAL ELIG-APPEALS DATE- SUPPLEMENTARY RECORD"
APS1="SSDI APPEALS DATE 1"
APS10="SSDI APPEALS DATE 10"
APS11="SSDI APPEALS DATE 11"
APS12="SSDI APPEALS DATE 12"
APS2="SSDI APPEALS DATE 2"
APS3="SSDI APPEALS DATE 3"
APS4="SSDI APPEALS DATE 4"
APS5="SSDI APPEALS DATE 5"
APS6="SSDI APPEALS DATE 6"
APS7="SSDI APPEALS DATE 7"
APS8="SSDI APPEALS DATE 8"
APS9="SSDI APPEALS DATE 9"
BDCD="SSDI DUAL ELIG-BASIS FOR DENIAL CODE-SUPPLEMENTARY RECORD"
BDC1="SSDI BASIS FOR DENIAL CODE 1"
BDC10="SSDI BASIS FOR DENIAL CODE 10"
BDC11="SSDI BASIS FOR DENIAL CODE 11"
BDC12="SSDI BASIS FOR DENIAL CODE 12"
BDC2="SSDI BASIS FOR DENIAL CODE 2"
BDC3="SSDI BASIS FOR DENIAL CODE 3"
BDC4="SSDI BASIS FOR DENIAL CODE 4"
BDC5="SSDI BASIS FOR DENIAL CODE 5"
BDC6="SSDI BASIS FOR DENIAL CODE 6"
BDC7="SSDI BASIS FOR DENIAL CODE 7"
BDC8="SSDI BASIS FOR DENIAL CODE 8"
BDC9="SSDI BASIS FOR DENIAL CODE 9"
```

Appendix A.62
JCL/SAS Code: DEMOLBLS

```
DODMBR="SSDI DATE OF DEATH - MBR"
BDOE_START1="SSDI DATE OF ENTITLEMENT START  1"
BDOE_START10="SSDI DATE OF ENTITLEMENT START  10"
BDOE_START11="SSDI DATE OF ENTITLEMENT START  11"
BDOE_START12="SSDI DATE OF ENTITLEMENT START  12"
BDOE_START13="SSDI DATE OF ENTITLEMENT START  13"
BDOE_START14="SSDI DATE OF ENTITLEMENT START  14"
BDOE_START15="SSDI DATE OF ENTITLEMENT START  15"
BDOE_START16="SSDI DATE OF ENTITLEMENT START  16"
BDOE_START17="SSDI DATE OF ENTITLEMENT START  17"
BDOE_START18="SSDI DATE OF ENTITLEMENT START  18"
BDOE_START19="SSDI DATE OF ENTITLEMENT START  19"
BDOE_START2="SSDI DATE OF ENTITLEMENT START  2"
BDOE_START20="SSDI DATE OF ENTITLEMENT START  20"
BDOE_START21="SSDI DATE OF ENTITLEMENT START  21"
BDOE_START22="SSDI DATE OF ENTITLEMENT START  22"
BDOE_START23="SSDI DATE OF ENTITLEMENT START  23"
BDOE_START24="SSDI DATE OF ENTITLEMENT START  24"
BDOE_START25="SSDI DATE OF ENTITLEMENT START  25"
BDOE_START3="SSDI DATE OF ENTITLEMENT START  3"
BDOE_START4="SSDI DATE OF ENTITLEMENT START  4"
BDOE_START5="SSDI DATE OF ENTITLEMENT START  5"
BDOE_START6="SSDI DATE OF ENTITLEMENT START  6"
BDOE_START7="SSDI DATE OF ENTITLEMENT START  7"
BDOE_START8="SSDI DATE OF ENTITLEMENT START  8"
BDOE_START9="SSDI DATE OF ENTITLEMENT START  9"
BDOE_TERM1="SSDI DATE OF ENTITLEMENT TERMINATION 1"
BDOE_TERM10="SSDI DATE OF ENTITLEMENT TERMINATION 10"
BDOE_TERM11="SSDI DATE OF ENTITLEMENT TERMINATION 11"
BDOE_TERM12="SSDI DATE OF ENTITLEMENT TERMINATION 12"
BDOE_TERM13="SSDI DATE OF ENTITLEMENT TERMINATION 13"
BDOE_TERM14="SSDI DATE OF ENTITLEMENT TERMINATION 14"
BDOE_TERM15="SSDI DATE OF ENTITLEMENT TERMINATION 15"
BDOE_TERM16="SSDI DATE OF ENTITLEMENT TERMINATION 16"
BDOE_TERM17="SSDI DATE OF ENTITLEMENT TERMINATION 17"
BDOE_TERM18="SSDI DATE OF ENTITLEMENT TERMINATION 18"
BDOE_TERM19="SSDI DATE OF ENTITLEMENT TERMINATION 19"
BDOE_TERM2="SSDI DATE OF ENTITLEMENT TERMINATION 2"
BDOE_TERM20="SSDI DATE OF ENTITLEMENT TERMINATION 20"
BDOE_TERM21="SSDI DATE OF ENTITLEMENT TERMINATION 21"
BDOE_TERM22="SSDI DATE OF ENTITLEMENT TERMINATION 22"
BDOE_TERM23="SSDI DATE OF ENTITLEMENT TERMINATION 23"
BDOE_TERM24="SSDI DATE OF ENTITLEMENT TERMINATION 24"
BDOE_TERM25="SSDI DATE OF ENTITLEMENT TERMINATION 25"
BDOE_TERM3="SSDI DATE OF ENTITLEMENT TERMINATION 3"
```

Appendix A.62
JCL/SAS Code: DEMOLBLS

```
BDOE_TERM4="SSDI DATE OF ENTITLEMENT TERMINATION 4"
BDOE_TERM5="SSDI DATE OF ENTITLEMENT TERMINATION 5"
BDOE_TERM6="SSDI DATE OF ENTITLEMENT TERMINATION 6"
BDOE_TERM7="SSDI DATE OF ENTITLEMENT TERMINATION 7"
BDOE_TERM8="SSDI DATE OF ENTITLEMENT TERMINATION 8"
BDOE_TERM9="SSDI DATE OF ENTITLEMENT TERMINATION 9"
BDOF1="SSDI DATE OF FILING ENTRY 1"
BDOF10="SSDI DATE OF FILING ENTRY 10"
BDOF11="SSDI DATE OF FILING ENTRY 11"
BDOF12="SSDI DATE OF FILING ENTRY 12"
BDOF13="SSDI DATE OF FILING ENTRY 13"
BDOF14="SSDI DATE OF FILING ENTRY 14"
BDOF15="SSDI DATE OF FILING ENTRY 15"
BDOF16="SSDI DATE OF FILING ENTRY 16"
BDOF17="SSDI DATE OF FILING ENTRY 17"
BDOF18="SSDI DATE OF FILING ENTRY 18"
BDOF19="SSDI DATE OF FILING ENTRY 19"
BDOF2="SSDI DATE OF FILING ENTRY 2"
BDOF20="SSDI DATE OF FILING ENTRY 20"
BDOF21="SSDI DATE OF FILING ENTRY 21"
BDOF22="SSDI DATE OF FILING ENTRY 22"
BDOF23="SSDI DATE OF FILING ENTRY 23"
BDOF24="SSDI DATE OF FILING ENTRY 24"
BDOF25="SSDI DATE OF FILING ENTRY 25"
BDOF3="SSDI DATE OF FILING ENTRY 3"
BDOF4="SSDI DATE OF FILING ENTRY 4"
BDOF5="SSDI DATE OF FILING ENTRY 5"
BDOF6="SSDI DATE OF FILING ENTRY 6"
BDOF7="SSDI DATE OF FILING ENTRY 7"
BDOF8="SSDI DATE OF FILING ENTRY 8"
BDOF9="SSDI DATE OF FILING ENTRY 9"
BFD1="BASIS FOR DETERMINATION 1"
BFD10="BASIS FOR DETERMINATION 10"
BFD11="BASIS FOR DETERMINATION 11"
BFD12="BASIS FOR DETERMINATION 12"
BFD13="BASIS FOR DETERMINATION 13"
BFD14="BASIS FOR DETERMINATION 14"
BFD15="BASIS FOR DETERMINATION 15"
BFD16="BASIS FOR DETERMINATION 16"
BFD2="BASIS FOR DETERMINATION 2"
BFD3="BASIS FOR DETERMINATION 3"
BFD4="BASIS FOR DETERMINATION 4"
BFD5="BASIS FOR DETERMINATION 5"
BFD6="BASIS FOR DETERMINATION 6"
BFD7="BASIS FOR DETERMINATION 7"
```

Appendix A.62
JCL/SAS Code: DEMOLBLS

```
BFD8="BASIS FOR DETERMINATION 8"
BFD9="BASIS FOR DETERMINATION 9"
BGN="SSDI BENEFICIARY GIVEN NAME"
BIC="SSDI BENEFICIARY IDENTIFICATION CODE (BIC)"
BLINDDT="DATE OF BLINDNESS ONSET"
BLN="SSDI BENEFICIARY LAST NAME"
BMI="SSDI BENEFICIARY MIDDLE INITIAL"
CAN="SSDI CLAIM ACCOUNT NUMBER"
CDRD="SSDI DUAL ELIG- DISABILITY CESSATION REASON-SUPPLEMENTARY RECORD"
CDR1="SSDI DISABILITY CESSATION REASON 1"
CDR10="SSDI DISABILITY CESSATION REASON 10"
CDR11="SSDI DISABILITY CESSATION REASON 11"
CDR12="SSDI DISABILITY CESSATION REASON 12"
CDR2="SSDI DISABILITY CESSATION REASON 2"
CDR3="SSDI DISABILITY CESSATION REASON 3"
CDR4="SSDI DISABILITY CESSATION REASON 4"
CDR5="SSDI DISABILITY CESSATION REASON 5"
CDR6="SSDI DISABILITY CESSATION REASON 6"
CDR7="SSDI DISABILITY CESSATION REASON 7"
CDR8="SSDI DISABILITY CESSATION REASON 8"
CDR9="SSDI DISABILITY CESSATION REASON 9"
CITIZEN="SSI US CITIZENSHIP INDICATOR"
CLM_FIL="SSI CLAIM FILED DATE"
COMP_STA="SSI STATUS TYPE OF ACTION"
COUNTY="SSDI SSA COUNTY CODE OF RESIDENCE"
COUNTRY_OF_BIRTH="COUNTRY OF BIRTH"
CURSTAT="SSI MOST RECENT PAYMENT STATUS"
DACD="SSDI DUAL ELIG-DISABILITY AWARD CODE-SUPPLEMENTARY RECORD"
DAC1="SSDI DISABILITY AWARD CODE 1"
DAC10="SSDI DISABILITY AWARD CODE 10"
DAC11="SSDI DISABILITY AWARD CODE 11"
DAC12="SSDI DISABILITY AWARD CODE 12"
DAC2="SSDI DISABILITY AWARD CODE 2"
DAC3="SSDI DISABILITY AWARD CODE 3"
DAC4="SSDI DISABILITY AWARD CODE 4"
DAC5="SSDI DISABILITY AWARD CODE 5"
DAC6="SSDI DISABILITY AWARD CODE 6"
DAC7="SSDI DISABILITY AWARD CODE 7"
DAC8="SSDI DISABILITY AWARD CODE 8"
DAC9="SSDI DISABILITY AWARD CODE 9"
DDBCD="SSDI DUAL ELIG-DATE OF BENEFIT CESSATION-SUPPLEMENTARY RECORD"
DDBC1="SSDI DISABILITY CESSATION DATE 1"
DDBC10="SSDI DISABILITY CESSATION DATE 10"
DDBC11="SSDI DISABILITY CESSATION DATE 11"
DDBC12="SSDI DISABILITY CESSATION DATE 12"
```

Appendix A.62
JCL/SAS Code: DEMOLBLS

```
DDBC2="SSDI DISABILITY CESSATION DATE 2"
DDBC3="SSDI DISABILITY CESSATION DATE 3"
DDBC4="SSDI DISABILITY CESSATION DATE 4"
DDBC5="SSDI DISABILITY CESSATION DATE 5"
DDBC6="SSDI DISABILITY CESSATION DATE 6"
DDBC7="SSDI DISABILITY CESSATION DATE 7"
DDBC8="SSDI DISABILITY CESSATION DATE 8"
DDBC9="SSDI DISABILITY CESSATION DATE 9"
DDOD="SSDI DUAL ELIG-DISABILITY ONSET DATE-SUPPLEMENTARY RECORD"
DDO1="SSDI DISABILITY ONSET DATE 1"
DDO10="SSDI DISABILITY ONSET DATE 10"
DDO11="SSDI DISABILITY ONSET DATE 11"
DDO12="SSDI DISABILITY ONSET DATE 12"
DDO2="SSDI DISABILITY ONSET DATE 2"
DDO3="SSDI DISABILITY ONSET DATE 3"
DDO4="SSDI DISABILITY ONSET DATE 4"
DDO5="SSDI DISABILITY ONSET DATE 5"
DDO6="SSDI DISABILITY ONSET DATE 6"
DDO7="SSDI DISABILITY ONSET DATE 7"
DDO8="SSDI DISABILITY ONSET DATE 8"
DDO9="SSDI DISABILITY ONSET DATE 9"
DD1="MEDICAL CONTINUING DISABILITY REVIEW DATE 1"
DD10="MEDICAL CONTINUING DISABILITY REVIEW DATE 10"
DD11="MEDICAL CONTINUING DISABILITY REVIEW DATE 11"
DD12="MEDICAL CONTINUING DISABILITY REVIEW DATE 12"
DD13="MEDICAL CONTINUING DISABILITY REVIEW DATE 13"
DD14="MEDICAL CONTINUING DISABILITY REVIEW DATE 14"
DD15="MEDICAL CONTINUING DISABILITY REVIEW DATE 15"
DD16="MEDICAL CONTINUING DISABILITY REVIEW DATE 16"
DD2="MEDICAL CONTINUING DISABILITY REVIEW DATE 2"
DD3="MEDICAL CONTINUING DISABILITY REVIEW DATE 3"
DD4="MEDICAL CONTINUING DISABILITY REVIEW DATE 4"
DD5="MEDICAL CONTINUING DISABILITY REVIEW DATE 5"
DD6="MEDICAL CONTINUING DISABILITY REVIEW DATE 6"
DD7="MEDICAL CONTINUING DISABILITY REVIEW DATE 7"
DD8="MEDICAL CONTINUING DISABILITY REVIEW DATE 8"
DD9="MEDICAL CONTINUING DISABILITY REVIEW DATE 9"
DODSSR="SSI DATE OF DEATH - FROM SSR"
DIB_DPM="SSI PERMANENT DISABILITY INDICATOR"
DIB_MDR="SSI MEDICAL DIARY REASON"
DIBHAS1="DIB QUARTERS OF COVERAGE POSSESSED 1"
DIBHAS10="DIB QUARTERS OF COVERAGE POSSESSED 10"
DIBHAS11="DIB QUARTERS OF COVERAGE POSSESSED 11"
DIBHAS12="DIB QUARTERS OF COVERAGE POSSESSED 12"
DIBHAS13="DIB QUARTERS OF COVERAGE POSSESSED 13"
```

Appendix A.62
JCL/SAS Code: DEMOLBLS

```
DIBHAS14="DIB QUARTERS OF COVERAGE POSSESSED 14"
DIBHAS15="DIB QUARTERS OF COVERAGE POSSESSED 15"
DIBHAS2="DIB QUARTERS OF COVERAGE POSSESSED 2"
DIBHAS3="DIB QUARTERS OF COVERAGE POSSESSED 3"
DIBHAS4="DIB QUARTERS OF COVERAGE POSSESSED 4"
DIBHAS5="DIB QUARTERS OF COVERAGE POSSESSED 5"
DIBHAS6="DIB QUARTERS OF COVERAGE POSSESSED 6"
DIBHAS7="DIB QUARTERS OF COVERAGE POSSESSED 7"
DIBHAS8="DIB QUARTERS OF COVERAGE POSSESSED 8"
DIBHAS9="DIB QUARTERS OF COVERAGE POSSESSED 9"
DIBREQ1="DIB QUARTERS OF COVERAGE REQUIRED 1"
DIBREQ10="DIB QUARTERS OF COVERAGE REQUIRED 10"
DIBREQ11="DIB QUARTERS OF COVERAGE REQUIRED 11"
DIBREQ12="DIB QUARTERS OF COVERAGE REQUIRED 12"
DIBREQ13="DIB QUARTERS OF COVERAGE REQUIRED 13"
DIBREQ14="DIB QUARTERS OF COVERAGE REQUIRED 14"
DIBREQ15="DIB QUARTERS OF COVERAGE REQUIRED 15"
DIBREQ2="DIB QUARTERS OF COVERAGE REQUIRED 2"
DIBREQ3="DIB QUARTERS OF COVERAGE REQUIRED 3"
DIBREQ4="DIB QUARTERS OF COVERAGE REQUIRED 4"
DIBREQ5="DIB QUARTERS OF COVERAGE REQUIRED 5"
DIBREQ6="DIB QUARTERS OF COVERAGE REQUIRED 6"
DIBREQ7="DIB QUARTERS OF COVERAGE REQUIRED 7"
DIBREQ8="DIB QUARTERS OF COVERAGE REQUIRED 8"
DIBREQ9="DIB QUARTERS OF COVERAGE REQUIRED 9"
DIG_MR="SSDI PRIMARY DIAGNOSIS CODE, MOST RECENT"
DISPAYCD="SSI DISABILITY PAYMENT CODE"
DOBBEST="BEST DATE OF BIRTH"
DOBFLAG="JANUARY 1 IMPUTED FOR BEST DATE OF BIRTH"
DOBSSR="DATE OF BIRTH - SSR"
DOBMBR="DATE OF BIRTH - MBR"
DOBNUM="DATE OF BIRTH - NUMIDENT"
DOBCER="DATE OF BIRTH - CER100% FIELD FILE"
DOC_SSDI_MR="SSDI DISTRICT OFFICE CODE, MOST RECENT"
DOC_SSI_MR="SSI DISTRICT OFFICE CODE, MOST RECENT"
DOC1="DISTRICT OFFICE CODE 1"
DOC10="DISTRICT OFFICE CODE 10"
DOC11="DISTRICT OFFICE CODE 11"
DOC12="DISTRICT OFFICE CODE 12"
DOC13="DISTRICT OFFICE CODE 13"
DOC14="DISTRICT OFFICE CODE 14"
DOC15="DISTRICT OFFICE CODE 15"
DOC16="DISTRICT OFFICE CODE 16"
DOC2="DISTRICT OFFICE CODE 2"
DOC3="DISTRICT OFFICE CODE 3"
```

Appendix A.62
JCL/SAS Code: DEMOLBLS

```
DOC4="DISTRICT OFFICE CODE 4"
DOC5="DISTRICT OFFICE CODE 5"
DOC6="DISTRICT OFFICE CODE 6"
DOC7="DISTRICT OFFICE CODE 7"
DOC8="DISTRICT OFFICE CODE 8"
DOC9="DISTRICT OFFICE CODE 9"
DODNUM="DATE OF DEATH - NUMIDENT"
DODBEST="BEST DATE OF DEATH"
DODEC1="DATE OF MEDICAL DECISION (SSA OR STATE DDS) 1"
DODEC10="DATE OF MEDICAL DECISION (SSA OR STATE DDS) 10"
DODEC11="DATE OF MEDICAL DECISION (SSA OR STATE DDS) 11"
DODEC12="DATE OF MEDICAL DECISION (SSA OR STATE DDS) 12"
DODEC13="DATE OF MEDICAL DECISION (SSA OR STATE DDS) 13"
DODEC14="DATE OF MEDICAL DECISION (SSA OR STATE DDS) 14"
DODEC15="DATE OF MEDICAL DECISION (SSA OR STATE DDS) 15"
DODEC16="DATE OF MEDICAL DECISION (SSA OR STATE DDS) 16"
DODEC2="DATE OF MEDICAL DECISION (SSA OR STATE DDS) 2"
DODEC3="DATE OF MEDICAL DECISION (SSA OR STATE DDS) 3"
DODEC4="DATE OF MEDICAL DECISION (SSA OR STATE DDS) 4"
DODEC5="DATE OF MEDICAL DECISION (SSA OR STATE DDS) 5"
DODEC6="DATE OF MEDICAL DECISION (SSA OR STATE DDS) 6"
DODEC7="DATE OF MEDICAL DECISION (SSA OR STATE DDS) 7"
DODEC8="DATE OF MEDICAL DECISION (SSA OR STATE DDS) 8"
DODEC9="DATE OF MEDICAL DECISION (SSA OR STATE DDS) 9"
DODFLAG="JANUARY 1 IMPUTED FOR BEST DATE OF DEATH"
DOEC="SSDI MOST RECENT ENTITLEMENT DATE"
DOECD=
"SSDI DUAL ELIG-SSDI MOST RECENT ENTITLEMENT DATE-SUPPLEMENTARY RECORD"
DOEI="SSDI INITIAL ENTITLEMENT DATE"
DOEID=
"SSDI DUAL ELIG-SSDI INITIAL ENTITLEMENT DATE-SUPPLEMENTARY RECORD"
DOST="SSDI SUSPENSION OR TERMINATION DATE"
DPI_START1="SSDI DEMONSTRATION PROJECT START DATE 1"
DPI_START10="SSDI DEMONSTRATION PROJECT START DATE 10"
DPI_START2="SSDI DEMONSTRATION PROJECT START DATE 2"
DPI_START3="SSDI DEMONSTRATION PROJECT START DATE 3"
DPI_START4="SSDI DEMONSTRATION PROJECT START DATE 4"
DPI_START5="SSDI DEMONSTRATION PROJECT START DATE 5"
DPI_START6="SSDI DEMONSTRATION PROJECT START DATE 6"
DPI_START7="SSDI DEMONSTRATION PROJECT START DATE 7"
DPI_START8="SSDI DEMONSTRATION PROJECT START DATE 8"
DPI_START9="SSDI DEMONSTRATION PROJECT START DATE 9"
DPI_STOP1="SSDI DEMONSTRATION PROJECT END DATE 1"
DPI_STOP10="SSDI DEMONSTRATION PROJECT END DATE 10"
DPI_STOP2="SSDI DEMONSTRATION PROJECT END DATE 2"
```

Appendix A.62
JCL/SAS Code: DEMOLBLS

```
DPI_STOP3="SSDI DEMONSTRATION PROJECT END DATE 3"
DPI_STOP4="SSDI DEMONSTRATION PROJECT END DATE 4"
DPI_STOP5="SSDI DEMONSTRATION PROJECT END DATE 5"
DPI_STOP6="SSDI DEMONSTRATION PROJECT END DATE 6"
DPI_STOP7="SSDI DEMONSTRATION PROJECT END DATE 7"
DPI_STOP8="SSDI DEMONSTRATION PROJECT END DATE 8"
DPI_STOP9="SSDI DEMONSTRATION PROJECT END DATE 9"
DPI1="SSDI DEMONSTRATION PROJECT CODE 1"
DPI10="SSDI DEMONSTRATION PROJECT CODE 10"
DPI2="SSDI DEMONSTRATION PROJECT CODE 2"
DPI3="SSDI DEMONSTRATION PROJECT CODE 3"
DPI4="SSDI DEMONSTRATION PROJECT CODE 4"
DPI5="SSDI DEMONSTRATION PROJECT CODE 5"
DPI6="SSDI DEMONSTRATION PROJECT CODE 6"
DPI7="SSDI DEMONSTRATION PROJECT CODE 7"
DPI8="SSDI DEMONSTRATION PROJECT CODE 8"
DPI9="SSDI DEMONSTRATION PROJECT CODE 9"
DPM1="PERMANENT DISABILITY CODE ENTRY 1"
DPM10="PERMANENT DISABILITY CODE ENTRY 10"
DPM11="PERMANENT DISABILITY CODE ENTRY 11"
DPM12="PERMANENT DISABILITY CODE ENTRY 12"
DPM13="PERMANENT DISABILITY CODE ENTRY 13"
DPM14="PERMANENT DISABILITY CODE ENTRY 14"
DPM15="PERMANENT DISABILITY CODE ENTRY 15"
DPM16="PERMANENT DISABILITY CODE ENTRY 16"
DPM2="PERMANENT DISABILITY CODE ENTRY 2"
DPM3="PERMANENT DISABILITY CODE ENTRY 3"
DPM4="PERMANENT DISABILITY CODE ENTRY 4"
DPM5="PERMANENT DISABILITY CODE ENTRY 5"
DPM6="PERMANENT DISABILITY CODE ENTRY 6"
DPM7="PERMANENT DISABILITY CODE ENTRY 7"
DPM8="PERMANENT DISABILITY CODE ENTRY 8"
DPM9="PERMANENT DISABILITY CODE ENTRY 9"
DR1="MEDICAL CONTINUING DISABILITY REVIEW REASON 1"
DR10="MEDICAL CONTINUING DISABILITY REVIEW REASON 10"
DR11="MEDICAL CONTINUING DISABILITY REVIEW REASON 11"
DR12="MEDICAL CONTINUING DISABILITY REVIEW REASON 12"
DR13="MEDICAL CONTINUING DISABILITY REVIEW REASON 13"
DR14="MEDICAL CONTINUING DISABILITY REVIEW REASON 14"
DR15="MEDICAL CONTINUING DISABILITY REVIEW REASON 15"
DR16="MEDICAL CONTINUING DISABILITY REVIEW REASON 16"
DR2="MEDICAL CONTINUING DISABILITY REVIEW REASON 2"
DR3="MEDICAL CONTINUING DISABILITY REVIEW REASON 3"
DR4="MEDICAL CONTINUING DISABILITY REVIEW REASON 4"
DR5="MEDICAL CONTINUING DISABILITY REVIEW REASON 5"
```

Appendix A.62
JCL/SAS Code: DEMOLBLS

```
DR6="MEDICAL CONTINUING DISABILITY REVIEW REASON 6"
DR7="MEDICAL CONTINUING DISABILITY REVIEW REASON 7"
DR8="MEDICAL CONTINUING DISABILITY REVIEW REASON 8"
DR9="MEDICAL CONTINUING DISABILITY REVIEW REASON 9"
DSDD=
"SSDI DUAL ELIG-SSDI DISABILITY ADJUDICATION DATE-SUPPLEMENTARY RECORD"
DSD1="SSDI DISABILITY ADJUDICATION DATE 1"
DSD10="SSDI DISABILITY ADJUDICATION DATE 10"
DSD11="SSDI DISABILITY ADJUDICATION DATE 11"
DSD12="SSDI DISABILITY ADJUDICATION DATE 12"
DSD2="SSDI DISABILITY ADJUDICATION DATE 2"
DSD3="SSDI DISABILITY ADJUDICATION DATE 3"
DSD4="SSDI DISABILITY ADJUDICATION DATE 4"
DSD5="SSDI DISABILITY ADJUDICATION DATE 5"
DSD6="SSDI DISABILITY ADJUDICATION DATE 6"
DSD7="SSDI DISABILITY ADJUDICATION DATE 7"
DSD8="SSDI DISABILITY ADJUDICATION DATE 8"
DSD9="SSDI DISABILITY ADJUDICATION DATE 9"
DSICLAIM1="DISABILITY SERVICES IMPROVEMENT CLAIM 1"
DSICLAIM2="DISABILITY SERVICES IMPROVEMENT CLAIM 2"
DSICLAIM3="DISABILITY SERVICES IMPROVEMENT CLAIM 3"
DSICLAIM4="DISABILITY SERVICES IMPROVEMENT CLAIM 4"
DSICLAIM5="DISABILITY SERVICES IMPROVEMENT CLAIM 5"
DSICLAIM6="DISABILITY SERVICES IMPROVEMENT CLAIM 6"
DSICLAIM7="DISABILITY SERVICES IMPROVEMENT CLAIM 7"
DSICLAIM8="DISABILITY SERVICES IMPROVEMENT CLAIM 8"
DSICLAIM9="DISABILITY SERVICES IMPROVEMENT CLAIM 9"
DSICLAIM10="DISABILITY SERVICES IMPROVEMENT CLAIM 10"
DSICLAIM11="DISABILITY SERVICES IMPROVEMENT CLAIM 11"
DSICLAIM12="DISABILITY SERVICES IMPROVEMENT CLAIM 12"
DSICLAIM13="DISABILITY SERVICES IMPROVEMENT CLAIM 13"
DSICLAIM14="DISABILITY SERVICES IMPROVEMENT CLAIM 14"
DSICLAIM15="DISABILITY SERVICES IMPROVEMENT CLAIM 15"
DSICLAIM16="DISABILITY SERVICES IMPROVEMENT CLAIM 16"
DT1="MEDICAL CONTINUING DISABILITY REVIEW REASON TYPE 1"
DT10="MEDICAL CONTINUING DISABILITY REVIEW REASON TYPE 10"
DT11="MEDICAL CONTINUING DISABILITY REVIEW REASON TYPE 11"
DT12="MEDICAL CONTINUING DISABILITY REVIEW REASON TYPE 12"
DT13="MEDICAL CONTINUING DISABILITY REVIEW REASON TYPE 13"
DT14="MEDICAL CONTINUING DISABILITY REVIEW REASON TYPE 14"
DT15="MEDICAL CONTINUING DISABILITY REVIEW REASON TYPE 15"
DT16="MEDICAL CONTINUING DISABILITY REVIEW REASON TYPE 16"
DT2="MEDICAL CONTINUING DISABILITY REVIEW REASON TYPE 2"
DT3="MEDICAL CONTINUING DISABILITY REVIEW REASON TYPE 3"
DT4="MEDICAL CONTINUING DISABILITY REVIEW REASON TYPE 4"
```

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```
DT5="MEDICAL CONTINUING DISABILITY REVIEW REASON TYPE 5"
DT6="MEDICAL CONTINUING DISABILITY REVIEW REASON TYPE 6"
DT7="MEDICAL CONTINUING DISABILITY REVIEW REASON TYPE 7"
DT8="MEDICAL CONTINUING DISABILITY REVIEW REASON TYPE 8"
DT9="MEDICAL CONTINUING DISABILITY REVIEW REASON TYPE 9"
DUALELIG="SSDI DUAL ELIG-BENEFICIARY FLAG"
DXPRI_DI=
"SSDI  PRIMARY DIAGNOSIS CODE MOST RECENT, BEST FROM ALL SOURCES"
DXPRI_DUAL="SSDI DUAL ELIG-PRIMARY DIAGNOSIS-SUPPLEMENTARY RECORD"
DXPRI_MBR1="SSDI PRIMARY DIAGNOSIS CODE FROM MBR 1"
DXPRI_MBR10="SSDI PRIMARY DIAGNOSIS CODE FROM MBR 10"
DXPRI_MBR11="SSDI PRIMARY DIAGNOSIS CODE FROM MBR 11"
DXPRI_MBR12="SSDI PRIMARY DIAGNOSIS CODE FROM MBR  12"
DXPRI_MBR2="SSDI PRIMARY DIAGNOSIS CODE FROM MBR 2"
DXPRI_MBR3="SSDI PRIMARY DIAGNOSIS CODE FROM MBR 3"
DXPRI_MBR4="SSDI PRIMARY DIAGNOSIS CODE FROM MBR 4"
DXPRI_MBR5="SSDI PRIMARY DIAGNOSIS CODE FROM MBR 5"
DXPRI_MBR6="SSDI PRIMARY DIAGNOSIS CODE FROM MBR  6"
DXPRI_MBR7="SSDI PRIMARY DIAGNOSIS CODE FROM MBR  7"
DXPRI_MBR8="SSDI PRIMARY DIAGNOSIS CODE FROM MBR 8"
DXPRI_MBR9="SSDI PRIMARY DIAGNOSIS CODE FROM MBR 9"
DXPRI_SSI="SSI  PRIMARY DIAGNOSIS CODE BEST FROM ALL SOURCES"
DXPRIBEST="PRIMARY DIAGNOSIS CODE MOST RECENT, BEST FROM ALL SOURCES"
DXSEC_DI=
"SSDI SECONDARY DIAGNOSIS CODE MOST RECENT, BEST FROM ALL SOURCES"
DXSEC_DUAL="SSDI DUAL ELIG-SECONDARY DIAGNOSIS-SUPPLEMENTARY RECORD"
DXSEC_MBR1="SSDI SECONDARY DIAGNOSIS CODE FROM MBR 1"
DXSEC_MBR10="SSDI SECONDARY DIAGNOSIS CODE FROM MBR 10"
DXSEC_MBR11="SSDI SECONDARY DIAGNOSIS CODE FROM MBR 11"
DXSEC_MBR12="SSDI SECONDARY DIAGNOSIS CODE FROM MBR 12"
DXSEC_MBR2="SSDI SECONDARY DIAGNOSIS CODE FROM MBR  2"
DXSEC_MBR3="SSDI SECONDARY DIAGNOSIS CODE FROM MBR 3"
DXSEC_MBR4="SSDI SECONDARY DIAGNOSIS CODE FROM MBR 4"
DXSEC_MBR5="SSDI SECONDARY DIAGNOSIS CODE FROM MBR 5"
DXSEC_MBR6="SSDI SECONDARY DIAGNOSIS CODE FROM MBR 6"
DXSEC_MBR7="SSDI SECONDARY DIAGNOSIS CODE FROM MBR 7"
DXSEC_MBR8="SSDI SECONDARY DIAGNOSIS CODE FROM MBR 8"
DXSEC_MBR9="SSDI SECONDARY DIAGNOSIS CODE FROM MBR 9"
DXSEC_SSI=
"SSI  SECONDARY DIAGNOSIS CODE MOST RECENT, BEST FROM ALL SOURCES"
DXSECBEST="SECONDARY DIAGNOSIS CODE MOST RECENT, BEST FROM ALL SOURCES"
EBDD="SSDI DUAL ELIG-EXTENDED PERIOD OF ELIGIBILITY BEGIN DATE"
EBD1="EXTENDED PERIOD OF ELIGIBILITY BEGIN DATE 1"
EBD10="EXTENDED PERIOD OF ELIGIBILITY BEGIN DATE 10"
EBD11="EXTENDED PERIOD OF ELIGIBILITY BEGIN DATE 11"
```

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JCL/SAS Code: DEMOLBLS

```
EBD12="EXTENDED PERIOD OF ELIGIBILITY BEGIN DATE 12"
EBD2="EXTENDED PERIOD OF ELIGIBILITY BEGIN DATE 2"
EBD3="EXTENDED PERIOD OF ELIGIBILITY BEGIN DATE 3"
EBD4="EXTENDED PERIOD OF ELIGIBILITY BEGIN DATE 4"
EBD5="EXTENDED PERIOD OF ELIGIBILITY BEGIN DATE 5"
EBD6="EXTENDED PERIOD OF ELIGIBILITY BEGIN DATE 6"
EBD7="EXTENDED PERIOD OF ELIGIBILITY BEGIN DATE 7"
EBD8="EXTENDED PERIOD OF ELIGIBILITY BEGIN DATE 8"
EBD9="EXTENDED PERIOD OF ELIGIBILITY BEGIN DATE 9"
ELG_RD="SSI DATE OF MOST RECENT ELIGIBILITY"
ENTDATD="SSDI DUAL ELIG-SSDI ENTITLEMENT DATE"
ENTDAT1="SSDI ENTITLEMENT DATE 1"
ENTDAT10="SSDI ENTITLEMENT DATE 10"
ENTDAT11="SSDI ENTITLEMENT DATE 11"
ENTDAT12="SSDI ENTITLEMENT DATE 12"
ENTDAT2="SSDI ENTITLEMENT DATE 2"
ENTDAT3="SSDI ENTITLEMENT DATE 3"
ENTDAT4="SSDI ENTITLEMENT DATE 4"
ENTDAT5="SSDI ENTITLEMENT DATE 5"
ENTDAT6="SSDI ENTITLEMENT DATE 6"
ENTDAT7="SSDI ENTITLEMENT DATE 7"
ENTDAT8="SSDI ENTITLEMENT DATE 8"
ENTDAT9="SSDI ENTITLEMENT DATE 9"
EPEDATE1="SSDI EXTENDED PERIOD OF ELIGIBILITY START DATE 1"
EPEDATE10="SSDI EXTENDED PERIOD OF ELIGIBILITY START DATE 10"
EPEDATE11="SSDI EXTENDED PERIOD OF ELIGIBILITY START DATE 11"
EPEDATE12="SSDI EXTENDED PERIOD OF ELIGIBILITY START DATE 12"
EPEDATE13="SSDI EXTENDED PERIOD OF ELIGIBILITY START DATE 13"
EPEDATE14="SSDI EXTENDED PERIOD OF ELIGIBILITY START DATE 14"
EPEDATE15="SSDI EXTENDED PERIOD OF ELIGIBILITY START DATE 15"
EPEDATE16="SSDI EXTENDED PERIOD OF ELIGIBILITY START DATE 16"
EPEDATE2="SSDI EXTENDED PERIOD OF ELIGIBILITY START DATE 2"
EPEDATE3="SSDI EXTENDED PERIOD OF ELIGIBILITY START DATE 3"
EPEDATE4="SSDI EXTENDED PERIOD OF ELIGIBILITY START DATE 4"
EPEDATE5="SSDI EXTENDED PERIOD OF ELIGIBILITY START DATE 5"
EPEDATE6="SSDI EXTENDED PERIOD OF ELIGIBILITY START DATE 6"
EPEDATE7="SSDI EXTENDED PERIOD OF ELIGIBILITY START DATE 7"
EPEDATE8="SSDI EXTENDED PERIOD OF ELIGIBILITY START DATE 8"
EPEDATE9="SSDI EXTENDED PERIOD OF ELIGIBILITY START DATE 9"
EPEDENY1=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT DENIED FLAG 1"
EPEDENY10=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT DENIED FLAG 10"
EPEDENY11=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT DENIED FLAG 11"
```

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```
EPEDENY12=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT DENIED FLAG 12"
EPEDENY13=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT DENIED FLAG 13"
EPEDENY14=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT DENIED FLAG 14"
EPEDENY15=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT DENIED FLAG 15"
EPEDENY16=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT DENIED FLAG 16"
EPEDENY2=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT DENIED FLAG 2"
EPEDENY3=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT DENIED FLAG 3"
EPEDENY4=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT DENIED FLAG 4"
EPEDENY5=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT DENIED FLAG 5"
EPEDENY6=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT DENIED FLAG 6"
EPEDENY7=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT DENIED FLAG 7"
EPEDENY8=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT DENIED FLAG 8"
EPEDENY9=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT DENIED FLAG 9"
EPEREIN1=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT ALLOWED DATE 1"
EPEREIN10=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT ALLOWED DATE 10"
EPEREIN11=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT ALLOWED DATE 11"
EPEREIN12=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT ALLOWED DATE 12"
EPEREIN13=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT ALLOWED DATE 13"
EPEREIN14=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT ALLOWED DATE 14"
EPEREIN15=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT ALLOWED DATE 15"
EPEREIN16=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT ALLOWED DATE 16"
EPEREIN2=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT ALLOWED DATE 2"
EPEREIN3=
```

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```
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT ALLOWED DATE 3"
EPEREIN4=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT ALLOWED DATE 4"
EPEREIN5=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT ALLOWED DATE 5"
EPEREIN6=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT ALLOWED DATE 6"
EPEREIN7=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT ALLOWED DATE 7"
EPEREIN8=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT ALLOWED DATE 8"
EPEREIN9=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT ALLOWED DATE 9"
EPESUSP1=
"SSDI EXTENDED PERIOD OF ELIGIBILITY SUSPENDED AFTER REINSTATE DATE 1"
EPESUSP10=
"SSDI EXTENDED PERIOD OF ELIGIBILITY SUSPENDED AFTER REINSTATE DATE 10"
EPESUSP11=
"SSDI EXTENDED PERIOD OF ELIGIBILITY SUSPENDED AFTER REINSTATE DATE 11"
EPESUSP12=
"SSDI EXTENDED PERIOD OF ELIGIBILITY SUSPENDED AFTER REINSTATE DATE 12"
EPESUSP13=
"SSDI EXTENDED PERIOD OF ELIGIBILITY SUSPENDED AFTER REINSTATE DATE 13"
EPESUSP14=
"SSDI EXTENDED PERIOD OF ELIGIBILITY SUSPENDED AFTER REINSTATE DATE 14"
EPESUSP15=
"SSDI EXTENDED PERIOD OF ELIGIBILITY SUSPENDED AFTER REINSTATE DATE 15"
EPESUSP16=
"SSDI EXTENDED PERIOD OF ELIGIBILITY SUSPENDED AFTER REINSTATE DATE 16"
EPESUSP2=
"SSDI EXTENDED PERIOD OF ELIGIBILITY SUSPENDED AFTER REINSTATE DATE 2"
EPESUSP3=
"SSDI EXTENDED PERIOD OF ELIGIBILITY SUSPENDED AFTER REINSTATE DATE 3"
EPESUSP4=
"SSDI EXTENDED PERIOD OF ELIGIBILITY SUSPENDED AFTER REINSTATE DATE 4"
EPESUSP5=
"SSDI EXTENDED PERIOD OF ELIGIBILITY SUSPENDED AFTER REINSTATE DATE 5"
EPESUSP6=
"SSDI EXTENDED PERIOD OF ELIGIBILITY SUSPENDED AFTER REINSTATE DATE 6"
EPESUSP7=
"SSDI EXTENDED PERIOD OF ELIGIBILITY SUSPENDED AFTER REINSTATE DATE 7"
EPESUSP8=
"SSDI EXTENDED PERIOD OF ELIGIBILITY SUSPENDED AFTER REINSTATE DATE 8"
EPESUSP9=
"SSDI EXTENDED PERIOD OF ELIGIBILITY SUSPENDED AFTER REINSTATE DATE 9"
```

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```
EPETERM1=
"SSDI EXTENDED PERIOD OF ELIGIBILITY BENEFIT TERMINATION DATE 1"
EPETERM10=
"SSDI EXTENDED PERIOD OF ELIGIBILITY BENEFIT TERMINATION DATE 10"
EPETERM11=
"SSDI EXTENDED PERIOD OF ELIGIBILITY BENEFIT TERMINATION DATE 11"
EPETERM12=
"SSDI EXTENDED PERIOD OF ELIGIBILITY BENEFIT TERMINATION DATE 12"
EPETERM13=
"SSDI EXTENDED PERIOD OF ELIGIBILITY BENEFIT TERMINATION DATE 13"
EPETERM14=
"SSDI EXTENDED PERIOD OF ELIGIBILITY BENEFIT TERMINATION DATE 14"
EPETERM15=
"SSDI EXTENDED PERIOD OF ELIGIBILITY BENEFIT TERMINATION DATE 15"
EPETERM16=
"SSDI EXTENDED PERIOD OF ELIGIBILITY BENEFIT TERMINATION DATE 16"
EPETERM2=
"SSDI EXTENDED PERIOD OF ELIGIBILITY BENEFIT TERMINATION DATE 2"
EPETERM3=
"SSDI EXTENDED PERIOD OF ELIGIBILITY BENEFIT TERMINATION DATE 3"
EPETERM4=
"SSDI EXTENDED PERIOD OF ELIGIBILITY BENEFIT TERMINATION DATE 4"
EPETERM5=
"SSDI EXTENDED PERIOD OF ELIGIBILITY BENEFIT TERMINATION DATE 5"
EPETERM6=
"SSDI EXTENDED PERIOD OF ELIGIBILITY BENEFIT TERMINATION DATE 6"
EPETERM7=
"SSDI EXTENDED PERIOD OF ELIGIBILITY BENEFIT TERMINATION DATE 7"
EPETERM8=
"SSDI EXTENDED PERIOD OF ELIGIBILITY BENEFIT TERMINATION DATE 8"
EPETERM9=
"SSDI EXTENDED PERIOD OF ELIGIBILITY BENEFIT TERMINATION DATE 9"
ERP_IND="ECONOMIC RECOVERY INDICATOR MAY 09"
FIRSTBFD="BASIS FOR DETERMINATION, EARLIEST"
FIRSTDD="MEDICAL CONTINUING DISABILITY REVIEW DATE, EARLIEST"
FIRSTDOC="DISTRICT OFFICE CODE, EARLIEST"
FIRSTDODEC="DATE OF MEDICAL DECISION (SSA OR DDS), EARLIEST"
FIRSTDPM="PERMANENT DISABILITY CODE ENTRY, EARLIEST"
FIRSTDR="MEDICAL CONTINUING DISABILITY REVIEW REASON, EARLIEST"
FIRSTDSICLAIM="DISABILITY SERVICES IMPROVEMENT CLAIM, EARLIEST"
FIRSTDT="MEDICAL CONTINUING DISABILITY REVIEW REASON TYPE, EARLIEST"
FIRSTEPEDATE="SSDI EXTENDED PERIOD OF ELIGIBILITY START DATE, EARLIEST"
FIRSTEPEDENY=
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT DENY FLAG, EARLIEST"
FIRSTEPEREIN=
```

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```
"SSDI EXTENDED PERIOD OF ELIGIBILITY REINSTATEMENT ALLOW DATE, EARLIEST"
FIRSTEPESUSP=
"SSDI EXTENDED PERIOD OF ELIGIBILITY SUSP. AFTER REINS. DATE, EARLIEST"
FIRSTEPETERM=
"SSDI EXTENDED PERIOD OF ELIGIBILITY BENEFIT TERMINATION DATE, EARLIEST"
FIRSTIME="SSDI INDEXED MONTHLY EARNINGS FOR EARLIEST PERIOD"
FIRSTJUDLVL="LEVEL OF ADJUDICATION, EARLIEST"
FIRSTPD="PRESUMPTIVE DISABILITY DECISION CODE, EARLIEST"
FIRSTPDD="PRESUMPTIVE DECISION DATE, EARLIEST"
FIRSTPIA="PRIMARY INSURANCE AMOUNT, EARLIEST"
FIRSTPIARFC="REASON FOR PRIMARY INSURANCE AMOUNT CHANGE, EARLIEST"
FIRSTPIED="PRIMARY INSURANCE DATE, EARLIEST"
FIRSTQDDIND="QUICK DISABILITY DETERMINATION (QDD) INDICATOR, EARLIEST"
FIRSTQDREINDT="QDD REINSTATEMENT DATE, EARLIEST"
FIRSTQDRMVDT="QDD REMOVAL DATE, EARLIEST"
FIRSTQDRMVRSN="QDD REMOVAL REASON, EARLIEST"
FIRSTQDSCORE="QDD SCORING CODE, EARLIEST"
FIRSTRB="REGULATION BASIS CODE, EARLIEST"
FIRSTRDT="RESULT OF DETERMINATION DATE, EARLIEST"
FIRSTRFC="REASON FOR CONTINUANCE/CESSATION CODE, EARLIEST"
FIRSTRID="PROGRAM IDENTIFICATION, EARLIEST"
FIRSTVRA="VOCATIONAL REHABILITATION REFERRAL CODE, EARLIEST"
FRA="BENEFICIARY'S FULL RETIREMENT AGE"
FRADATE = "FULL RETIREMENT DATE"
FIRSTMIE="DATE MIE FIRST FLAGGED"
FOREIGN_BORN="FOREIGN BORN INDICATOR"
FRSTNAME="NUMIDENT BENEFICIARY FIRST NAME"
HBIC1="HISTORICAL BIC 1"
HBIC10="HISTORICAL BIC 10"
HBIC11="HISTORICAL BIC 11"
HBIC12="HISTORICAL BIC 12"
HBIC13="HISTORICAL BIC 13"
HBIC14="HISTORICAL BIC 14"
HBIC15="HISTORICAL BIC 15"
HBIC16="HISTORICAL BIC 16"
HBIC17="HISTORICAL BIC 17"
HBIC18="HISTORICAL BIC 18"
HBIC19="HISTORICAL BIC 19"
HBIC2="HISTORICAL BIC 2"
HBIC20="HISTORICAL BIC 20"
HBIC21="HISTORICAL BIC 21"
HBIC22="HISTORICAL BIC 22"
HBIC23="HISTORICAL BIC 23"
HBIC24="HISTORICAL BIC 24"
HBIC25="HISTORICAL BIC 25"
```

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```
HBIC3="HISTORICAL BIC 3"
HBIC4="HISTORICAL BIC 4"
HBIC5="HISTORICAL BIC 5"
HBIC6="HISTORICAL BIC 6"
HBIC7="HISTORICAL BIC 7"
HBIC8="HISTORICAL BIC 8"
HBIC9="HISTORICAL BIC 9"
HDDD="SSDI DUAL ELIG-HEARING DECISION DATE"
HDD1="SSDI HEARING DECISION DATE 1"
HDD10="SSDI HEARING DECISION DATE 10"
HDD11="SSDI HEARING DECISION DATE 11"
HDD12="SSDI HEARING DECISION DATE 12"
HDD2="SSDI HEARING DECISION DATE 2"
HDD3="SSDI HEARING DECISION DATE 3"
HDD4="SSDI HEARING DECISION DATE 4"
HDD5="SSDI HEARING DECISION DATE 5"
HDD6="SSDI HEARING DECISION DATE 6"
HDD7="SSDI HEARING DECISION DATE 7"
HDD8="SSDI HEARING DECISION DATE 8"
HDD9="SSDI HEARING DECISION DATE 9"
HI_START_MR=
"SSDI HOSPITAL INS. (HI) START DATE, MEDICARE PART A MOST RECENT"
HI_START1="SSDI HOSPITAL INS. (HI) START DATE, MEDICARE PART A 1"
HI_START10="SSDI HOSPITAL INS. (HI) START DATE, MEDICARE PART A 10"
HI_START2="SSDI HOSPITAL INS. (HI) START DATE, MEDICARE PART A 2"
HI_START3="SSDI HOSPITAL INS. (HI) START DATE, MEDICARE PART A 3"
HI_START4="SSDI HOSPITAL INS. (HI) START DATE, MEDICARE PART A 4"
HI_START5="SSDI HOSPITAL INS. (HI) START DATE, MEDICARE PART A 5"
HI_START6="SSDI HOSPITAL INS. (HI) START DATE, MEDICARE PART A 6"
HI_START7="SSDI HOSPITAL INS. (HI) START DATE, MEDICARE PART A 7"
HI_START8="SSDI HOSPITAL INS. (HI) START DATE, MEDICARE PART A 8"
HI_START9="SSDI HOSPITAL INS. (HI) START DATE, MEDICARE PART A 9"
HI_TERM_MR=
"SSDI HOSPITAL INS. (HI) END  DATE, MEDICARE PART A MOST RECENT"
HI_TERM1="SSDI HOSPITAL INS. (HI) END DATE, MEDICARE PART A 1"
HI_TERM10="SSDI HOSPITAL INS. (HI) END DATE, MEDICARE PART A 10"
HI_TERM2="SSDI HOSPITAL INS. (HI) END DATE, MEDICARE PART A 2"
HI_TERM3="SSDI HOSPITAL INS. (HI) END DATE, MEDICARE PART A 3"
HI_TERM4="SSDI HOSPITAL INS. (HI) END DATE, MEDICARE PART A 4"
HI_TERM5="SSDI HOSPITAL INS. (HI) END DATE, MEDICARE PART A 5"
HI_TERM6="SSDI HOSPITAL INS. (HI) END DATE, MEDICARE PART A 6"
HI_TERM7="SSDI HOSPITAL INS. (HI) END DATE, MEDICARE PART A 7"
HI_TERM8="SSDI HOSPITAL INS. (HI) END DATE, MEDICARE PART A 8"
HI_TERM9="SSDI HOSPITAL INS. (HI) END DATE, MEDICARE PART A 9"
HUN="SSI HOUSED UNDER NUMBER (HUN)"
```

Appendix A.62
JCL/SAS Code: DEMOLBLS

```
IME1="SSDI INDEXED MONTHLY EARNINGS 1"
IME10="SSDI INDEXED MONTHLY EARNINGS 10"
IME11="SSDI INDEXED MONTHLY EARNINGS 11"
IME12="SSDI INDEXED MONTHLY EARNINGS 12"
IME13="SSDI INDEXED MONTHLY EARNINGS 13"
IME14="SSDI INDEXED MONTHLY EARNINGS 14"
IME15="SSDI INDEXED MONTHLY EARNINGS 15"
IME16="SSDI INDEXED MONTHLY EARNINGS 16"
IME17="SSDI INDEXED MONTHLY EARNINGS 17"
IME18="SSDI INDEXED MONTHLY EARNINGS 18"
IME19="SSDI INDEXED MONTHLY EARNINGS 19"
IME2="SSDI INDEXED MONTHLY EARNINGS 2"
IME20="SSDI INDEXED MONTHLY EARNINGS 20"
IME21="SSDI INDEXED MONTHLY EARNINGS 21"
IME22="SSDI INDEXED MONTHLY EARNINGS 22"
IME23="SSDI INDEXED MONTHLY EARNINGS 23"
IME24="SSDI INDEXED MONTHLY EARNINGS 24"
IME25="SSDI INDEXED MONTHLY EARNINGS 25"
IME26="SSDI INDEXED MONTHLY EARNINGS 26"
IME27="SSDI INDEXED MONTHLY EARNINGS 27"
IME28="SSDI INDEXED MONTHLY EARNINGS 28"
IME29="SSDI INDEXED MONTHLY EARNINGS 29"
IME3="SSDI INDEXED MONTHLY EARNINGS 3"
IME30="SSDI INDEXED MONTHLY EARNINGS 30"
IME31="SSDI INDEXED MONTHLY EARNINGS 31"
IME32="SSDI INDEXED MONTHLY EARNINGS 32"
IME33="SSDI INDEXED MONTHLY EARNINGS 33"
IME34="SSDI INDEXED MONTHLY EARNINGS 34"
IME35="SSDI INDEXED MONTHLY EARNINGS 35"
IME36="SSDI INDEXED MONTHLY EARNINGS 36"
IME37="SSDI INDEXED MONTHLY EARNINGS 37"
IME38="SSDI INDEXED MONTHLY EARNINGS 38"
IME39="SSDI INDEXED MONTHLY EARNINGS 39"
IME4="SSDI INDEXED MONTHLY EARNINGS 4"
IME40="SSDI INDEXED MONTHLY EARNINGS 40"
IME41="SSDI INDEXED MONTHLY EARNINGS 41"
IME42="SSDI INDEXED MONTHLY EARNINGS 42"
IME43="SSDI INDEXED MONTHLY EARNINGS 43"
IME44="SSDI INDEXED MONTHLY EARNINGS 44"
IME45="SSDI INDEXED MONTHLY EARNINGS 45"
IME46="SSDI INDEXED MONTHLY EARNINGS 46"
IME47="SSDI INDEXED MONTHLY EARNINGS 47"
IME48="SSDI INDEXED MONTHLY EARNINGS 48"
IME49="SSDI INDEXED MONTHLY EARNINGS 49"
IME5="SSDI INDEXED MONTHLY EARNINGS 5"
```

Appendix A.62
JCL/SAS Code: DEMOLBLS

```
IME50="SSDI INDEXED MONTHLY EARNINGS 50"
IME6="SSDI INDEXED MONTHLY EARNINGS 6"
IME7="SSDI INDEXED MONTHLY EARNINGS 7"
IME8="SSDI INDEXED MONTHLY EARNINGS 8"
IME9="SSDI INDEXED MONTHLY EARNINGS 9"
JUDLVL1="LEVEL OF ADJUDICATION 1"
JUDLVL10="LEVEL OF ADJUDICATION 10"
JUDLVL11="LEVEL OF ADJUDICATION 11"
JUDLVL12="LEVEL OF ADJUDICATION 12"
JUDLVL13="LEVEL OF ADJUDICATION 13"
JUDLVL14="LEVEL OF ADJUDICATION 14"
JUDLVL15="LEVEL OF ADJUDICATION 15"
JUDLVL16="LEVEL OF ADJUDICATION 16"
JUDLVL2="LEVEL OF ADJUDICATION 2"
JUDLVL3="LEVEL OF ADJUDICATION 3"
JUDLVL4="LEVEL OF ADJUDICATION 4"
JUDLVL5="LEVEL OF ADJUDICATION 5"
JUDLVL6="LEVEL OF ADJUDICATION 6"
JUDLVL7="LEVEL OF ADJUDICATION 7"
JUDLVL8="LEVEL OF ADJUDICATION 8"
JUDLVL9="LEVEL OF ADJUDICATION 9"
LAF_MR="SSDI LEDGER ACCOUNT FILE STATUS, MOST RECENT"
LAF_MR_DATE="DATE OF MOST RECENT SSDI LEDGER ACCOUNT FILE STATUS"
LANG="SSDI WRITTEN LANGUAGE INDICATOR"
LAST_DODEC="MOST RECENT ADJUDICATION DATE"
LASTNAME="NUMIDENT BENEFICIARY LAST NAME"
LODD="SSDI DUAL ELIG-LEVEL OF DENIAL CODE"
LOD1="SSDI LEVEL OF DENIAL CODE 1"
LOD10="SSDI LEVEL OF DENIAL CODE 10"
LOD11="SSDI LEVEL OF DENIAL CODE 11"
LOD12="SSDI LEVEL OF DENIAL CODE 12"
LOD2="SSDI LEVEL OF DENIAL CODE 2"
LOD3="SSDI LEVEL OF DENIAL CODE 3"
LOD4="SSDI LEVEL OF DENIAL CODE 4"
LOD5="SSDI LEVEL OF DENIAL CODE 5"
LOD6="SSDI LEVEL OF DENIAL CODE 6"
LOD7="SSDI LEVEL OF DENIAL CODE 7"
LOD8="SSDI LEVEL OF DENIAL CODE 8"
LOD9="SSDI LEVEL OF DENIAL CODE 9"
LSAP="SSDI LUMP SUM AWARD AMOUNT"
LSDC="SSDI LUMP SUM DISALLOWANCE CODE"
LSFD="SSDI LUMP SUM FILING DATE"
LSPA="SSDI LUMP SUM PAYMENT AMOUNT"
MALE="MALE INDICATOR"
MAX_80JD="SSI MOST RECENT DECISION DATE"
```

Appendix A.62
JCL/SAS Code: DEMOLBLS

```
MAXAPPRD="SSI MOST RECENT APPLICATION DATE"
MAXCLMFL="SSI MOST RECENT APPLICATION RECEIPT DATE"
MAXELGRD="SSI MOST RECENT SSI ELIGIBILITY DATE"
MAXFRSTP="SSI MOST RECENT APPLICATION, FIRST SSI PAYMENT DATE"
MAXSTPRD="SSI MOST RECENT APPLICATION, ELIGIBILITY PERIOD END DATE"
MAXSTRRD="SSI MOST RECENT START DATE OF SSI PAYMENTS"
MFT="SSI MASTER FILE TYPE"
MIE_BEFORE_CDR="MIE BEFORE FIRST CDR"
MIN_80JD="SSI EARLIEST AVAILABLE DECISION DATE"
MINAPPRD="SSI EARLIEST AVAILABLE APPLICATION DATE"
MINCLMFL="SSI EARLIEST AVAILABLE APPLICATION RECEIPT DATE"
MINFRSTP="SSI EARLIEST AVAILABLE APPLICATION, FIRST SSI PAYMENT DATE"
MINSTPRD=
"SSI EARLIEST AVAILABLE APPLICATION ELIGIBILITY PERIOD END DATE"
MINSTRRD="SSI EARLIEST AVAILABLE APPLICATION COMPUTATION DATE"
NAMESUFX="NUMIDENT BENEFICIARY NAME SUFFIX"
NDOF="NUMBER OF MBR DATE OF FILING FIELDS"
NHDEMO="NUMBER OF DEMONSTRATION PROJECT OCCURRENCES"
NHI=
"NUMBER OF SSDI HOSPITAL INS. (HI) MEDICARE PART A FIELD OCCURRENCES"
NINSD="NUMBER OF INSURED STATUS DATA OCCURRENCES"
NODF="NUMBER OF MBR DISABILITY FIELDS"
NPIA_NEW="NUMBER OF MBR PIA ENTRIES NEW"
NPIA_ORIG="NUMBER OF MBR PIA ENTRIES ORIGINAL"
NSMI=
"NUMBER OF SSDI SUP. MED. INS. (SMI) MEDICARE PART B FIELD OCCURRENCES"
PDD1="PRESUMPTIVE DECISION DATE 1"
PDD10="PRESUMPTIVE DECISION DATE 10"
PDD11="PRESUMPTIVE DECISION DATE 11"
PDD12="PRESUMPTIVE DECISION DATE 12"
PDD13="PRESUMPTIVE DECISION DATE 13"
PDD14="PRESUMPTIVE DECISION DATE 14"
PDD15="PRESUMPTIVE DECISION DATE 15"
PDD16="PRESUMPTIVE DECISION DATE 16"
PDD2="PRESUMPTIVE DECISION DATE 2"
PDD3="PRESUMPTIVE DECISION DATE 3"
PDD4="PRESUMPTIVE DECISION DATE 4"
PDD5="PRESUMPTIVE DECISION DATE 5"
PDD6="PRESUMPTIVE DECISION DATE 6"
PDD7="PRESUMPTIVE DECISION DATE 7"
PDD8="PRESUMPTIVE DECISION DATE 8"
PDD9="PRESUMPTIVE DECISION DATE 9"
PDSCC="SSI STATE & COUNTY SSA CODE"
PDZIP="SSI PAYEE ZIP CODE"
PDZIP6_9="SSI PAYEE ZIP SUFFIX"
```

Appendix A.62
JCL/SAS Code: DEMOLBLS

```
PD1="PRESUMPTIVE DISABILITY DECISION CODE 1"
PD10="PRESUMPTIVE DISABILITY DECISION CODE 10"
PD11="PRESUMPTIVE DISABILITY DECISION CODE 11"
PD12="PRESUMPTIVE DISABILITY DECISION CODE 12"
PD13="PRESUMPTIVE DISABILITY DECISION CODE 13"
PD14="PRESUMPTIVE DISABILITY DECISION CODE 14"
PD15="PRESUMPTIVE DISABILITY DECISION CODE 15"
PD16="PRESUMPTIVE DISABILITY DECISION CODE 16"
PD2="PRESUMPTIVE DISABILITY DECISION CODE 2"
PD3="PRESUMPTIVE DISABILITY DECISION CODE 3"
PD4="PRESUMPTIVE DISABILITY DECISION CODE 4"
PD5="PRESUMPTIVE DISABILITY DECISION CODE 5"
PD6="PRESUMPTIVE DISABILITY DECISION CODE 6"
PD7="PRESUMPTIVE DISABILITY DECISION CODE 7"
PD8="PRESUMPTIVE DISABILITY DECISION CODE 8"
PD9="PRESUMPTIVE DISABILITY DECISION CODE 9"
PIARFC1="SSDI REASON FOR CHANGE IN PIA 1"
PIARFC10="SSDI REASON FOR CHANGE IN PIA 10"
PIARFC11="SSDI REASON FOR CHANGE IN PIA 11"
PIARFC12="SSDI REASON FOR CHANGE IN PIA 12"
PIARFC13="SSDI REASON FOR CHANGE IN PIA 13"
PIARFC14="SSDI REASON FOR CHANGE IN PIA 14"
PIARFC15="SSDI REASON FOR CHANGE IN PIA 15"
PIARFC16="SSDI REASON FOR CHANGE IN PIA 16"
PIARFC17="SSDI REASON FOR CHANGE IN PIA 17"
PIARFC18="SSDI REASON FOR CHANGE IN PIA 18"
PIARFC19="SSDI REASON FOR CHANGE IN PIA 19"
PIARFC2="SSDI REASON FOR CHANGE IN PIA 2"
PIARFC20="SSDI REASON FOR CHANGE IN PIA 20"
PIARFC21="SSDI REASON FOR CHANGE IN PIA 21"
PIARFC22="SSDI REASON FOR CHANGE IN PIA 22"
PIARFC23="SSDI REASON FOR CHANGE IN PIA 23"
PIARFC24="SSDI REASON FOR CHANGE IN PIA 24"
PIARFC25="SSDI REASON FOR CHANGE IN PIA 25"
PIARFC26="SSDI REASON FOR CHANGE IN PIA 26"
PIARFC27="SSDI REASON FOR CHANGE IN PIA 27"
PIARFC28="SSDI REASON FOR CHANGE IN PIA 28"
PIARFC29="SSDI REASON FOR CHANGE IN PIA 29"
PIARFC3="SSDI REASON FOR CHANGE IN PIA 3"
PIARFC30="SSDI REASON FOR CHANGE IN PIA 30"
PIARFC31="SSDI REASON FOR CHANGE IN PIA 31"
PIARFC32="SSDI REASON FOR CHANGE IN PIA 32"
PIARFC33="SSDI REASON FOR CHANGE IN PIA 33"
PIARFC34="SSDI REASON FOR CHANGE IN PIA 34"
PIARFC35="SSDI REASON FOR CHANGE IN PIA 35"
```

Appendix A.62
JCL/SAS Code: DEMOLBLS

```
PIARFC36="SSDI REASON FOR CHANGE IN PIA 36"
PIARFC37="SSDI REASON FOR CHANGE IN PIA 37"
PIARFC38="SSDI REASON FOR CHANGE IN PIA 38"
PIARFC39="SSDI REASON FOR CHANGE IN PIA 39"
PIARFC4="SSDI REASON FOR CHANGE IN PIA 4"
PIARFC40="SSDI REASON FOR CHANGE IN PIA 40"
PIARFC41="SSDI REASON FOR CHANGE IN PIA 41"
PIARFC42="SSDI REASON FOR CHANGE IN PIA 42"
PIARFC43="SSDI REASON FOR CHANGE IN PIA 43"
PIARFC44="SSDI REASON FOR CHANGE IN PIA 44"
PIARFC45="SSDI REASON FOR CHANGE IN PIA 45"
PIARFC46="SSDI REASON FOR CHANGE IN PIA 46"
PIARFC47="SSDI REASON FOR CHANGE IN PIA 47"
PIARFC48="SSDI REASON FOR CHANGE IN PIA 48"
PIARFC49="SSDI REASON FOR CHANGE IN PIA 49"
PIARFC5="SSDI REASON FOR CHANGE IN PIA 5"
PIARFC50="SSDI REASON FOR CHANGE IN PIA 50"
PIARFC6="SSDI REASON FOR CHANGE IN PIA 6"
PIARFC7="SSDI REASON FOR CHANGE IN PIA 7"
PIARFC8="SSDI REASON FOR CHANGE IN PIA 8"
PIARFC9="SSDI REASON FOR CHANGE IN PIA 9"
PIA1="SSDI PRIMARY INS. AMOUNT 1"
PIA10="SSDI PRIMARY INS. AMOUNT 10"
PIA11="SSDI PRIMARY INS. AMOUNT 11"
PIA12="SSDI PRIMARY INS. AMOUNT 12"
PIA13="SSDI PRIMARY INS. AMOUNT 13"
PIA14="SSDI PRIMARY INS. AMOUNT 14"
PIA15="SSDI PRIMARY INS. AMOUNT 15"
PIA16="SSDI PRIMARY INS. AMOUNT 16"
PIA17="SSDI PRIMARY INS. AMOUNT 17"
PIA18="SSDI PRIMARY INS. AMOUNT 18"
PIA19="SSDI PRIMARY INS. AMOUNT 19"
PIA2="SSDI PRIMARY INS. AMOUNT 2"
PIA20="SSDI PRIMARY INS. AMOUNT 20"
PIA21="SSDI PRIMARY INS. AMOUNT 21"
PIA22="SSDI PRIMARY INS. AMOUNT 22"
PIA23="SSDI PRIMARY INS. AMOUNT 23"
PIA24="SSDI PRIMARY INS. AMOUNT 24"
PIA25="SSDI PRIMARY INS. AMOUNT 25"
PIA26="SSDI PRIMARY INS. AMOUNT 26"
PIA27="SSDI PRIMARY INS. AMOUNT 27"
PIA28="SSDI PRIMARY INS. AMOUNT 28"
PIA29="SSDI PRIMARY INS. AMOUNT 29"
PIA3="SSDI PRIMARY INS. AMOUNT 3"
PIA30="SSDI PRIMARY INS. AMOUNT 30"
```

Appendix A.62
JCL/SAS Code: DEMOLBLS

```
PIA31="SSDI PRIMARY INS. AMOUNT 31"
PIA32="SSDI PRIMARY INS. AMOUNT 32"
PIA33="SSDI PRIMARY INS. AMOUNT 33"
PIA34="SSDI PRIMARY INS. AMOUNT 34"
PIA35="SSDI PRIMARY INS. AMOUNT 35"
PIA36="SSDI PRIMARY INS. AMOUNT 36"
PIA37="SSDI PRIMARY INS. AMOUNT 37"
PIA38="SSDI PRIMARY INS. AMOUNT 38"
PIA39="SSDI PRIMARY INS. AMOUNT 39"
PIA4="SSDI PRIMARY INS. AMOUNT 4"
PIA40="SSDI PRIMARY INS. AMOUNT 40"
PIA41="SSDI PRIMARY INS. AMOUNT 41"
PIA42="SSDI PRIMARY INS. AMOUNT 42"
PIA43="SSDI PRIMARY INS. AMOUNT 43"
PIA44="SSDI PRIMARY INS. AMOUNT 44"
PIA45="SSDI PRIMARY INS. AMOUNT 45"
PIA46="SSDI PRIMARY INS. AMOUNT 46"
PIA47="SSDI PRIMARY INS. AMOUNT 47"
PIA48="SSDI PRIMARY INS. AMOUNT 48"
PIA49="SSDI PRIMARY INS. AMOUNT 49"
PIA5="SSDI PRIMARY INS. AMOUNT 5"
PIA50="SSDI PRIMARY INS. AMOUNT 50"
PIA6="SSDI PRIMARY INS. AMOUNT 6"
PIA7="SSDI PRIMARY INS. AMOUNT 7"
PIA8="SSDI PRIMARY INS. AMOUNT 8"
PIA9="SSDI PRIMARY INS. AMOUNT 9"
PIED1="SSDI PIA EFFECTIVE DATE 1"
PIED10="SSDI PIA EFFECTIVE DATE 10"
PIED11="SSDI PIA EFFECTIVE DATE 11"
PIED12="SSDI PIA EFFECTIVE DATE 12"
PIED13="SSDI PIA EFFECTIVE DATE 13"
PIED14="SSDI PIA EFFECTIVE DATE 14"
PIED15="SSDI PIA EFFECTIVE DATE 15"
PIED16="SSDI PIA EFFECTIVE DATE 16"
PIED17="SSDI PIA EFFECTIVE DATE 17"
PIED18="SSDI PIA EFFECTIVE DATE 18"
PIED19="SSDI PIA EFFECTIVE DATE 19"
PIED2="SSDI PIA EFFECTIVE DATE 2"
PIED20="SSDI PIA EFFECTIVE DATE 20"
PIED21="SSDI PIA EFFECTIVE DATE 21"
PIED22="SSDI PIA EFFECTIVE DATE 22"
PIED23="SSDI PIA EFFECTIVE DATE 23"
PIED24="SSDI PIA EFFECTIVE DATE 24"
PIED25="SSDI PIA EFFECTIVE DATE 25"
PIED26="SSDI PIA EFFECTIVE DATE 26"
```

Appendix A.62
JCL/SAS Code: DEMOLBLS

```
PIED27="SSDI PIA EFFECTIVE DATE 27"
PIED28="SSDI PIA EFFECTIVE DATE 28"
PIED29="SSDI PIA EFFECTIVE DATE 29"
PIED3="SSDI PIA EFFECTIVE DATE 3"
PIED30="SSDI PIA EFFECTIVE DATE 30"
PIED31="SSDI PIA EFFECTIVE DATE 31"
PIED32="SSDI PIA EFFECTIVE DATE 32"
PIED33="SSDI PIA EFFECTIVE DATE 33"
PIED34="SSDI PIA EFFECTIVE DATE 34"
PIED35="SSDI PIA EFFECTIVE DATE 35"
PIED36="SSDI PIA EFFECTIVE DATE 36"
PIED37="SSDI PIA EFFECTIVE DATE 37"
PIED38="SSDI PIA EFFECTIVE DATE 38"
PIED39="SSDI PIA EFFECTIVE DATE 39"
PIED4="SSDI PIA EFFECTIVE DATE 4"
PIED40="SSDI PIA EFFECTIVE DATE 40"
PIED41="SSDI PIA EFFECTIVE DATE 41"
PIED42="SSDI PIA EFFECTIVE DATE 42"
PIED43="SSDI PIA EFFECTIVE DATE 43"
PIED44="SSDI PIA EFFECTIVE DATE 44"
PIED45="SSDI PIA EFFECTIVE DATE 45"
PIED46="SSDI PIA EFFECTIVE DATE 46"
PIED47="SSDI PIA EFFECTIVE DATE 47"
PIED48="SSDI PIA EFFECTIVE DATE 48"
PIED49="SSDI PIA EFFECTIVE DATE 49"
PIED5="SSDI PIA EFFECTIVE DATE 5"
PIED50="SSDI PIA EFFECTIVE DATE 50"
PIED6="SSDI PIA EFFECTIVE DATE 6"
PIED7="SSDI PIA EFFECTIVE DATE 7"
PIED8="SSDI PIA EFFECTIVE DATE 8"
PIED9="SSDI PIA EFFECTIVE DATE 9"
PNOB="SSDI NUMBER OF DEPENDENT BENEFICIARIES INCLUDED IN PAYMENT"
PST_MR="BENEFICIARY'S MOST RECENT AVAILABLE STATE OF RESIDENCE"
PSTA_MR="SSI STATUS CODE, MOST RECENT"
PSTA_MR_DATE="DATE OF MOST RECENT SSI STATUS CODE"
QDDIND1="QUICK DISABILITY DETERMINATION (QDD) INDICATOR 1"
QDDIND2="QUICK DISABILITY DETERMINATION (QDD) INDICATOR 2"
QDDIND3="QUICK DISABILITY DETERMINATION (QDD) INDICATOR 3"
QDDIND4="QUICK DISABILITY DETERMINATION (QDD) INDICATOR 4"
QDDIND5="QUICK DISABILITY DETERMINATION (QDD) INDICATOR 5"
QDDIND6="QUICK DISABILITY DETERMINATION (QDD) INDICATOR 6"
QDDIND7="QUICK DISABILITY DETERMINATION (QDD) INDICATOR 7"
QDDIND8="QUICK DISABILITY DETERMINATION (QDD) INDICATOR 8"
QDDIND9="QUICK DISABILITY DETERMINATION (QDD) INDICATOR 9"
QDDIND10="QUICK DISABILITY DETERMINATION (QDD) INDICATOR 10"
```

Appendix A.62
JCL/SAS Code: DEMOLBLS

```
QDDIND11="QUICK DISABILITY DETERMINATION (QDD) INDICATOR 11"
QDDIND12="QUICK DISABILITY DETERMINATION (QDD) INDICATOR 12"
QDDIND13="QUICK DISABILITY DETERMINATION (QDD) INDICATOR 13"
QDDIND14="QUICK DISABILITY DETERMINATION (QDD) INDICATOR 14"
QDDIND15="QUICK DISABILITY DETERMINATION (QDD) INDICATOR 15"
QDDIND16="QUICK DISABILITY DETERMINATION (QDD) INDICATOR 16"
QDREINDT1="QDD REINSTATEMENT DATE 1"
QDREINDT2="QDD REINSTATEMENT DATE 2"
QDREINDT3="QDD REINSTATEMENT DATE 3"
QDREINDT4="QDD REINSTATEMENT DATE 4"
QDREINDT5="QDD REINSTATEMENT DATE 5"
QDREINDT6="QDD REINSTATEMENT DATE 6"
QDREINDT7="QDD REINSTATEMENT DATE 7"
QDREINDT8="QDD REINSTATEMENT DATE 8"
QDREINDT9="QDD REINSTATEMENT DATE 9"
QDREINDT10="QDD REINSTATEMENT DATE 10"
QDREINDT11="QDD REINSTATEMENT DATE 11"
QDREINDT12="QDD REINSTATEMENT DATE 12"
QDREINDT13="QDD REINSTATEMENT DATE 13"
QDREINDT14="QDD REINSTATEMENT DATE 14"
QDREINDT15="QDD REINSTATEMENT DATE 15"
QDREINDT16="QDD REINSTATEMENT DATE 16"
QDRMVDT1="QDD REMOVAL DATE 1"
QDRMVDT2="QDD REMOVAL DATE 2"
QDRMVDT3="QDD REMOVAL DATE 3"
QDRMVDT4="QDD REMOVAL DATE 4"
QDRMVDT5="QDD REMOVAL DATE 5"
QDRMVDT6="QDD REMOVAL DATE 6"
QDRMVDT7="QDD REMOVAL DATE 7"
QDRMVDT8="QDD REMOVAL DATE 8"
QDRMVDT9="QDD REMOVAL DATE 9"
QDRMVDT10="QDD REMOVAL DATE 10"
QDRMVDT11="QDD REMOVAL DATE 11"
QDRMVDT12="QDD REMOVAL DATE 12"
QDRMVDT13="QDD REMOVAL DATE 13"
QDRMVDT14="QDD REMOVAL DATE 14"
QDRMVDT15="QDD REMOVAL DATE 15"
QDRMVDT16="QDD REMOVAL DATE 16"
QDRMVRSN1="QDD REMOVAL REASON 1"
QDRMVRSN2="QDD REMOVAL REASON 2"
QDRMVRSN3="QDD REMOVAL REASON 3"
QDRMVRSN4="QDD REMOVAL REASON 4"
QDRMVRSN5="QDD REMOVAL REASON 5"
QDRMVRSN6="QDD REMOVAL REASON 6"
QDRMVRSN7="QDD REMOVAL REASON 7"
```

Appendix A.62
JCL/SAS Code: DEMOLBLS

```
QDRMVRSN8="QDD REMOVAL REASON 8"
QDRMVRSN9="QDD REMOVAL REASON 9"
QDRMVRSN10="QDD REMOVAL REASON 10"
QDRMVRSN11="QDD REMOVAL REASON 11"
QDRMVRSN12="QDD REMOVAL REASON 12"
QDRMVRSN13="QDD REMOVAL REASON 13"
QDRMVRSN14="QDD REMOVAL REASON 14"
QDRMVRSN15="QDD REMOVAL REASON 15"
QDRMVRSN16="QDD REMOVAL REASON 16"
QDSCORE1="QDD SCORING CODE 1"
QDSCORE2="QDD SCORING CODE 2"
QDSCORE3="QDD SCORING CODE 3"
QDSCORE4="QDD SCORING CODE 4"
QDSCORE5="QDD SCORING CODE 5"
QDSCORE6="QDD SCORING CODE 6"
QDSCORE7="QDD SCORING CODE 7"
QDSCORE8="QDD SCORING CODE 8"
QDSCORE9="QDD SCORING CODE 9"
QDSCORE10="QDD SCORING CODE 10"
QDSCORE11="QDD SCORING CODE 11"
QDSCORE12="QDD SCORING CODE 12"
QDSCORE13="QDD SCORING CODE 13"
QDSCORE14="QDD SCORING CODE 14"
QDSCORE15="QDD SCORING CODE 15"
QDSCORE16="QDD SCORING CODE 16"
/*RACE="RACE OR ETHNICITY"
RACE_ASIAN="RACE: ASIAN"
RACE_BLACK="RACE: AFRICAN-AMERICAN"
RACE_HISPANIC="RACE: HISPANIC"
RACE_NAINDIAN="RACE: NATIVE AMERICAN"
RACE_OTHER="RACE: OTHER"
RACE_UNKNOWN="RACE: UNKNOWN"
RACE_WHITE="RACE: WHITE"
RACEMISS="RACE: MISSING"*/
RB1="REGULATION BASIS CODE 1"
RB10="REGULATION BASIS CODE 10"
RB11="REGULATION BASIS CODE 11"
RB12="REGULATION BASIS CODE 12"
RB13="REGULATION BASIS CODE 13"
RB14="REGULATION BASIS CODE 14"
RB15="REGULATION BASIS CODE 15"
RB16="REGULATION BASIS CODE 16"
RB2="REGULATION BASIS CODE 2"
RB3="REGULATION BASIS CODE 3"
RB4="REGULATION BASIS CODE 4"
```

Appendix A.62
JCL/SAS Code: DEMOLBLS

```
RB5="REGULATION BASIS CODE 5"
RB6="REGULATION BASIS CODE 6"
RB7="REGULATION BASIS CODE 7"
RB8="REGULATION BASIS CODE 8"
RB9="REGULATION BASIS CODE 9"
RDD="SSDI REASON FOR DISALLOWANCE OR DENIAL"
RDT1="RESULT OF DISABILITY DETERMINATION 1"
RDT10="RESULT OF DISABILITY DETERMINATION 10"
RDT11="RESULT OF DISABILITY DETERMINATION 11"
RDT12="RESULT OF DISABILITY DETERMINATION 12"
RDT13="RESULT OF DISABILITY DETERMINATION 13"
RDT14="RESULT OF DISABILITY DETERMINATION 14"
RDT15="RESULT OF DISABILITY DETERMINATION 15"
RDT16="RESULT OF DISABILITY DETERMINATION 16"
RDT2="RESULT OF DISABILITY DETERMINATION 2"
RDT3="RESULT OF DISABILITY DETERMINATION 3"
RDT4="RESULT OF DISABILITY DETERMINATION 4"
RDT5="RESULT OF DISABILITY DETERMINATION 5"
RDT6="RESULT OF DISABILITY DETERMINATION 6"
RDT7="RESULT OF DISABILITY DETERMINATION 7"
RDT8="RESULT OF DISABILITY DETERMINATION 8"
RDT9="RESULT OF DISABILITY DETERMINATION 9"
 /*REMDIG1="PRIMARY 4-DIGIT DIAGNOSIS - CER100% FIELD FILE"*/
REPPAYTP="SSI TYPE OF PAYEE CODE"
REPPYSSD="SSDI REPRESENTATIVE PAYEE INDICATOR"
REPPYSSI="SSI REPRESENTATIVE PAYEE INDICATOR"
 /*RETIREDATE="DATE BENEFICIARY REACHES FULL RETIREMENT AGE"*/
RFC1="REASON FOR CONTINUANCE/CESSATION CODE 1"
RFC10="REASON FOR CONTINUANCE/CESSATION CODE 10"
RFC11="REASON FOR CONTINUANCE/CESSATION CODE 11"
RFC12="REASON FOR CONTINUANCE/CESSATION CODE 12"
RFC13="REASON FOR CONTINUANCE/CESSATION CODE 13"
RFC14="REASON FOR CONTINUANCE/CESSATION CODE 14"
RFC15="REASON FOR CONTINUANCE/CESSATION CODE 15"
RFC16="REASON FOR CONTINUANCE/CESSATION CODE 16"
RFC2="REASON FOR CONTINUANCE/CESSATION CODE 2"
RFC3="REASON FOR CONTINUANCE/CESSATION CODE 3"
RFC4="REASON FOR CONTINUANCE/CESSATION CODE 4"
RFC5="REASON FOR CONTINUANCE/CESSATION CODE 5"
RFC6="REASON FOR CONTINUANCE/CESSATION CODE 6"
RFC7="REASON FOR CONTINUANCE/CESSATION CODE 7"
RFC8="REASON FOR CONTINUANCE/CESSATION CODE 8"
RFC9="REASON FOR CONTINUANCE/CESSATION CODE 9"
RID1="PROGRAM IDENTIFICATION 1"
RID10="PROGRAM IDENTIFICATION 10"
```

Appendix A.62
JCL/SAS Code: DEMOLBLS

```
RID11="PROGRAM IDENTIFICATION 11"
RID12="PROGRAM IDENTIFICATION 12"
RID13="PROGRAM IDENTIFICATION 13"
RID14="PROGRAM IDENTIFICATION 14"
RID15="PROGRAM IDENTIFICATION 15"
RID16="PROGRAM IDENTIFICATION 16"
RID2="PROGRAM IDENTIFICATION 2"
RID3="PROGRAM IDENTIFICATION 3"
RID4="PROGRAM IDENTIFICATION 4"
RID5="PROGRAM IDENTIFICATION 5"
RID6="PROGRAM IDENTIFICATION 6"
RID7="PROGRAM IDENTIFICATION 7"
RID8="PROGRAM IDENTIFICATION 8"
RID9="PROGRAM IDENTIFICATION 9"
RP="RACE OF THE PRIMARY"
RZIP="SSDI RESIDENCE ZIP CODE"
SDIG_MR="SSDI SECONDARY DIAGNOSIS CODE, MOST RECENT"
SDSD="SSDI DUAL ELIG-SGA DISABILITY CESSATION DATE"
SDS1="SSDI SGA DISABILITY CESSATION 1"
SDS10="SSDI SGA DISABILITY CESSATION 10"
SDS11="SSDI SGA DISABILITY CESSATION 11"
SDS12="SSDI SGA DISABILITY CESSATION 12"
SDS2="SSDI SGA DISABILITY CESSATION 2"
SDS3="SSDI SGA DISABILITY CESSATION 3"
SDS4="SSDI SGA DISABILITY CESSATION 4"
SDS5="SSDI SGA DISABILITY CESSATION 5"
SDS6="SSDI SGA DISABILITY CESSATION 6"
SDS7="SSDI SGA DISABILITY CESSATION 7"
SDS8="SSDI SGA DISABILITY CESSATION 8"
SDS9="SSDI SGA DISABILITY CESSATION 9"
SEX="SEX"
SEXMISS="INDICATOR FOR MISSING SEX DATA"
SIFT="SSDI SECURITY INCOME FILE TYPE"
SISC="SSI INCOME STATUS CODE"
SLAC="SSI LIVING ARRANGEMENT CODE"
SMI_START_MR=
"SSDI SUPP. MEDICAL INS. (SMI) START DATE, MEDICARE PART B MOST RECENT"
SMI_START1="SSDI SUPP. MEDICAL INS. (SMI) START DATE, MEDICARE PART B 1"
SMI_START10=
"SSDI SUPP. MEDICAL INS. (SMI) START DATE, MEDICARE PART B 10"
SMI_START11=
"SSDI SUPP. MEDICAL INS. (SMI) START DATE, MEDICARE PART B 11"
SMI_START12=
"SSDI SUPP. MEDICAL INS. (SMI) START DATE, MEDICARE PART B 12"
SMI_START13=
```

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JCL/SAS Code: DEMOLBLS

```
"SSDI SUPP. MEDICAL INS. (SMI) START DATE, MEDICARE PART B 13"
SMI_START14=
"SSDI SUPP. MEDICAL INS. (SMI) START DATE, MEDICARE PART B 14"
SMI_START15=
"SSDI SUPP. MEDICAL INS. (SMI) START DATE, MEDICARE PART B 15"
SMI_START16=
"SSDI SUPP. MEDICAL INS. (SMI) START DATE, MEDICARE PART B 16"
SMI_START17=
"SSDI SUPP. MEDICAL INS. (SMI) START DATE, MEDICARE PART B 17"
SMI_START18=
"SSDI SUPP. MEDICAL INS. (SMI) START DATE, MEDICARE PART B 18"
SMI_START19=
"SSDI SUPP. MEDICAL INS. (SMI) START DATE, MEDICARE PART B 19"
SMI_START2="SSDI SUPP. MEDICAL INS. (SMI) START DATE, MEDICARE PART B 2"
SMI_START20=
"SSDI SUPP. MEDICAL INS. (SMI) START DATE, MEDICARE PART B 20"
SMI_START3="SSDI SUPP. MEDICAL INS. (SMI) START DATE, MEDICARE PART B 3"
SMI_START4="SSDI SUPP. MEDICAL INS. (SMI) START DATE, MEDICARE PART B 4"
SMI_START5="SSDI SUPP. MEDICAL INS. (SMI) START DATE, MEDICARE PART B 5"
SMI_START6="SSDI SUPP. MEDICAL INS. (SMI) START DATE, MEDICARE PART B 6"
SMI_START7="SSDI SUPP. MEDICAL INS. (SMI) START DATE, MEDICARE PART B 7"
SMI_START8="SSDI SUPP. MEDICAL INS. (SMI) START DATE, MEDICARE PART B 8"
SMI_START9="SSDI SUPP. MEDICAL INS. (SMI) START DATE, MEDICARE PART B 9"
SMI_TERM_MR=
"SSDI SUPP. MEDICAL INS. (SMI) END DATE, MEDICARE PART B MOST RECENT"
SMI_TERM1="SSDI SUPP. MEDICAL INS. (SMI) END DATE, MEDICARE PART B 1"
SMI_TERM10="SSDI SUPP. MEDICAL INS. (SMI) END DATE, MEDICARE PART B 10"
SMI_TERM11="SSDI SUPP. MEDICAL INS. (SMI) END DATE, MEDICARE PART B 11"
SMI_TERM12="SSDI SUPP. MEDICAL INS. (SMI) END DATE, MEDICARE PART B 12"
SMI_TERM13="SSDI SUPP. MEDICAL INS. (SMI) END DATE, MEDICARE PART B 13"
SMI_TERM14="SSDI SUPP. MEDICAL INS. (SMI) END DATE, MEDICARE PART B 14"
SMI_TERM15="SSDI SUPP. MEDICAL INS. (SMI) END DATE, MEDICARE PART B 15"
SMI_TERM16="SSDI SUPP. MEDICAL INS. (SMI) END DATE, MEDICARE PART B 16"
SMI_TERM17="SSDI SUPP. MEDICAL INS. (SMI) END DATE, MEDICARE PART B 17"
SMI_TERM18="SSDI SUPP. MEDICAL INS. (SMI) END DATE, MEDICARE PART B 18"
SMI_TERM19="SSDI SUPP. MEDICAL INS. (SMI) END DATE, MEDICARE PART B 19"
SMI_TERM2="SSDI SUPP. MEDICAL INS. (SMI) END DATE, MEDICARE PART B 2"
SMI_TERM20="SSDI SUPP. MEDICAL INS. (SMI) END DATE, MEDICARE PART B 20"
SMI_TERM3="SSDI SUPP. MEDICAL INS. (SMI) END DATE, MEDICARE PART B 3"
SMI_TERM4="SSDI SUPP. MEDICAL INS. (SMI) END DATE, MEDICARE PART B 4"
SMI_TERM5="SSDI SUPP. MEDICAL INS. (SMI) END DATE, MEDICARE PART B 5"
SMI_TERM6="SSDI SUPP. MEDICAL INS. (SMI) END DATE, MEDICARE PART B 6"
SMI_TERM7="SSDI SUPP. MEDICAL INS. (SMI) END DATE, MEDICARE PART B 7"
SMI_TERM8="SSDI SUPP. MEDICAL INS. (SMI) END DATE, MEDICARE PART B 8"
SMI_TERM9="SSDI SUPP. MEDICAL INS. (SMI) END DATE, MEDICARE PART B 9"
```

Appendix A.62
JCL/SAS Code: DEMOLBLS

```
SSDI_ONSET="SSDI DISABILITY ONSET DATE EARLIEST PERIOD OF ELIGIBILITY"

%DO YEAR=&BEGYR. %TO &ENDYR.;
%LET YR=%SUBSTR(&YEAR.,3,2);
SSDI&YR.="SSDI CURRENT PAY STATUS IN &YEAR."
SSI&YR.="SSI CURRENT PAY STATUS IN &YEAR."
%END;

SSIELIG_ADULT="SSI EARLIEST ADULT ELIGIBILITY DATE (CONSTRUCTED)"
SSIELIG_FIRST="SSI EARLIEST ELIGIBILITY DATE (CONSTRUCTED)"
SSN="SOCIAL SECURITY NUMBER"
START_RD="SSI EARLIEST COMPUTATION DATE"
STATE="SSDI SSA STATE CODE OF RESIDENCE"
 /*STATECD_ENDYR="PAYMENT STATE CODE"*/
STOP_RD="SSI END DATE FOR ELIGIBILITY PERIOD"
TAC="SSDI TYPE OF AWARD CODE"

%DO YEAR=2002 %TO &ENDYR.;
%LET YR=%SUBSTR(&YEAR.,3,2);
TKT&YR.="TICKET ACTIVE IN &YEAR."
%END;

TOA="SSI TYPE OF ACTION CODE"
TOC_NUM="SSDI NUMBER OF TYPE OF CLAIM (TOC) OCCURRENCES"
TOC_START1="SSDI TYPE OF CLAIM (TOC) START DATE 1"
TOC_START10="SSDI TYPE OF CLAIM (TOC) START DATE 10"
TOC_START11="SSDI TYPE OF CLAIM (TOC) START DATE 11"
TOC_START12="SSDI TYPE OF CLAIM (TOC) START DATE 12"
TOC_START13="SSDI TYPE OF CLAIM (TOC) START DATE 13"
TOC_START14="SSDI TYPE OF CLAIM (TOC) START DATE 14"
TOC_START15="SSDI TYPE OF CLAIM (TOC) START DATE 15"
TOC_START16="SSDI TYPE OF CLAIM (TOC) START DATE 16"
TOC_START17="SSDI TYPE OF CLAIM (TOC) START DATE 17"
TOC_START18="SSDI TYPE OF CLAIM (TOC) START DATE 18"
TOC_START19="SSDI TYPE OF CLAIM (TOC) START DATE 19"
TOC_START2="SSDI TYPE OF CLAIM (TOC) START DATE 2"
TOC_START20="SSDI TYPE OF CLAIM (TOC) START DATE 20"
TOC_START3="SSDI TYPE OF CLAIM (TOC) START DATE 3"
TOC_START4="SSDI TYPE OF CLAIM (TOC) START DATE 4"
TOC_START5="SSDI TYPE OF CLAIM (TOC) START DATE 5"
TOC_START6="SSDI TYPE OF CLAIM (TOC) START DATE 6"
TOC_START7="SSDI TYPE OF CLAIM (TOC) START DATE 7"
TOC_START8="SSDI TYPE OF CLAIM (TOC) START DATE 8"
TOC_START9="SSDI TYPE OF CLAIM (TOC) START DATE 9"
TOC1="SSDI TYPE OF CLAIM 1"
```

Appendix A.62
JCL/SAS Code: DEMOLBLS

```
TOC10="SSDI TYPE OF CLAIM 10"
TOC11="SSDI TYPE OF CLAIM 11"
TOC12="SSDI TYPE OF CLAIM 12"
TOC13="SSDI TYPE OF CLAIM 13"
TOC14="SSDI TYPE OF CLAIM 14"
TOC15="SSDI TYPE OF CLAIM 15"
TOC16="SSDI TYPE OF CLAIM 16"
TOC17="SSDI TYPE OF CLAIM 17"
TOC18="SSDI TYPE OF CLAIM 18"
TOC19="SSDI TYPE OF CLAIM 19"
TOC2="SSDI TYPE OF CLAIM 2"
TOC20="SSDI TYPE OF CLAIM 20"
TOC3="SSDI TYPE OF CLAIM 3"
TOC4="SSDI TYPE OF CLAIM 4"
TOC5="SSDI TYPE OF CLAIM 5"
TOC6="SSDI TYPE OF CLAIM 6"
TOC7="SSDI TYPE OF CLAIM 7"
TOC8="SSDI TYPE OF CLAIM 8"
TOC9="SSDI TYPE OF CLAIM 9"
TOP="SSDI TYPE OF PAYEE"
TWPCMPLMNTH1="SSDI TRIAL WORK PERIOD (TWP) COMPLETION MONTH 1"
TWPCMPLMNTH2="SSDI TRIAL WORK PERIOD (TWP) COMPLETION MONTH 2"
TWPCMPLMNTH3="SSDI TRIAL WORK PERIOD (TWP) COMPLETION MONTH 3"
TWPCMPLMNTH4="SSDI TRIAL WORK PERIOD (TWP) COMPLETION MONTH 4"
TWPCMPLMNTH5="SSDI TRIAL WORK PERIOD (TWP) COMPLETION MONTH 5"
T16APPL1="SSI MEDICAL DECISION APPEAL DATE 1"
T16APPL10="SSI MEDICAL DECISION APPEAL DATE 10"
T16APPL2="SSI MEDICAL DECISION APPEAL DATE 2"
T16APPL3="SSI MEDICAL DECISION APPEAL DATE 3"
T16APPL4="SSI MEDICAL DECISION APPEAL DATE 4"
T16APPL5="SSI MEDICAL DECISION APPEAL DATE 5"
T16APPL6="SSI MEDICAL DECISION APPEAL DATE 6"
T16APPL7="SSI MEDICAL DECISION APPEAL DATE 7"
T16APPL8="SSI MEDICAL DECISION APPEAL DATE 8"
T16APPL9="SSI MEDICAL DECISION APPEAL DATE 9"
LANGSSR="SSI LANGUAGE"
T16START1="SSI BENEFIT ENTITLEMENT DATE 1"
T16START10="SSI BENEFIT ENTITLEMENT DATE 10"
T16START2="SSI BENEFIT ENTITLEMENT DATE 2"
T16START3="SSI BENEFIT ENTITLEMENT DATE 3"
T16START4="SSI BENEFIT ENTITLEMENT DATE 4"
T16START5="SSI BENEFIT ENTITLEMENT DATE 5"
T16START6="SSI BENEFIT ENTITLEMENT DATE 6"
T16START7="SSI BENEFIT ENTITLEMENT DATE 7"
T16START8="SSI BENEFIT ENTITLEMENT DATE 8"
```

Appendix A.62
JCL/SAS Code: DEMOLBLS

```
T16START9="SSI BENEFIT ENTITLEMENT DATE 9"
T16STOP1="SSI BENEFIT CESSATION DATE 1"
T16STOP10="SSI BENEFIT CESSATION DATE 10"
T16STOP2="SSI BENEFIT CESSATION DATE 2"
T16STOP3="SSI BENEFIT CESSATION DATE 3"
T16STOP4="SSI BENEFIT CESSATION DATE 4"
T16STOP5="SSI BENEFIT CESSATION DATE 5"
T16STOP6="SSI BENEFIT CESSATION DATE 6"
T16STOP7="SSI BENEFIT CESSATION DATE 7"
T16STOP8="SSI BENEFIT CESSATION DATE 8"
T16STOP9="SSI BENEFIT CESSATION DATE 9"
VRA1="VOCATIONAL REHABILITATION REFERRAL ACTION CODE 1"
VRA10="VOCATIONAL REHABILITATION REFERRAL ACTION CODE 10"
VRA11="VOCATIONAL REHABILITATION REFERRAL ACTION CODE 11"
VRA12="VOCATIONAL REHABILITATION REFERRAL ACTION CODE 12"
VRA13="VOCATIONAL REHABILITATION REFERRAL ACTION CODE 13"
VRA14="VOCATIONAL REHABILITATION REFERRAL ACTION CODE 14"
VRA15="VOCATIONAL REHABILITATION REFERRAL ACTION CODE 15"
VRA16="VOCATIONAL REHABILITATION REFERRAL ACTION CODE 16"
VRA2="VOCATIONAL REHABILITATION REFERRAL ACTION CODE 2"
VRA3="VOCATIONAL REHABILITATION REFERRAL ACTION CODE 3"
VRA4="VOCATIONAL REHABILITATION REFERRAL ACTION CODE 4"
VRA5="VOCATIONAL REHABILITATION REFERRAL ACTION CODE 5"
VRA6="VOCATIONAL REHABILITATION REFERRAL ACTION CODE 6"
VRA7="VOCATIONAL REHABILITATION REFERRAL ACTION CODE 7"
VRA8="VOCATIONAL REHABILITATION REFERRAL ACTION CODE 8"
VRA9="VOCATIONAL REHABILITATION REFERRAL ACTION CODE 9"
;
 %MEND GETLB;
 %GETLB;
```

Appendix A.63
JCL/SAS Code: COPYDMG

```
//#7429CPD  JOB (12510000,T715,,SAS,,ITC9FL),COLIP-BRITTANY,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#4941
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    JODY SCHIMMEL HYDE
//* PROGRAM:     OPDR.TG.PRD.ETTW.#7429.DAF18.DEMO.PRDLIB(COPYDEMO)
//* DESCRIPTION: COPE DEMO FILE FROM TAPE TO TAPE
//* DATE:
//* UPDATE:      12/13/2019 BRITTANY COLIP
//*****************************************************************
//* FULL DMG FILE
//STEPA    EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.DMG,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.DMG,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//* COPIED VERSION
//STEPA    EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.DMG,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.DMG,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//* DMG 10% FILE
//STEPA    EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10DMG,DISP=SHR
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.P10DMG,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//SYSIN    DD DUMMY
//* DMG 10% FILE COPIED VERSION
//STEPA    EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10DMG,DISP=SHR
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.P10DMG,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//SYSIN    DD DUMMY
```

Appendix A.63
JCL/SAS Code: COPYDMG

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<BRITTANY.COLIP@SSA.GOV>
RCPT TO:<BRITTANY.COLIP@SSA.GOV>
DATA
FROM:   <BRITTANY.COLIP@SSA.GOV>
TO:     <BRITTANY.COLIP@SSA.GOV>
SUBJECT: DMG COPY COMPLETE

DMG COPY IS COMPLETE
```

Appendix A.64
JCL/SAS Code: Upload Provider Data

```
*****************************************************************
* PROJECT: Evaluation of the Ticket to Work Program-Part A
*        Evaluation Implementation () DAF16
* PROJECT
* DIRECTOR:    LAURA KOSAR
*
* PROGRAM:     M:\DAF18\TASK 11 Create Ticket Component\Programs\Upload Provider Data.sas
*
*
* DESCRIPTION: UPLOADS PROVIDER DATA
*
* DATE:       06/13/2019 SERGE LUKASHANETS
***************************************************************** ;

LIBNAME OUT 'M:\DAF18\TASK 11 Create Ticket Component\Programs';

/*set macro vars*/

%let fname    = EN_Provider_File_062719;
%let datafile = M:\DAF18\TASK 11 Create Ticket Component\Provider File\EN Provider File 062719.xls;
%let libloc   = M:\DAF18\TASK 11 Create Ticket Component\Programs;

/*THIS FILE IS OBTAINED FROM THE HYPERION SYSTEM BY KATIE STRIEBINGER VIA EMAIL REQUEST.
THE FILE CONTAINS DATA RELATED PROVIDERS (EN & VR) FOR THE TTW PROGRAM*/

PROC IMPORT OUT= OUT.&fname.
        DATAFILE= "&datafile."
        DBMS=XLS REPLACE;
   SHEET='DAF_EN_Provider';
   GETNAMES=YES;
   MIXED=YES;/*
   USEDATE=YES;
   SCANTIME=YES;*/
RUN;
/*
proc compare base=out.En_provider_file_060619
               compare=out.En_provider_file_062719;
run;
*/

PROC PRINT DATA = OUT.&fname.;
RUN;
```

Appendix A.64
JCL/SAS Code: Upload Provider Data

```
DATA  OUT.TRUNC_PROVIDER
     (KEEP = DUNS Vr_Sw);
    SET OUT.&fname.;
RUN;

PROC PRINT DATA = OUT.TRUNC_PROVIDER;
RUN;


PROC SORT DATA = OUT.TRUNC_PROVIDER (RENAME = (Vr_Sw=Vocational_Rehabilitation_Switch))
        OUT = OUT.PROVIDER
        NODUP;
        BY DUNS;
RUN;
/*
OPTIONS comamid=tcp remote=mvs;
signon user='#6266' password = '1514orsh';
*/

filename a "&libloc.\provider.txt";
data _null_;
set OUT.PROVIDER;
file a;
put DUNS Vocational_Rehabilitation_Switch;
run;

endsas;

SIGNON ;
libname local "&libloc.";
*rsubmit;
libname MISFDATA REMOTE "OPDR.TG.PRD.ETTW.#6266.DAF18P.PROVIDER.SA.V1" SERVER=SY56.spawner;
option compress=binary;
RUN;

****************************************************************;
/* Use the firstobs and obs control only if needed.  For example, if the first download */
/*  after the 499th record, then the code below will start downloading at the 500th     */
/*  observation and go until it completes or crashes.                                    */
****************************************************************;

proc upload data=local.PROVIDER  OUT=MISFDATA.PROVIDER (compress=binary);

RUN;
*endrsubmit;
```

Appendix A.64
JCL/SAS Code: Upload Provider Data

```
signoff;
```

Appendix A.65
JCL/SAS Code: DCFTKT

```
//#6502DCF JOB (12510000,T715,,SAS,,ITC9TH),BRYCE,CLASS=T,
// MSGCLASS=1,MSGLEVEL=(1,1),REGION=4096K,NOTIFY=#6502
/*SSAMAIN SASBASIC
//*****************************************************************
//* PROJECT: EVALUATION OF THE TICKET TO WORK PROGRAM-PART A
//*        EVALUATION IMPLEMENTATION (06979) DAF
//* PROJECT
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.TKT.PRDLIB(DCFEXT)
//*
//* DESCRIPTION: CREATE DCF EXTRACTS FOR DAF TICKET FILE
//*
//* DATE:       05/14/19 ALEX BRYCE
//*
//* EMAIL:      ABRYCE@MATHEMATICA-MPR.COM
//* PHONE:      ???
//*****************************************************************
//S1 EXEC SAS9,LOAD='DBP8.DB2.SDSNLOAD',SORT='15000',
//    WORK='15000,15000',COND=EVEN
//TKTASGN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DCFTKTA.SA.V1,
//  DISP=(,CATLG,DELETE),
//  UNIT=TSILO,
//  VOL=(,,,255),
//  DCB=(BLKSIZE=6144,DSORG=PS,LRECL=6144,RECFM=FS)
//HTKTASGN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DCFHTKTA.SA.V1,
//  DISP=(,CATLG,DELETE),
//  UNIT=AFF=TKTASGN,
//  VOL=(,,,255),
//  DCB=(BLKSIZE=6144,DSORG=PS,LRECL=6144,RECFM=FS)
//TKT      DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DCFTKT.SA.V1,
//  DISP=(,CATLG,DELETE),
//  UNIT=AFF=TKTASGN,
//  VOL=(,,,255),
//  DCB=(BLKSIZE=6144,DSORG=PS,LRECL=6144,RECFM=FS)
//HTKT      DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DCFHTKT.SA.V1,
//  DISP=(,CATLG,DELETE),
//  UNIT=AFF=TKTASGN,
//  VOL=(,,,255),
//  DCB=(BLKSIZE=6144,DSORG=PS,LRECL=6144,RECFM=FS)
//TKTTITLE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DCFTKTT.SA.V1,
//  DISP=(,CATLG,DELETE),
//  UNIT=AFF=TKTASGN,
//  VOL=(,,,255),
```

Appendix A.65
JCL/SAS Code: DCFTKT

```
// DCB=(BLKSIZE=6144,DSORG=PS,LRECL=6144,RECFM=FS)
//HTKTTITL DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DCFHTKTT.SA.V1,
// DISP=(,CATLG,DELETE),
// UNIT=AFF=TKTASGN,
// VOL=(,,,255),
// DCB=(BLKSIZE=6144,DSORG=PS,LRECL=6144,RECFM=FS)
//TKTMNTH  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DCFTKTM.SA.V1,
// DISP=(,CATLG,DELETE),
// UNIT=AFF=TKTASGN,
// VOL=(,,,255),
// DCB=(BLKSIZE=6144,DSORG=PS,LRECL=6144,RECFM=FS)
//HTKTMNTH  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DCFHTKTM.SA.V1,
// DISP=(,CATLG,DELETE),
// UNIT=AFF=TKTASGN,
// VOL=(,,,255),
// DCB=(BLKSIZE=6144,DSORG=PS,LRECL=6144,RECFM=FS)
//CLNT     DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DCFCLNT.SA.V1,
// DISP=(,CATLG,DELETE),
// UNIT=AFF=TKTASGN,
// VOL=(,,,255),
// DCB=(BLKSIZE=6144,DSORG=PS,LRECL=6144,RECFM=FS)
//HCLNT    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DCFHCLNT.SA.V1,
// DISP=(,CATLG,DELETE),
// UNIT=AFF=TKTASGN,
// VOL=(,,,255),
// DCB=(BLKSIZE=6144,DSORG=PS,LRECL=6144,RECFM=FS)
//TKTST    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DCFTKTST.SA.V1,
// DISP=(,CATLG,DELETE),
// UNIT=AFF=TKTASGN,
// VOL=(,,,255),
// DCB=(BLKSIZE=6144,DSORG=PS,LRECL=6144,RECFM=FS)
//SYSIN DD *
  /*NOTE: DATASETS PREFIXED WITH AN "H" ARE HISTORICAL FILES
        AND ARE CREATED FOR INTERNAL DOCUMENTATION PURPOSES ONLY
        HTKTASGN, HTKT, HTKTTITL, HTKTMNTH, HCLNT*/

OPTIONS NOCENTER;
OPTIONS OBS=MAX;

*THE LIBNAME STATEMENT BELOW REFERS TO THE DCF DB2 TABLES,
 INPUT DATA IS SPECIFIED IN THAT LIBNAME STATEMENT;

LIBNAME MDCF DB2 SSID=DBP8 SCHEMA=MDCF;

*WE ARE CREATING SNAPSHOTS OF THIS DATA SO WE DO NOT WANT TO DO ANYTHING
```

Appendix A.65
JCL/SAS Code: DCFTKT

```
 THAT CHANGES THE NUMBER OF OBS OR VARS CONTAINED IN THE DATASET
 (I.E. DROP, KEEP, WHERE, ETC.);

PROC SQL;
  CREATE TABLE TKTASGN.TKTASGN   AS
  SELECT * FROM   MDCF.TKTASGN
  /*ORDER BY REPLACES SORT INITIAL SORT IN TKTMLASG*/
  ORDER BY COSSN, TKT_NUM;

  CREATE TABLE HTKTASGN.HTKTASGN AS
  SELECT * FROM    MDCF.HTKTASGN;


  CREATE TABLE   TKT.TKT        AS
  SELECT * FROM MDCF.TKT
  /*ORDER BY REPLACES SORT INITIAL SORT IN TKTMLASG*/
  ORDER BY COSSN, TKT_NUM;

  CREATE TABLE  HTKT.HTKT       AS
  SELECT * FROM MDCF.HTKT;


  CREATE TABLE TKTTITLE.TKTTITLE AS
  SELECT * FROM    MDCF.TKTTITLE;


  CREATE TABLE HTKTTITL.HTKTTITL AS
  SELECT * FROM    MDCF.HTKTTITL;


  CREATE TABLE TKTMNTH.TKTMNTH   AS
  SELECT * FROM   MDCF.TKTMNTH
  /*ORDER BY REPLACES SORT INITIAL SORT IN TKTTITLE*/
  ORDER BY COSSN, TKT_STMDT;

  CREATE TABLE HTKTMNTH.HTKTMNTH AS
  SELECT * FROM    MDCF.HTKTMNTH;

  CREATE TABLE  CLNT.CLNT       AS
  SELECT * FROM MDCF.CLNT;

  CREATE TABLE HCLNT.HCLNT      AS
  SELECT * FROM MDCF.HCLNT;

   CREATE TABLE TKTST.TKTSENT     AS
```

Appendix A.65
JCL/SAS Code: DCFTKT

```
    SELECT * FROM MDCF.TKTSENT;

QUIT;

PROC CONTENTS DATA=TKTST.TKTSENT;
PROC CONTENTS DATA=TKTASGN.TKTASGN;
PROC CONTENTS DATA=HTKTASGN.HTKTASGN;
PROC CONTENTS DATA=TKT.TKT;
PROC CONTENTS DATA=HTKT.HTKT;
PROC CONTENTS DATA=TKTTITLE.TKTTITLE;
PROC CONTENTS DATA=HTKTTITL.HTKTTITL;
PROC CONTENTS DATA=TKTMNTH.TKTMNTH;
PROC CONTENTS DATA=HTKTMNTH.HTKTMNTH;
PROC CONTENTS DATA=CLNT.CLNT;
PROC CONTENTS DATA=HCLNT.HCLNT;
RUN;

//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:     ABRYCE@MATHEMATICA-MPR.COM
TO:       ABRYCE@MATHEMATICA-MPR.COM
SUBJECT:  DCFEXT (DAF18)

DCFEXT HAS FINISHED RUNNING
```

Appendix A.66
JCL/SAS Code: PROVFMT

```
//#6266PVF  JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//* PROJECT: BUILD DAF18 (??)
//* PROJECT
//* DIRECTOR:    LAURA KOSAR
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6266.DAF18.TKT.PRDLIB(PROVFMT)
//*
//* DESCRIPTION: CREATE PROVIDER FORMAT FROM PROVIDER FILE
//*
//* DATE:       06/13/19 SERGE LUKASHANETS
//* EMAIL:      SLUKASHANETS@MATHEMATICA-MPR.COM
//*********************************************************************
//STEP1 EXEC SAS9
//WORK     DD SPACE=(6160,(99000,99000),,,ROUND)
//TEMP1  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,
//         VOL=(,,,10)
//PROV     DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.PROVIDER.FL.V2,DISP=SHR
//LIBRARY  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.TKT.FMTLIB,
//           DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//           SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD *

* READ PROVIDER FILE;
DATA PROVIDER;
INFILE PROV TRUNCOVER;
INPUT
@01 DUNS $9.
@11 Vocational_Rehabilitation_Switch $1.
;
IF DUNS="" THEN DELETE;
RUN;

PROC PRINT DATA=PROVIDER (OBS=10);
RUN;


DATA PROVIDER(KEEP=START LABEL FMTNAME);
   SET PROVIDER (RENAME=(DUNS=START
       Vocational_Rehabilitation_Switch=LABEL));
   * IN ORDER TO CREATE THE FORMAT THE VARIABLE CONTAINING THE VALUE
     TO BE FORMATTED MUST BE NAMED "START" AND THE VARIABLE CONTAINING
     THE FORMATTED VALUE MUST BE NAME "LABEL";
```

Appendix A.66
JCL/SAS Code: PROVFMT

```
    IF LABEL='Y' THEN LABEL='V';
    ELSE IF LABEL='N' THEN LABEL='E';

    * A VARIABLE NAMED FMTNAME MUST BE CREATED TO STORE THE NAME OF THE
      FORMAT --- THE NAME USED TO REFERENCE THE FORMAT;
    FMTNAME='$PROVTYPE';

    OUTPUT;

    *THE 'IF _N_=1' CONDITION IS NECESSARY SINCE WE WANT TO ADD ONE LINE
     FOR ALL 'OTHER' VALUES WHEREVER THEY APPEAR, THE TOTAL N OF
     RECORDS IN THE OUTPUT DATA SET IS N+1;

    IF _N_=1 THEN DO;
       START='OTHER';
       LABEL=' ';
       OUTPUT;
    END;

RUN;

* CREATE THE FORMAT FROM THE FILE CREATED IN PREVIOUS DATASTEP;
PROC FORMAT CNTLIN=PROVIDER LIBRARY=LIBRARY FMTLIB;
RUN;

* CHECK THAT THE FORMAT IS WORKING CORRECTLY BY PRINTING THE FORMATED
  VALUE OF "START" FROM THE CNTLIN FILE AND THE VALUE OF "LABEL".  IF
  THE FORMAT CREATION WAS SUCCESSFULL THESE VALUES WILL BE THE SAME;
PROC PRINT DATA=PROVIDER;
    VAR START LABEL;
    FORMAT START $PROVTYPE.;
RUN;
```

Appendix A.67
JCL/SAS Code: TKTTITLE

```
//#6266TTL  JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//         MSGCLASS=1,MSGLEVEL=(1,1)
//*****************************************************************
//* PROJECT: BUILD DAF (06979)
//* PROJECT
//* DIRECTOR:    LAURA KOSAR
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6266.DAF18.TKT.PRDLIB(TKTTITLE)
//*
//* DESCRIPTION: CREATE TICKET TITLE & IN-USE DATA
//*            THIS PROGRAM MODIFIES THE ORIGINAL TKTTITLE PROGRAM
//*            BY ADDING MACRO VARIABLE PROCESSING
//*            (DOES NOT CREATE A MACRO)
//* DATE:       05/22/18 SERGE LUKASHANETS
//* EMAIL:      SLUKASHANETS@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//SAS      EXEC SAS9,
//         WORK='120000,60000'
//*
//IN1   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DCFTKTM.SA.V1,DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.TKTTITLE.SA.V1,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//TEMP1 DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(3000,3000),RLSE),VOL=(,,,10)
//SYSIN DD *

OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN OBS=MAX;
%GLOBAL BEGYR ENDYR;
%LET BEGYR=2002;
%LET ENDYR=2018; * CHANGE WHEN NEEDED;

DATA TEMP1.TKTMNTH(KEEP=COSSN TKT_STMDT SSACT_PRTCPN_CD YYMM
 TKT_INUSE_S:) TEMP1.TKTDUP (KEEP=COSSN TKT_STMDT);/*TKTDUP FOR DUPS ONLY*/
   SET IN1.TKTMNTH (RENAME=(TKT_INUSE_SW=TKT_INUSE_SWC));
   WHERE SSACT_PRTCPN_CD NE '0';
   BY COSSN TKT_STMDT;

   * CREATE VARIABLE CONTAINING THE YYMM OF THE EFFECTIVE DATE;
   * THE YYMM VARIABLE IS USED AS AN ID IN THE TRANSPOSE PROCEDURE

   LENGTH YYMM $4.;
   YYMM=PUT(TKT_STMDT,YYMMDD4.);
```

Appendix A.67
JCL/SAS Code: TKTTITLE

```
    *CONVER TO NUMERIC;
    IF TKT_INUSE_SWC='Y' THEN TKT_INUSE_SW=1;
    ELSE IF TKT_INUSE_SWC='N' THEN TKT_INUSE_SW=0;


    * KEEP ALL UNIQUE COMBINATIONS OF COSSN AND TKT_STMDT;
    * IF NOT A UNIQUE COMBO THEN KEEP THE FIRST OBS;
    IF FIRST.TKT_STMDT THEN OUTPUT TEMP1.TKTMNTH;
    ELSE OUTPUT TEMP1.TKTDUP;
RUN;
PROC SORT DATA=TEMP1.TKTMNTH;
    BY COSSN YYMM;
RUN;

PROC FREQ DATA=TEMP1.TKTMNTH;
TABLES TKT_INUSE_SW*TKT_INUSE_SWC/LIST MISSING;
RUN;

* CREATE ONE RECORD PER COSSN WITH MONTHLY TITLE VARIABLES;
PROC TRANSPOSE DATA=TEMP1.TKTMNTH OUT=TEMP1.TKTTITLE PREFIX=TITLE_MO;
    BY COSSN;
    ID YYMM;
    VAR SSACT_PRTCPN_CD;
RUN;

* CREATE ONE RECORD PER COSSN WITH MONTHLY INUSE VARIABLES;
PROC TRANSPOSE DATA=TEMP1.TKTMNTH OUT=TEMP1.TKTINUSE PREFIX=INUSE_MO;
    BY COSSN;
    ID YYMM;
    VAR TKT_INUSE_SW;
RUN;

* CREATE MACRO TKTTITLE SO THAT %DO PROCESSING WILL EXECUTE;

%MACRO TKTTITLE();
* POPULATE ALL MONTHLY TITLE & IN-USE VARIABLES;
 DATA OUT.TKTTITLE;
    MERGE TEMP1.TKTTITLE(IN=A)
          TEMP1.TKTINUSE(IN=B)
          ;
    BY COSSN;

    /*TITLE_MO AND CINUSE_MO ARE INPUT ARRAYS*/
    /*WE'RE NOT GOING TO USE YYMM MACRO TO KEEP IT SIMPLE*/
```

Appendix A.67
JCL/SAS Code: TKTTITLE

```
    ARRAY TITLE_MO $
                %DO YEAR=&BEGYR %TO &ENDYR;
                  %LET YR=%SUBSTR(&YEAR.,3,2);
                  TITLE_MO&YR.01-TITLE_MO&YR.12
                %END;
               ;

    ARRAY CINUSE_MO
                %DO YEAR=&BEGYR %TO &ENDYR;
                  %LET YR=%SUBSTR(&YEAR.,3,2);
                  INUSE_MO&YR.01-INUSE_MO&YR.12
                %END;
               ;


    * IF THE CURRENT MONTH IS NOT BLANK AND THE SUBSEQUENT
      MONTH IS BLANK THEN POPULATE THE SUBSEQUENT MONTH
      WITH THE CURRENT MONTH.  THIS WILL POPULATE ALL MONTHS
      FROM THE FIRST MONTH OF EFFECTIVE DATE UNTIL THE
      MONTH THE VARIABLE CHANGES.;
    DO I=1 TO DIM(TITLE_MO)-1;

       IF TITLE_MO(I) NE '' AND TITLE_MO(I+1)=''
       THEN TITLE_MO(I+1)=TITLE_MO(I);

       IF CINUSE_MO(I) NE . AND CINUSE_MO(I+1)=.
       THEN CINUSE_MO(I+1)=CINUSE_MO(I);

    END;


  RUN;

  PROC CONTENTS DATA=OUT.TKTTITLE;
  RUN;

  PROC MEANS DATA=OUT.TKTTITLE N MIN MEAN MAX;
  VAR INUSE_MO:;
  RUN;

 %MEND;

 %TKTTITLE();
 ENDSAS;
 //*************************************************
```

Appendix A.67
JCL/SAS Code: TKTTITLE

```
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<SLUKASHANETS@MATHEMATICA-MPR.COM>
RCPT TO:<SLUKASHANETS@MATHEMATICA-MPR.COM>
DATA
FROM:     SLUKASHANETS@MATHEMATICA-MPR.COM
TO:       SLUKASHANETS@MATHEMATICA-MPR.COM
SUBJECT:  TKTTITLE (DAF18)

TKTTITLE HAS FINISHED RUNNING
```

Appendix A.68
JCL/SAS Code: TKTMLASG

```
//#6266TKM  JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//* PROJECT: BUILD DAF17 (06979)
//* PROJECT
//* DIRECTOR:    LAURA KOSAR
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6266.DAF17.TKT.PRDLIB(TKTMLASG)
//*
//* DESCRIPTION: CREATE TICKET MAILINGS & ASSIGNMENT PORTIONS OF DAF
//*
//* DATE:  06/01/2018 SERGE LUKASHANETS
//* EMAIL: SLUKASHANETS@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//TKTML   EXEC SAS9,
//        WORK='120000,60000'
//*
//TKT     DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DCFTKT.SA.V1,DISP=SHR
//TKTA    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DCFTKTA.SA.V1,DISP=SHR
//CLNT    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DCFCLNT.SA.V1,DISP=SHR
//TKTST   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DCFTKTST.SA.V1,DISP=SHR
//MLAS    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.TKTMLASG.SA.V2,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//NOPROV  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.NOPROV.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         SPACE=(CYL,(500,10),RLSE)
//BPRE    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.BLDPRETK.SA.V2,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//LIBRARY DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.TKT.FMTLIB,DISP=SHR
//TEMP1   DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP2   DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP3   DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP4   DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP5   DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN   DD *
```

Appendix A.68
JCL/SAS Code: TKTMLASG

```
OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN OBS=MAX;

PROC SORT DATA=TKT.TKT OUT=TEMP1.TKT;
   BY COSSN TKT_NUM MAILD_DT TKT_STUS_DT;
RUN;

PROC SORT DATA=TKTA.TKTASGN OUT=TEMP2.TKTASGN;
   BY COSSN TKT_NUM ASGND_DT;
RUN;

PROC SORT DATA=TKTST.TKTSENT OUT=TEMP3.TKTSENT;
   BY COSSN TKT_NUM NTC_VER_NUM DESCENDING LU_TS;
   WHERE NTC_VER_NUM NE 2001;
RUN;

PROC SORT DATA=TKTST.TKTSENT OUT=TEMP3.TKTSENT1;
   BY COSSN TKT_NUM NTC_VER_NUM NTCDT;
   WHERE NTC_VER_NUM = 2001;
RUN;


PROC SORT DATA=TEMP3.TKTSENT NODUPKEYS;
   BY COSSN TKT_NUM NTC_VER_NUM;
RUN;

PROC SORT DATA=TEMP3.TKTSENT1 NODUPKEYS;
   BY COSSN TKT_NUM NTC_VER_NUM;
RUN;


PROC MEANS DATA=TEMP3.TKTSENT MIN MAX MEAN;
VAR NTCDT;
CLASS NTC_VER_NUM;
RUN;

PROC MEANS DATA=TEMP3.TKTSENT1 MIN MAX MEAN;
VAR NTCDT;
CLASS NTC_VER_NUM;
RUN;


PROC TRANSPOSE DATA=TEMP3.TKTSENT OUT=TEMP3.TKTSENTA;
ID NTC_VER_NUM;
BY COSSN TKT_NUM;
VAR NTCDT;
```

Appendix A.68
JCL/SAS Code: TKTMLASG

```
RUN;

PROC TRANSPOSE DATA=TEMP3.TKTSENT1 OUT=TEMP3.TKTSENTB;
ID NTC_VER_NUM;
BY COSSN TKT_NUM;
VAR NTCDT;
RUN;

PROC CONTENTS DATA=TEMP3.TKTSENTA;RUN;
PROC CONTENTS DATA=TEMP3.TKTSENTB;RUN;

DATA TEMP4.TKTMLASG;
  MERGE TEMP1.TKT (IN=A)
      TEMP2.TKTASGN
      TEMP3.TKTSENTA (IN=B DROP=_NAME_ _LABEL_)
      TEMP3.TKTSENTB (IN=C DROP=_NAME_ _LABEL_)
   ;
 BY COSSN TKT_NUM;
 IF A;
 IF A THEN IN_TKT=1;
 IF B THEN IN_TKS=1;
 IF C THEN IN_TKS2=1;

 IF _1>.Z THEN MAIL_DT=_1;
 IF _5001>.Z THEN MAIL_DT=_5001;


 RUN;

 PROC FREQ DATA=TEMP4.TKTMLASG;
 TABLES IN_TKT*IN_TKS*IN_TKS2 / LIST MISSING;
 RUN;

 PROC MEANS DATA=TEMP4.TKTMLASG;
 VAR MAIL_DT _1 _5001;
 WHERE _1>.Z OR _5001>.Z;
 RUN;

  /*SELECT THE NUMBER OF ARRAY MEMBERS, BASED ON N OF RECS PER SSN*/


PROC SQL NOPRINT;
  SELECT MAX(TKT_COUNT) INTO :MAXTKTN
  FROM (SELECT COUNT(COSSN) AS TKT_COUNT
      FROM TEMP4.TKTMLASG
```

Appendix A.68
JCL/SAS Code: TKTMLASG

```
        GROUP BY COSSN);
    QUIT;
    %LET MAXTKTNUM = %LEFT(&MAXTKTN.);
    %PUT FOUND &MAXTKTNUM AS THE MAXIMUM NUMBER OF RECS PER SSN;

    DATA MLAS.TKTMLASG(KEEP=TKTMAILDDT: TKTTERMDDT: TKTASGNDDT: TKTUNASGDT:
                TKTSELDT: DUNS: PROVTYPE: PMTTYPE: NOE COSSN
                NUMBER: TKTINTMLDT: TKTADHMLDT: TKT1YRMLDT:
                TKT3YRMLDT: TKTCUPMLDT:)

        /*STORE RECORDS WITH DUNS AND NO PROVIDER TYPE IN NOPROV
        DATASET*/
    NOPROV.NOPROV(KEEP=DUNS: PROVTYPE: MAX_NOTYPE FLAG_NOTYPE:);

    RETAIN TKTMAILDDT1-TKTMAILDDT&MAXTKTNUM

        TKTINTMLDT1-TKTINTMLDT&MAXTKTNUM
        TKTADHMLDT1-TKTADHMLDT&MAXTKTNUM
        TKT1YRMLDT1-TKT1YRMLDT&MAXTKTNUM
        TKT3YRMLDT1-TKT3YRMLDT&MAXTKTNUM
        TKTCUPMLDT1-TKTCUPMLDT&MAXTKTNUM

        TKTTERMDDT1-TKTTERMDDT&MAXTKTNUM
        TKTASGNDDT1-TKTASGNDDT&MAXTKTNUM
        TKTUNASGDT1-TKTUNASGDT&MAXTKTNUM
        TKTSELDT1-TKTSELDT&MAXTKTNUM
        DUNS1-DUNS&MAXTKTNUM
        PROVTYPE1-PROVTYPE&MAXTKTNUM
        FLAG_NOTYPE1-FLAG_NOTYPE&MAXTKTNUM
        MAX_NOTYPE
        PMTTYPE1-PMTTYPE&MAXTKTNUM
        NOE
        NUMBER1-NUMBER&MAXTKTNUM
        ;


    SET TEMP4.TKTMLASG
        ;
    BY COSSN;

    * OUTPUT ARRAYS;
    ARRAY  TKTMAILDDT     TKTMAILDDT1- TKTMAILDDT&MAXTKTNUM;

    ARRAY  TKTINTMLDT     TKTINTMLDT1- TKTINTMLDT&MAXTKTNUM;
    ARRAY  TKTADHMLDT     TKTADHMLDT1- TKTADHMLDT&MAXTKTNUM;
```

Appendix A.68
JCL/SAS Code: TKTMLASG

```
ARRAY  TKT1YRMLDT     TKT1YRMLDT1- TKT1YRMLDT&MAXTKTNUM;
ARRAY  TKT3YRMLDT     TKT3YRMLDT1- TKT3YRMLDT&MAXTKTNUM;
ARRAY  TKTCUPMLDT     TKTCUPMLDT1- TKTCUPMLDT&MAXTKTNUM;


ARRAY  TKTTERMDDT     TKTTERMDDT1- TKTTERMDDT&MAXTKTNUM;
ARRAY  TKTASGNDDT     TKTASGNDDT1- TKTASGNDDT&MAXTKTNUM;
ARRAY  TKTUNASGDT     TKTUNASGDT1- TKTUNASGDT&MAXTKTNUM;
ARRAY    TKTSELDT      TKTSELDT1-   TKTSELDT&MAXTKTNUM;
ARRAY      DUNSA $9.      DUNS1-       DUNS&MAXTKTNUM;
ARRAY     PMTTYPE $     PMTTYPE1-    PMTTYPE&MAXTKTNUM;
ARRAY    PROVTYPE $     PROVTYPE1-   PROVTYPE&MAXTKTNUM;
ARRAY FLAG_NOTYPE    FLAG_NOTYPE1-FLAG_NOTYPE&MAXTKTNUM;
ARRAY      NUMBER        NUMBER1-     NUMBER&MAXTKTNUM;

* INTIALIZE VARIABLES WHEN ENCOUNTERING A NEW SSN;
IF FIRST.COSSN THEN DO;
   DO I=1 TO &MAXTKTNUM;
      TKTMAILDDT(I)=.;

      TKTINTMLDT(I)=.;
      TKTADHMLDT(I)=.;
      TKT1YRMLDT(I)=.;
      TKT3YRMLDT(I)=.;
      TKTCUPMLDT(I)=.;

      TKTTERMDDT(I)=.;
      TKTASGNDDT(I)=.;
      TKTUNASGDT(I)=.;
        TKTSELDT(I)=.;
          DUNSA(I)='';
         PMTTYPE(I)='';
        PROVTYPE(I)='';
     FLAG_NOTYPE(I)=.;
         NUMBER(I)=.;
   END;
   NOE=0;
END;

* SET NUMBER OF ENTRIES (NOE) VARIABLE;
NOE=NOE+1;

* POPULATE THE TICKET ACTIVE VARIABLES;
TKTMAILDDT(NOE)=MAILD_DT;
```

Appendix A.68
JCL/SAS Code: TKTMLASG

```
    TKTINTMLDT(NOE)=_1;
    TKTADHMLDT(NOE)=_2001;
    TKT1YRMLDT(NOE)=_3001;
    TKT3YRMLDT(NOE)=_4001;
    TKTCUPMLDT(NOE)=_5001;

    TKTASGNDDT(NOE)=ASGND_DT;
    TKTUNASGDT(NOE)=UNASGND_DT;
      TKTSELDT(NOE)=SLTD_DT;
        DUNSA(NOE)=DUNS;
       PMTTYPE(NOE)=TKT_PMT_TYP;
      PROVTYPE(NOE)=PUT(DUNSA(NOE),$PROVTYPE.);
      IF DUNSA(NOE) NE "" AND PROVTYPE(NOE)="" THEN FLAG_NOTYPE(NOE)=1;
    IF TKT_STUS_CD='T' THEN TKTTERMDDT(NOE)=TKT_STUS_DT;
    NUMBER(NOE)=TKT_NUM;

    MAX_NOTYPE=MAX(OF FLAG_NOTYPE:);
    IF MAX_NOTYPE = 1 THEN OUTPUT NOPROV.NOPROV;

     *IF THE LAST RECORD FOR THIS SSN THEN OUTPUT;
    IF LAST.COSSN THEN OUTPUT MLAS.TKTMLASG;

    DROP DUNS; * ADDED FOR DAF12 (PER ASSESS DATA NEEDS);
  RUN;

  PROC CONTENTS DATA=MLAS.TKTMLASG;
  RUN;

  PROC FREQ DATA=NOPROV.NOPROV;
   TITLE1 'RECORDS WITH NON-MISSING DUNS AND MISSING PROVIDER TYPE';
   TABLES FLAG_NOTYPE: ;
  RUN;

  PROC PRINT DATA=NOPROV.NOPROV (OBS=50);
   TITLE1 'SAMPLE PRINT (50 OBS)';
   TITLE2 'RECORDS WITH NON-MISSING DUNS AND MISSING PROVIDER TYPE';
   RUN;
   TITLE2;

  TITLE1 'SAMPLE PRINT:TKTMLASG(OBS=50)';
  PROC PRINT DATA=MLAS.TKTMLASG(OBS=50);
    FORMAT TKTMAILDDT: TKTASGNDDT: TKTUNASGDT: TKTTERMDDT:
          TKTINTMLDT: TKTADHMLDT: TKT1YRMLDT: TKT3YRMLDT: TKTCUPMLDT:
          YYMMDD10.;
  RUN;
```

Appendix A.68
JCL/SAS Code: TKTMLASG

```
******************************;
* END TKTMLASG, BEGIN BLDPRETK;
******************************;

* SORT DCF CLIENT DATASET AND KEEP ONLY WHERE THE COSSN IS THE
BENEFICIARIES BOAN;
      /*THIS WHERE SYNTAX DOES NOT WORK ON PC SAS9.3...*/
PROC SORT DATA=CLNT.CLNT NODUPKEYS OUT=TEMP2.CLNT
   (KEEP=T16_DOB T2_DOB T16_DOD T2_DOD COSSN);
   WHERE CID='00';  /* COSSN IS THE BOAN */
   BY COSSN;
RUN;

* COMBINE TICKET MAIL, ASSIGNMENT, & TITLE FILE WITH CLNT FILE TO
  OBTAIN THE DOB & DOD;
DATA BPRE.BLDPRETK(DROP=T16_DOB T2_DOB T16_DOD T2_DOD);
   MERGE MLAS.TKTMLASG(IN=TKT)
        TEMP2.CLNT(IN=CLNT);
   BY COSSN;
   IF TKT;

   IF CLNT THEN INCLNT=1;
   ELSE INCLNT=0;

   * DETERMINE DOBTKT;
   DOBTKT=T16_DOB;
   IF DOBTKT=. THEN DOBTKT=T2_DOB;

   * DETERMINE DODTKT;
   DODTKT=T16_DOD;
   IF DODTKT=. THEN DODTKT=T2_DOD;

  *************** CALCULATE FULL RETIREMENT AGE *********************;

   * ADJUST RETIREMENT DATE FOR BENEFICIARIES BORN ON JAN 1;
   IF MONTH(DOBTKT)=1 AND DAY(DOBTKT)=1 THEN
     DOBRETIRE=INTNX('DAY',DOBTKT,-1);
   ELSE DOBRETIRE=DOBTKT;

   * SET FRA;
       IF YEAR(DOBRETIRE)<=1937 THEN FRA=780/12;      /* 65 */
   ELSE IF YEAR(DOBRETIRE) =1938 THEN FRA=782/12;      /* 65 & 2 M */
   ELSE IF YEAR(DOBRETIRE) =1939 THEN FRA=784/12;      /* 65 & 4 M */
   ELSE IF YEAR(DOBRETIRE) =1940 THEN FRA=786/12;      /* 65 & 6 M */
```

Appendix A.68
JCL/SAS Code: TKTMLASG

```
   ELSE IF YEAR(DOBRETIRE) =1941 THEN FRA=788/12;      /* 65 & 8 M */
   ELSE IF YEAR(DOBRETIRE) =1942 THEN FRA=790/12;      /* 65 & 10 M */
   ELSE IF 1943<=YEAR(DOBRETIRE)<=1954 THEN FRA=792/12; /* 66 */
   ELSE IF YEAR(DOBRETIRE) =1955 THEN FRA=794/12;      /* 66 & 2 M */
   ELSE IF YEAR(DOBRETIRE) =1956 THEN FRA=796/12;      /* 66 & 4 M */
   ELSE IF YEAR(DOBRETIRE) =1957 THEN FRA=798/12;      /* 66 & 6 M */
   ELSE IF YEAR(DOBRETIRE) =1958 THEN FRA=800/12;      /* 66 & 8 M */
   ELSE IF YEAR(DOBRETIRE) =1959 THEN FRA=802/12;      /* 66 & 10 M */
   ELSE IF YEAR(DOBRETIRE)>=1960 THEN FRA=804/12;      /* 67 */

RUN;

TITLE1;
TITLE2;
PROC CONTENTS DATA=BPRE.BLDPRETK;
RUN;
TITLE1 'SAMPLE PRINT:TKTSELDT WHERE TKTSELDT2 NE . (OBS=100)';
PROC PRINT DATA=BPRE.BLDPRETK(OBS=50);
   WHERE TKTSELDT2 NE .;
   VAR TKTMAILDDT1-TKTMAILDDT2 TKTSELDT1-TKTSELDT2;
   FORMAT TKTMAILDDT: TKTSELDT: YYMMDD10.;
RUN;

TITLE1 'SAMPLE PRINT:TKTSELDT WHERE TKTSELDT5 NE . (OBS=100)';
PROC PRINT DATA=BPRE.BLDPRETK(OBS=50);
   WHERE TKTSELDT5 NE .;
   VAR TKTMAILDDT1-TKTMAILDDT5 TKTSELDT1-TKTSELDT5;
   FORMAT TKTMAILDDT: TKTSELDT: YYMMDD10.;
RUN;

TITLE1 'SAMPLE PRINT:BLDPRETK (OBS=50)';
PROC PRINT DATA=BPRE.BLDPRETK(OBS=50);
   FORMAT TKTMAILDDT: TKTASGNDDT: TKTUNASGDT: TKTTERMDDT: DOBTKT
        DODTKT TKTSELDT: YYMMDD10.;
RUN;

ENDSAS;
//*****************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*****************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
```

Appendix A.68
JCL/SAS Code: TKTMLASG

```
HELO MVSHOST
MAIL FROM:<SLUKASHANETS@MATHEMATICA-MPR.COM>
RCPT TO:<SLUKASHANETS@MATHEMATICA-MPR.COM>
DATA
FROM:     SLUKASHANETS@MATHEMATICA-MPR.COM
TO:       SLUKASHANETS@MATHEMATICA-MPR.COM
SUBJECT:  TKTMLASG (DAF17)

TKTMLASG HAS FINISHED RUNNING
```

Appendix A.69
JCL/SAS Code: CRTKTFLG

```
//#6266CTK  JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//* PROJECT: BUILD DAF (06979)
//*
//* PROJECT
//* DIRECTOR:    LAURA KOSAR
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6266.DAF18.TKT.PRDLIB(CRTKTFLG)
//*
//* DESCRIPTION: CREATE TICKET PORTION OF TRF
//*
//* DATE:       06/05/18 SERGE LUKASHANETS
//* EMAIL:      SLUKASHANETS@MATHEMATICA-MPR.COM
//*
//* PURPOSE: CREATE TICKET PORTION OF THE TICKET RESEARCH FILE.
//*   PROGRAM CREATES MONTHLY FLAGS (ELIGIBLE, ACTIVE, PMTTYPE,
//*   PROVTYPE, ETC. - SEE SPECS "VARIABLES FOR TICKET MASTER
//*   FILE, TICKET PORTION ONLY") BASED ON DCF TKT DATA (TKTNUM,
//*   TKTMAILDDT, TKTASGNDDT, TKTUNASGDT, TKTTERMDDT, ETC.).
//*****************************************************************
//*
//SAS       EXEC SAS9,
//         WORK='120000,60000'
//*
//IN1  DD  DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.BLDPRETK.SA.V2,DISP=SHR
//OUT  DD  DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CRTKTFLG.SA.V2,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//TEMP1  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN  DD *

OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN  OBS=MAX;

TITLE1 "BUILD DAF18";
TITLE2 "TKT FLAG CREATION";
TITLE3;

  /* change endyr and endmmn for each run */
%LET BEGYR=2002;
%LET ENDYR=2018; /* change as needed */

  /* step to assign macro variables to handle time series data */
```

Appendix A.69
JCL/SAS Code: CRTKTFLG

```
%MACRO TICKETFLAG;
%LET MOCNTER=1;
  /*LOOPING THROUGH EACH YEAR SPECIFIED ABOVE*/
%DO YEAR=&BEGYR. %TO &ENDYR.;
  /*SETTING YR MACRO VAR TO LAST TWO DIGITS OF EACH YEAR*/
   %LET YR=%SUBSTR(&YEAR.,3,2);

   /*LOOP THROUGH MONTHS 1 TO 12 AND INCREMENT MONTH COUNTER*/
   %DO M=1 %TO 12;
      %LET M=%SYSFUNC(PUTN(&M.,Z2.));
      %LET YY&MOCNTER.=%EVAL(&YR.)%EVAL(&M.);
      %LET MOCNTER=%EVAL(&MOCNTER.+1);
   %END;
%END;
  /*SET TOTAL MONTHS, TOTMOS, EQUAL TO MOCNTER - 1 TO GET
    TOTAL MONTHS IN TIME SERIES*/
%LET TOT=%EVAL(&MOCNTER.-1);

 /*USED TO PRINT MAPPING TO LOG - CHECK DURING CODE REVIEW*/
 /*USING TOT HERE INSTEAD OF TOTMOS TO ACCOMODATE VERY LONG
   ARRAY NAMES BELOW...*/
%DO MM=1 % TO &TOT.;
   %PUT &MM. MAPS TO YYMM, &&YY&MM.;
%END;
   %PUT TOTAL MONTHS = &TOT.;
 /*GETTING MAXIMUM NUMBER OF ENTRIES*/
 PROC SQL;
    SELECT MAX(NOE) INTO :MAXNOE
    SEPARATED BY ' '
    FROM IN1.BLDPRETK;
 QUIT;

 %PUT &MAXNOE = MAXIMUM NUMBER OF ENTRIES;

DATA OUT.CRTKTFLG;
  SET IN1.BLDPRETK;

ARRAY ELIGIBLE_MO   (*)   %DO MM=1 %TO &TOT; ELIGIBLE_MO&&YY&MM %END;;
ARRAY ACTIVE_MO     (*)   %DO MM=1 %TO &TOT; ACTIVE_MO&&YY&MM %END;;
ARRAY PMTTYPE_MO    (*) $ %DO MM=1 %TO &TOT; PMTTYPE_MO&&YY&MM %END;;
ARRAY PROVTYPE_MO   (*) $ %DO MM=1 %TO &TOT; PROVTYPE_MO&&YY&MM %END;;
ARRAY ELIGIBLE_EV   (*)   %DO MM=1 %TO &TOT; ELIGIBLE_EV&&YY&MM %END;;
ARRAY ACTIVE_EV     (*)   %DO MM=1 %TO &TOT; ACTIVE_EV&&YY&MM %END;;
ARRAY VR_EV         (*)   %DO MM=1 %TO &TOT; VR_EV&&YY&MM %END;;
ARRAY EN_EV         (*)   %DO MM=1 %TO &TOT; EN_EV&&YY&MM %END;;
```

Appendix A.69
JCL/SAS Code: CRTKTFLG

```
ARRAY MAIL_MO      (*)   %DO MM=1 %TO &TOT; MAIL_MO&&YY&MM %END;;
ARRAY FIRST_ASGN_MO (*)   %DO MM=1 %TO &TOT; FIRST_ASGN_MO&&YY&MM %END;;
ARRAY DEACTIVE_MO   (*)   %DO MM=1 %TO &TOT; DEACTIVE_MO&&YY&MM %END;;
ARRAY REASSIGN_MO   (*)   %DO MM=1 %TO &TOT; REASSIGN_MO&&YY&MM %END;;
ARRAY
  FIRST_ASGN_VR_MO (*)   %DO MM=1 %TO &TOT;
                    FIRST_ASGN_VR_MO&&YY&MM
                  %END;;
ARRAY
  DEACTIVE_VR_MO   (*)   %DO MM=1 %TO &TOT;
                    DEACTIVE_VR_MO&&YY&MM
                  %END;;
ARRAY
  REASSIGN_VR_MO   (*)   %DO MM=1 %TO &TOT;
                    REASSIGN_VR_MO&&YY&MM
                  %END;;
ARRAY
  FIRST_ASGN_EN_MO (*)   %DO MM=1 %TO &TOT;
                    FIRST_ASGN_EN_MO&&YY&MM
                  %END;;
ARRAY
  DEACTIVE_EN_MO   (*)   %DO MM=1 %TO &TOT;
                    DEACTIVE_EN_MO&&YY&MM
                  %END;;
ARRAY
  REASSIGN_EN_MO   (*)   %DO MM=1 %TO &TOT;
                    REASSIGN_EN_MO&&YY&MM
                  %END;;

 ARRAY VR_TR_MO    (*) %DO MM=1 %TO &TOT; VR_TR_MO&&YY&MM %END;;
 ARRAY VR_MO_MO    (*) %DO MM=1 %TO &TOT; VR_MO_MO&&YY&MM %END;;
 ARRAY VR_OO_MO    (*) %DO MM=1 %TO &TOT; VR_OO_MO&&YY&MM %END;;
 ARRAY EN_MO_MO    (*) %DO MM=1 %TO &TOT; EN_MO_MO&&YY&MM %END;;
 ARRAY EN_OO_MO    (*) %DO MM=1 %TO &TOT; EN_OO_MO&&YY&MM %END;;
 ARRAY VR_TR_EV    (*) %DO MM=1 %TO &TOT; VR_TR_EV&&YY&MM %END;;
 ARRAY VR_MO_EV    (*) %DO MM=1 %TO &TOT; VR_MO_EV&&YY&MM %END;;
 ARRAY VR_OO_EV    (*) %DO MM=1 %TO &TOT; VR_OO_EV&&YY&MM %END;;
 ARRAY EN_MO_EV    (*) %DO MM=1 %TO &TOT; EN_MO_EV&&YY&MM %END;;
 ARRAY EN_OO_EV    (*) %DO MM=1 %TO &TOT; EN_OO_EV&&YY&MM %END;;

 ARRAY TKTNUM NUMBER1-NUMBER&MAXNOE;
 ARRAY MAILDT TKTMAILDDT1-TKTMAILDDT&MAXNOE;
 ARRAY TERMDT TKTTERMDDT1-TKTTERMDDT&MAXNOE;
 ARRAY ASGNDT TKTASGNDDT1-TKTASGNDDT&MAXNOE;
 ARRAY UNASSGDT TKTUNASGDT1-TKTUNASGDT&MAXNOE;
```

Appendix A.69
JCL/SAS Code: CRTKTFLG

```
ARRAY PMTTYP PMTTYPE1-PMTTYPE&MAXNOE;
ARRAY PROVTYPE PROVTYPE1-PROVTYPE&MAXNOE;


* SET BEGINNING AND ENDING DATES FOR EACH REPORTING MONTH;
* I.E. BEGDATE1=20020101 ENDDATE1=20020131;

FORMAT BEGDATE: ENDDATE: MMDDYY10.;

ARRAY BEGDATE (*) BEGDATE1-BEGDATE&TOT.;
ARRAY ENDDATE (*) ENDDATE1-ENDDATE&TOT.;
%LET ENDMN=12;

DO YR=&BEGYR. TO &ENDYR.;
   IF YR NE &ENDYR. THEN DO MO=1 TO 12;
      BEGDATE(((YR-&BEGYR.)*12)+MO)=MDY(MO,1,YR);
      ENDDATE(((YR-&BEGYR.)*12)+MO)
      =INTNX('MONTH',BEGDATE(((YR-&BEGYR.)*12)+MO),0,'END');
   END;
   ELSE DO MO=1 TO &ENDMN.;
      BEGDATE(((YR-&BEGYR.)*12)+MO)=MDY(MO,1,YR);
      ENDDATE(((YR-&BEGYR.)*12)+MO)
      =INTNX('MONTH',BEGDATE(((YR-&BEGYR.)*12)+MO),0,'END');
   END;
END;


* INITIALIZE EVER VARIABLES;
EVER_ELIG=0;
EVER_ACTIVE=0;
EVER_VR=0;
EVER_EN=0;
EVER_VR_TR=0;
EVER_VR_MO=0;
EVER_VR_OO=0;
EVER_EN_MO=0;
EVER_EN_OO=0;

*** LOOP THROUGH ONCE FOR EACH REPORTING MONTH;
DO RPTMO=1 TO DIM(BEGDATE);

  *** CALCULATE AGE FOR REPORTING MONTH;
  * OLD CALCULATION: AGE=YRDIF(DOBTKT,ENDDATE(RPTMO),'ACT/ACT');
  AGE=INTCK('MONTH',DOBTKT,ENDDATE(RPTMO),'C')/12;
```

Appendix A.69
JCL/SAS Code: CRTKTFLG

```
*** INITIALIZE VARIABLES;
ELIGIBLE_MO(RPTMO)=0;
ACTIVE_MO(RPTMO)=0;
PMTTYPE_MO(RPTMO)=' ';
PROVTYPE_MO(RPTMO)=' ';
ELIGIBLE_EV(RPTMO)=0;
ACTIVE_EV(RPTMO)=0;
MAIL_MO(RPTMO)=0;
VR_EV(RPTMO)=0;
EN_EV(RPTMO)=0;
VR_TR_MO(RPTMO)=0;
VR_MO_MO(RPTMO)=0;
VR_OO_MO(RPTMO)=0;
EN_MO_MO(RPTMO)=0;
EN_OO_MO(RPTMO)=0;
FIRST_ASGN_MO(RPTMO)=0;
FIRST_ASGN_VR_MO(RPTMO)=0;
FIRST_ASGN_EN_MO(RPTMO)=0;
DEACTIVE_MO(RPTMO)=0;
DEACTIVE_VR_MO(RPTMO)=0;
DEACTIVE_EN_MO(RPTMO)=0;
REASSIGN_MO(RPTMO)=0;
REASSIGN_VR_MO(RPTMO)=0;
REASSIGN_EN_MO(RPTMO)=0;

*** FLAG TICKET MAILED IN REPORTING MONTH;


*** TICKET HAS BEEN MAILED IF ALL OF THE FOLLOWING ARE TRUE:
   1. THE MAIL DATE IS ON OR AFTER THE FIRST DAY OF THE REPORTING
      MONTH OR ON OR BEFORE THE LAST DAY OF THE REPORTING MONTH
   2. THE TICKET TERMINATION DATE IS MISSING OR IS AFTER THE MAIL
      DATE
   4. THE MAIL DATE IS NOT MISSING
    ;
/* TKTEVT=1; */
*** LOOP THRU TICKETS UNTIL MAILED TICKET IS FOUND OR UNTIL OUT OF
   TICKETS STARTING WITH TICKET #1;
DO TKTEVT=1 TO NOE;
  IF BEGDATE(RPTMO)<=MAILDT(TKTEVT)<=ENDDATE(RPTMO)
    AND (TERMDT(TKTEVT)=. OR TERMDT(TKTEVT)>MAILDT(TKTEVT))
  THEN MAIL_MO(RPTMO)=1;
END;
```

Appendix A.69
JCL/SAS Code: CRTKTFLG

```
*** FLAG TICKET ELIGIBLE FOR REPORTING MONTH STARTING WITH TICKET
   #1;
*** BENE IS "TICKET ELIGIBLE" IN REPORTING MONTH IF ALL OF THE
   FOLLOWING CONDITIONS ARE MEET:
   1. TICKET MAILED ON OR BEFORE LAST DAY OF REPORTING MONTH
   2. TICKET HAD EITHER NOT BEEN TERMINATED OR, IF TERMINATED,
      TERMINATION DATE WAS LATER THAN THE MAIL DATE & ON OR AFTER
      THE FIRST DAY OF THE REPORTING MONTH
   3. BENE WAS OLDER THAN EXACTLY 18 & YOUNGER THAN FRA ON THE
      LAST DAY OF REPORTING MONTH (SSA CONSIDERS A BENE TO BE AT
      RETIREMENT AGE IN THE MONTH THEY REACH FRA)
   4. BENES DATE OF DEATH WAS MISSING OR, IF NOT MISSING, IT WAS
      AFTER THE LAST DAY OF THE REPORTING MONTH
   ;

*** LOOP THRU TICKETS UNTIL ELIGIBLE IS FOUND OR UNTIL OUT OF
   TICKETS;
DO TKTEVT=1 TO NOE;

  IF MAILDT(TKTEVT)<=ENDDATE(RPTMO)
    AND MAILDT(TKTEVT) NE .
    AND 18<AGE<FRA
    AND (DODTKT EQ . OR DODTKT>=BEGDATE(RPTMO))
    AND ((TERMDT(TKTEVT)>MAILDT(TKTEVT)
         AND TERMDT(TKTEVT)>=BEGDATE(RPTMO))
         OR TERMDT(TKTEVT)=.)
  THEN DO;
   ELIGTKTEVT=TKTNUM(TKTEVT);
   ELIGIBLE_MO(RPTMO)=1;
   EVER_ELIG=1;
  END;
END;
*** END ELIGIBLE LOOP;

*** FLAG ACTIVE TICKET IN REPORTING MONTH;
*** BENES HAVE AN "ACTIVE TICKET" IF THE BENE WAS "TICKET ELIGIBLE"
   IN REPORTING MONTH & EITHER OF THE FOLLOWING CONDITIONS ARE
   MEET:
   1. TICKET WAS ASSIGNED BEFORE THE 1ST DAY OF REPORTING MONTH
      & IT EITHER HAD NOT BEEN UNASSIGNED OR TERMINATED, OR IF
      UNASSIGNED OR TERMINATED, IT WAS ON OR AFTER THE FIRST DAY
      OF THE MONTH
   2. TICKET WAS ASSIGNED ON ANY DAY DURING THE MONTH
   ;
```

Appendix A.69
JCL/SAS Code: CRTKTFLG

```
*** IF ELIGIBLE TICKET THIS REPORTING MONTH START ACTIVE LOOP;
IF ELIGIBLE_MO(RPTMO)=1 THEN DO;
  *** LOOP THROUGH ELIGIBLE ASSIGNMENTS;
  DO ASGN=ELIGTKTEVT TO NOE UNTIL(ACTIVE_MO(RPTMO)=1);
    IF((ASGNDT(ASGN)<BEGDATE(RPTMO) AND ASGNDT(ASGN) NE .)
      AND (UNASSGDT(ASGN)>=BEGDATE(RPTMO) OR UNASSGDT(ASGN)=.)
      AND (TERMDT(ASGN)>=BEGDATE(RPTMO) OR TERMDT(ASGN)=.)) OR
      BEGDATE(RPTMO)<=ASGNDT(ASGN)<=ENDDATE(RPTMO) THEN DO;
      ACTIVE_MO(RPTMO)=1;
      EVER_ACTIVE=1;
    END;
  END;
  *** END ASSIGNMENT LOOP;
END;
*** END ACTIVE LOOP;

*** DETERMINE PROVIDER AND PAYMENT TYPES FOR ACTIVE TICKETS IN
    REPORTING MONTH;
IF ACTIVE_MO(RPTMO)=1 THEN DO;

  *** FLAG PAYMENT TYPE FOR ACTIVE TICKET;
  PMTTYPE_MO(RPTMO)=PMTTYP(ASGN);

  *** FLAG PROVIDER TYPE;
  PROVTYPE_MO(RPTMO)=PROVTYPE(ASGN);

  *** SVRAS;
  IF PROVTYPE_MO(RPTMO)='V' THEN DO;
    EVER_VR=1;

    *** FLAG PROVIDER/PAYMENT TYPE COMBOS;
    SELECT(PMTTYPE_MO(RPTMO));
      WHEN ('V') DO; VR_TR_MO(RPTMO)=1; EVER_VR_TR=1; END;
      WHEN ('M') DO; VR_MO_MO(RPTMO)=1; EVER_VR_MO=1; END;
      WHEN ('O') DO; VR_OO_MO(RPTMO)=1; EVER_VR_OO=1; END;
      OTHERWISE DO;
         VR_TR_MO(RPTMO)=9;
         VR_MO_MO(RPTMO)=9;
         VR_OO_MO(RPTMO)=9;
      END;
    END;

  END;

  *** ENS;
```

Appendix A.69
JCL/SAS Code: CRTKTFLG

```
  ELSE IF PROVTYPE_MO(RPTMO)='E' THEN DO;
   EVER_EN=1;

   *** FLAG PROVIDER/PAYMENT TYPE COMBOS;
   SELECT(PMTTYPE_MO(RPTMO));
    WHEN('M') DO; EN_MO_MO(RPTMO)=1; EVER_EN_MO=1; END;
    WHEN('O') DO; EN_OO_MO(RPTMO)=1; EVER_EN_OO=1; END;
    OTHERWISE DO;
       EN_MO_MO(RPTMO)=9;
       EN_OO_MO(RPTMO)=9;
    END;
   END;
  END;

  ELSE PROVTYPE_MO(RPTMO)='X';
END;
*** END PROVIDER & PAYMENT TYPE LOOP;

*** SET MONTHLY EVER FLAGS;
IF EVER_ELIG=1 THEN ELIGIBLE_EV(RPTMO)=1;
ELSE ELIGIBLE_EV(RPTMO)=0;

IF EVER_ACTIVE=1 THEN ACTIVE_EV(RPTMO)=1;
ELSE ACTIVE_EV(RPTMO)=0;

IF EVER_VR=1 THEN VR_EV(RPTMO)=1;
ELSE VR_EV(RPTMO)=0;

IF EVER_VR_TR=1 THEN VR_TR_EV(RPTMO)=1;
ELSE VR_TR_EV(RPTMO)=0;

IF EVER_VR_MO=1 THEN VR_MO_EV(RPTMO)=1;
ELSE VR_MO_EV(RPTMO)=0;

IF EVER_VR_OO=1 THEN VR_OO_EV(RPTMO)=1;
ELSE VR_OO_EV(RPTMO)=0;

IF EVER_EN=1 THEN EN_EV(RPTMO)=1;
ELSE EN_EV(RPTMO)=0;

IF EVER_EN_MO=1 THEN EN_MO_EV(RPTMO)=1;
ELSE EN_MO_EV(RPTMO)=0;

IF EVER_EN_OO=1 THEN EN_OO_EV(RPTMO)=1;
ELSE EN_OO_EV(RPTMO)=0;
```

Appendix A.69
JCL/SAS Code: CRTKTFLG

```
*** FLAG BENES FIRST ASSIGNMENTS;
* FOR 1ST REPORTING MONTH -- JAN 02;
IF RPTMO=1 AND ACTIVE_EV(RPTMO)=1 THEN DO;
  FIRST_ASGN_MO(RPTMO)=1;
  IF VR_TR_MO(RPTMO)=1 OR VR_MO_MO(RPTMO)=1 OR VR_OO_MO(RPTMO)=1
     THEN FIRST_ASGN_VR_MO(RPTMO)=1;
  ELSE IF EN_MO_MO(RPTMO)=1 OR EN_OO_MO(RPTMO)=1
     THEN FIRST_ASGN_EN_MO(RPTMO)=1;

  *** FLAGS FOR REASSIGNMENT PROCESSING;
  FIRSTASGNDT=ASGNDT(ASGN);
  FIRSTASGNMO=RPTMO;
END;
* FOR SUBSEQUENT REPORTING MONTHS -- AFTER JAN 02;
ELSE IF ACTIVE_EV(RPTMO)=1 AND ACTIVE_EV(RPTMO-1)=0 THEN DO;
  FIRST_ASGN_MO(RPTMO)=1;
  IF VR_TR_MO(RPTMO)=1 OR VR_MO_MO(RPTMO)=1 OR VR_OO_MO(RPTMO)=1
     THEN FIRST_ASGN_VR_MO(RPTMO)=1;
  ELSE IF EN_MO_MO(RPTMO)=1 OR EN_OO_MO(RPTMO)=1
     THEN FIRST_ASGN_EN_MO(RPTMO)=1;

  *** FLAGS FOR REASSIGNMENT PROCESSING;
  FIRSTASGNDT=ASGNDT(ASGN);
  FIRSTASGNMO=RPTMO;
END;
*** END FIRST ASSIGNMENT LOOP;

*** COUNT DEACTIVATIONS;
*** A TICKET HAS BEEN DEACTIVATED WHEN BENE HAS HAD AN ASSIGNMENT
   IN OR BEFORE REPORTING MONTH & AN UNASSIGNED DATE IN THE
   REPORTING MONTH OR IF UNASSIGNED DATE IS MISSING HAS A
   TERMINATION DATE IN THE REPORTING MONTH;

IF ACTIVE_EV(RPTMO)=1 THEN DO UNASGN=1 TO NOE;
  IF (UNASSGDT(UNASGN) NE .
    AND BEGDATE(RPTMO)<=UNASSGDT(UNASGN)<=ENDDATE(RPTMO))
    OR (UNASSGDT(UNASGN)=. AND TERMDT(UNASGN) NE .
       AND BEGDATE(RPTMO)<=TERMDT(UNASGN)<=ENDDATE(RPTMO))
  THEN DO;
     DEACTIVE_MO(RPTMO)=DEACTIVE_MO(RPTMO)+1;
     IF VR_TR_MO(RPTMO)=1 OR VR_MO_MO(RPTMO)=1
     OR VR_OO_MO(RPTMO)=1 THEN
        DEACTIVE_VR_MO(RPTMO)=DEACTIVE_VR_MO(RPTMO)+1;
     ELSE IF EN_MO_MO(RPTMO)=1 OR EN_OO_MO(RPTMO)=1 THEN
```

Appendix A.69
JCL/SAS Code: CRTKTFLG

```
          DEACTIVE_EN_MO(RPTMO)=DEACTIVE_EN_MO(RPTMO)+1;
    END;
  END;
  *** END DEACTIVATIONS LOOP;

  *** COUNT REASSIGNMENTS;
  *** A TICKET HAS BEEN REASSIGNED WHEN BENE HAS HAD AN ASSIGNMENT IN
     OR BEFORE REPORTING MONTH & A DEACTIVIATION IN OR BEFORE
     REPORTING MONTH & HAS A SUBSEQUENT VALID ASSIGNMENT DATE
     WITHIN REPORTING MONTH THAT IS NOT EQUAL TO BENES FIRST
     ASSIGNMENT DATE;

  IF ACTIVE_EV(RPTMO)=1 THEN DO I=FIRSTASGNMO TO RPTMO;
    IF DEACTIVE_MO(I)=1 THEN DO J=1 TO NOE;
       IF ASGNDT(J)>FIRSTASGNDT AND ASGNDT(J) NE .
         AND BEGDATE(RPTMO)<=ASGNDT(J)<=ENDDATE(RPTMO)
         AND (UNASSGDT(J)>BEGDATE(RPTMO) OR UNASSGDT(J)=.)
         AND (TERMDT(J)>BEGDATE(RPTMO) OR TERMDT(J)=.)
       THEN DO;
          REASSIGN_MO(RPTMO)=REASSIGN_MO(RPTMO)+1;
          IF VR_TR_MO(RPTMO)=1 OR VR_MO_MO(RPTMO)=1
          OR VR_OO_MO(RPTMO)=1 THEN
             REASSIGN_VR_MO(RPTMO)=REASSIGN_VR_MO(RPTMO)+1;
          ELSE IF EN_MO_MO(RPTMO)=1 OR EN_OO_MO(RPTMO)=1 THEN
             REASSIGN_EN_MO(RPTMO)=REASSIGN_EN_MO(RPTMO)+1;
       END;
    END;
  END;
  *** END REASSIGNMENTS LOOP;

END;
* END REPORTING MONTH LOOP;

* SET THE MINIMUM (FIRST) MAIL DATE;
MINMAIL=MIN(OF TKTMAILDDT1-TKTMAILDDT&MAXNOE);

DROP I J RPTMO TKTEVT ASGN UNASGN FRA; * DROP FRA ADDED PER DAF12;
                                 * ASSESS DATA NEEDS ;

/*NEW FOR DAF13 - ADDING TKTYY COMMON VARIABLE FROM BLDVAR2*/

ARRAY ACTMOYYMM(&BEGYR.:&ENDYR.,1:12)
  %DO YYYY=&BEGYR. %TO &ENDYR.;
    %LET YY=%SUBSTR(&YYYY.,3,2);
    ACTIVE_MO&YY.01-ACTIVE_MO&YY.12
```

Appendix A.69
JCL/SAS Code: CRTKTFLG

```
    %END;;

  ARRAY TKTYY (&BEGYR.:&ENDYR.)

    %DO YYYY=&BEGYR. %TO &ENDYR.;
      %LET YY=%SUBSTR(&YYYY.,3,2);
      TKT&YY.
    %END;;

    DO YY=&BEGYR. TO &ENDYR.;
      TKTYY(YY) = 0; *SET INITIAL TKTYY VALUE TO BE 0;
      DO MO=1 TO 12 UNTIL(TKTYY(YY)=1);
        IF ACTMOYYMM(YY,MO) = 1 THEN TKTYY(YY)=1;
      END;
   END;

RUN;

PROC CONTENTS DATA=OUT.CRTKTFLG POSITION;
RUN;

*** ADDED IN TRF10 - THE PRINT CODE IS REMOVED FROM THIS ***
*** PROGRAM IN ORDER TO AVOID INADVERTANT LOSS OF PII.   ***;
*** THE CODE BELOW HAS BEEN MADE INTO A SEPARATE PROGRAM ***;
*PROC PRINT DATA=OUT.CRTKTFLG (OBS=25);
*RUN;

%MEND TICKETFLAG;

%TICKETFLAG;

ENDSAS;

//*****************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*****************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<SLUKASHANETS@MATHEMATICA-MPR.COM>
RCPT TO:<SLUKASHANETS@MATHEMATICA-MPR.COM>
DATA
```

Appendix A.69
JCL/SAS Code: CRTKTFLG

FROM: SLUKASHANETS@MATHEMATICA-MPR.COM
TO: SLUKASHANETS@MATHEMATICA-MPR.COM
SUBJECT: CRTKTFLG (DAF18)

CRTKTFLG HAS FINISHED RUNNING

Appendix A.70
JCL/SAS Code: FINTKT

```
//#6266TSP  JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//* PROJECT: BUILD DAF 06979
//* PROJECT
//* DIRECTOR:    LAURA KOSAR
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6266.DAF18.TKT.PRDLIB(FINTKT)
//*
//* DESCRIPTION: CREATE FINAL TICKET FILES (BASE AND ANNUALS)
//*
//* DATE:        09/24/19 SERGE LUKASHANETS
//* EMAIL:       slukashanets@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//SAS       EXEC SAS9,
//         WORK='120000,60000'
//*
//IN1     DD  DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CRTKTFLG.SA.V2,DISP=SHR
//IN2     DD  DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.TKTTITLE.SA.V1,DISP=SHR
//DEMO    DD  DSN=OPDR.TG.PRD.ETTW.#7429.DAF18I.DMG.SA.V1,DISP=SHR
//CON     DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TKTCON,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//TKTBS   DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKETBS,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//TKTFL02 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET02,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//TKTFL03 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET03,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//TKTFL04 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET04,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//TKTFL05 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET05,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//TKTFL06 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET06,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//TKTFL07 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET07,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
```

Appendix A.70
JCL/SAS Code: FINTKT

```
//          UNIT=TSILO
//TKTFL08 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET08,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//TKTFL09 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET09,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//TKTFL10 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET10,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//TKTFL11 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET11,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//TKTFL12 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET12,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//TKTFL13 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET13,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//TKTFL14 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET14,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//TKTFL15 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET15,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//TKTFL16 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET16,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//TKTFL17 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET17,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//TKTFL18 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET18,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//*10% DATA MARTS
//TKTBSM  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10TKTBS,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//TKTDM02 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10TKT02,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//TKTDM03 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10TKT03,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//TKTDM04 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10TKT04,
```

Appendix A.70
JCL/SAS Code: FINTKT

```
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//TKTDM05 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10TKT05,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//TKTDM06 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10TKT06,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//TKTDM07 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10TKT07,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//TKTDM08 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10TKT08,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//TKTDM09 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10TKT09,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//TKTDM10 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10TKT10,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//TKTDM11 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10TKT11,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//TKTDM12 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10TKT12,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//TKTDM13 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10TKT13,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//TKTDM14 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10TKT14,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//TKTDM15 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10TKT15,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//TKTDM16 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10TKT16,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//TKTDM17 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10TKT17,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//TKTDM18 DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10TKT18,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//*COMMON VARIABLES
```

Appendix A.70
JCL/SAS Code: FINTKT

```
//COMV  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//SYSIN  DD *


OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN OBS=MAX
      DKROCOND=WARN;

TITLE1 "Ticket to Work";
TITLE2 "DAF TKTSPLIT";
TITLE3;

  /* change endyr and endmmn for each run */
%LET BEGYR=2002;
%LET BEGYY=%SUBSTR(&BEGYR.,3); *FOR TKTYY COMMON VARS;
%LET ENDYR=2018; /* change as needed */
%LET ENDYY=%SUBSTR(&ENDYR.,3); *FOR TKTYY COMMON VARS;
%PUT &BEGYR -> &BEGYY., &ENDYR -> &ENDYY;

%LET DROP_TITLE=19; /*SET TO YEAR AFTER CURRENT DAF YY*/

  /* step to assign macro variables to handle time series data */
%MACRO SPLITTKT;

DATA TKTBS.TICKETBS(DROP=ACTIVE_EV: ACTIVE_MNTH: DEACTIVE_EN_MNTH:
                  DEACTIVE_MNTH: DEACTIVE_SVRA_MNTH: ELIGIBLE_EV:
                  ELIGIBLE_MNTH: EN_EV: EN_MO_EV: EN_MO_MNTH:
                  EN_OO_EV: EN_OO_MNTH: FIRST_ASGN_EN_MNTH:
                  FIRST_ASGN_MNTH: FIRST_ASGN_SVRA_MNTH: MAIL_MNTH:
                  PMTTYPE_MNTH: PROVTYPE_MNTH: REASSIGN_EN_MNTH:
                  REASSIGN_MNTH: REASSIGN_VR_MNTH: TITLE_MNTH:
         SVRA_EV: SVRA_MO_EV: SVRA_MO_MNTH: SVRA_OO_EV: SVRA_OO_MNTH:
               SVRA_TR_EV: SVRA_TR_MNTH:
                  INUSE_MNTH:)
    %DO YYYY=&BEGYR. %TO &ENDYR.;
       %LET YY=%SUBSTR(&YYYY,3,2);
    TKTFL&YY..TICKET&YY.(KEEP=SSN
            ACTIVE_EV&YY:   ACTIVE_MNTH&YY:   DEACTIVE_EN_MNTH&YY:
        DEACTIVE_MNTH&YY: DEACTIVE_SVRA_MNTH&YY:     ELIGIBLE_EV&YY:
        ELIGIBLE_MNTH&YY:         EN_EV&YY:        EN_MO_EV&YY:
          EN_MO_MNTH&YY:      EN_OO_EV&YY:        EN_OO_MNTH&YY:
        FIRST_ASGN_MNTH&YY:
          MAIL_MNTH&YY:    PMTTYPE_MNTH&YY:     PROVTYPE_MNTH&YY:
          TITLE_MNTH&YY:        SVRA_EV&YY:      SVRA_MO_EV&YY:
```

Appendix A.70
JCL/SAS Code: FINTKT

```
        SVRA_MO_MNTH&YY:     SVRA_OO_EV&YY:      SVRA_OO_MNTH&YY:
        SVRA_TR_EV&YY:     SVRA_TR_MNTH&YY:        INUSE_MNTH&YY:
           TKT&BEGYY.-TKT&ENDYY.
           DOBBEST DODBEST DOEI SEX
           SSDI_ONSET
           SSDI94-SSDI99 SSDI00-SSDI&ENDYY
            SSI94- SSI99  SSI00- SSI&ENDYY
           DXPRIBEST FRADATE
           SSIELIG_FIRST)
   %END;
   COMV.COMVARS (KEEP=SSN DOBBEST DODBEST FRADATE SSIELIG_FIRST DOEI
                SSDI94-SSDI99 SSDI00-SSDI&ENDYY SSI94-SSI99 SEX
        SSI00-SSI&ENDYY TKT02-TKT&ENDYY DXPRIBEST SSDI_ONSET)
   ;
MERGE IN1.CRTKTFLG(IN=CRTKTFLG
      RENAME=(COSSN=SSN
      EVER_VR    =EVER_SVRA
      EVER_VR_MO =EVER_SVRA_MO
      EVER_VR_OO =EVER_SVRA_OO
      EVER_VR_TR =EVER_SVRA_TR
         %DO YYYY=&BEGYR. %TO &ENDYR.;
            %LET YR=%SUBSTR(&YYYY,3,2);
              %DO P=1 %TO 12;
         %LET MN = %SYSFUNC(PUTN(&P.,Z2.));
           DEACTIVE_VR_MO&YR.&MN.=DEACTIVE_SVRA_MNTH&YR.&MN.

            DEACTIVE_EN_MO&YR.&MN.=DEACTIVE_EN_MNTH&YR.&MN.
            DEACTIVE_MO&YR.&MN.=DEACTIVE_MNTH&YR.&MN.
            ACTIVE_MO&YR.&MN.=ACTIVE_MNTH&YR.&MN.
            ELIGIBLE_MO&YR.&MN.=ELIGIBLE_MNTH&YR.&MN.

           VR_EV&YR.&MN.=        SVRA_EV&YR.&MN.
           VR_MO_EV&YR.&MN.=      SVRA_MO_EV&YR.&MN.
           VR_MO_MO&YR.&MN.=      SVRA_MO_MNTH&YR.&MN.
           VR_OO_EV&YR.&MN.=      SVRA_OO_EV&YR.&MN.
           VR_OO_MO&YR.&MN.=      SVRA_OO_MNTH&YR.&MN.
           VR_TR_EV&YR.&MN.=      SVRA_TR_EV&YR.&MN.
           VR_TR_MO&YR.&MN.=      SVRA_TR_MNTH&YR.&MN.

        FIRST_ASGN_VR_MO&YR.&MN.= FIRST_ASGN_SVRA_MNTH&YR.&MN.
        FIRST_ASGN_EN_MO&YR.&MN.= FIRST_ASGN_EN_MNTH&YR.&MN.
        FIRST_ASGN_MO&YR.&MN.= FIRST_ASGN_MNTH&YR.&MN.

        EN_MO_MO&YR.&MN.=EN_MO_MNTH&YR.&MN.
        EN_OO_MO&YR.&MN.=EN_OO_MNTH&YR.&MN.
```

Appendix A.70
JCL/SAS Code: FINTKT

```
        MAIL_MO&YR.&MN.=MAIL_MNTH&YR.&MN.
        PMTTYPE_MO&YR.&MN.=PMTTYPE_MNTH&YR.&MN.
        PROVTYPE_MO&YR.&MN.=PROVTYPE_MNTH&YR.&MN.

        REASSIGN_EN_MO&YR.&MN.=REASSIGN_EN_MNTH&YR.&MN.
        REASSIGN_VR_MO&YR.&MN.=REASSIGN_VR_MNTH&YR.&MN.
        REASSIGN_MO&YR.&MN.=REASSIGN_MNTH&YR.&MN.

          %END;
      %END;
  ))

      IN2.TKTTITLE(RENAME=(COSSN=SSN

          %DO YYYY=&BEGYR. %TO &ENDYR.;
            %LET YR=%SUBSTR(&YYYY,3,2);
            %DO P=1 %TO 12;
            %LET MN = %SYSFUNC(PUTN(&P.,Z2.));
              INUSE_MO&YR.&MN.=INUSE_MNTH&YR.&MN.
              TITLE_MO&YR.&MN.=TITLE_MNTH&YR.&MN.
          %end;
          %end;
        ))

      DEMO.DMG   (KEEP=SSN DOBBEST DODBEST DOEI SEX FRADATE
                  SSDI_ONSET
                  SSDI94-SSDI99 SSDI00-SSDI&ENDYY
                   SSI94- SSI99  SSI00- SSI&ENDYY
                  DXPRIBEST SSIELIG_FIRST
               WHERE=(YEAR(DODBEST)>=1994 OR YEAR(DODBEST)=.)
              IN=INDEMO);

    BY SSN;

  DROP _LABEL_
      _NAME_
      AGE
      BEGDATE:
      DOBRETIRE
      ELIGTKTEVT
      ENDDATE:
      FIRSTASGNDT
      FIRSTASGNMO
      INCLNT
      MO
```

Appendix A.70
JCL/SAS Code: FINTKT

```
      NUMBER:
      /*DROPS TITLE DATA BEFORE 2002, AFTER DAFYY, AND SOME SLOP*/
      TITLE_MO01:
      TITLE_MO&DROP_TITLE.:
      INUSE_MO01:
      INUSE_MO&DROP_TITLE.:
      YR
      YY
      I;


     %INCLUDE 'OPDR.TG.PRD.ETTW.#6266.DAF18.TKT.PRDLIB(LABTKT)';
   %DO YYYY=&BEGYR. %TO &ENDYR.;
      %LET YR=%SUBSTR(&YYYY,3,2);
     %INCLUDE 'OPDR.TG.PRD.ETTW.#6266.DAF18.TKT.PRDLIB(LABELSAN)';
   %END;

 /*OUTPUT*/
  IF CRTKTFLG THEN OUTPUT TKTBS.TICKETBS
        %DO YYYY=&BEGYR. %TO &ENDYR.;
           %LET YY=%SUBSTR(&YYYY,3,2);
              TKTFL&YY..TICKET&YY.
        %END;
        ;
  if INDEMO THEN OUTPUT COMV.COMVARS;
 RUN;


 DATA TKTBSM.P10TKTB;
 SET TKTBS.TICKETBS;
 IF (SUBSTR(SSN,8,1) IN ('0', '2', '4', '7', '9'))
 AND (SUBSTR(SSN,9,1) IN ('0', '5'));
 RUN;

%DO YYYY=&BEGYR. %TO &ENDYR.;
  %LET YY=%SUBSTR(&YYYY,3,2);
    DATA TKTDM&YY..P10TKT&YY.;
      SET TKTFL&YY..TICKET&YY.;
      IF (SUBSTR(SSN,8,1) IN ('0', '2', '4', '7', '9'))
         AND (SUBSTR(SSN,9,1) IN ('0', '5'));
    RUN;
%END;

PROC CONTENTS DATA=TKTBS.TICKETBS OUT=CON.TICKETBS; RUN;
```

Appendix A.70
JCL/SAS Code: FINTKT

```
%DO YYYY=&BEGYR %TO &ENDYR;
  %LET YY=%SUBSTR(&YYYY.,3,2);
  PROC CONTENTS DATA=TKTFL&YY..TICKET&YY. OUT=CON.TICKET&YY;
  RUN;
%END;

proc contents data=COMV.COMVARS; RUN;

%MEND SPLITTKT;

%SPLITTKT;

ENDSAS;

//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<slukashanets@MATHEMATICA-MPR.COM>
RCPT TO:<slukashanets@MATHEMATICA-MPR.COM>
DATA
FROM:     slukashanets@MATHEMATICA-MPR.COM
TO:       slukashanets@MATHEMATICA-MPR.COM
SUBJECT:  TKTSPLIT (DAF18)

TKTSPLIT HAS FINISHED RUNNING
```

Appendix A.71
JCL/SAS Code: COPYBASE

```
//#6266CTB  JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//*
//*   *-------------------------------------------------*
//*   |  OPDR.TG.PRD.ETTW.#6266.DAF17.TKT.PRDLIB(COPYBASE) |
//*   *-------------------------------------------------*
//*
//*     1.  COPY TICKET BASE FILE FROM TAPE TO TAPE
//*
//*****************************************************************
//TKTBS   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKETBS,DISP=SHR,
//         UNIT=TSILO
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18C.TICKETBS,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
```

Appendix A.72
JCL/SAS Code: COPY0218

```
//#6266CTA  JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//*
//*   *-----------------------------------------------*
//*   | OPDR.TG.PRD.ETTW.#6266.DAF17.TKT.PRDLIB(COPY0216) |
//*   *-----------------------------------------------*
//*
//*     1.  COPY TICKET ANNUALS FROM TAPE TO TAPE
//*
//*****************************************************************
//Y2018   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET18,DISP=SHR,
//         UNIT=TSILO
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18C.TICKET18,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//*
//Y2017   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET17,DISP=SHR,
//         UNIT=TSILO
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18C.TICKET17,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//*
//Y2016   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET16,DISP=SHR,
//         UNIT=TSILO
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18C.TICKET16,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//*
//Y2015   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET15,DISP=SHR,
//         UNIT=TSILO
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18C.TICKET15,
//         DISP=(NEW,CATLG,DELETE),
```

Appendix A.72
JCL/SAS Code: COPY0218

```
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//*
//Y2014   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET14,DISP=SHR,
//        UNIT=TSILO
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18C.TICKET14,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//*
//Y2013   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET13,DISP=SHR,
//        UNIT=TSILO
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18C.TICKET13,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//*
//Y2012   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET12,DISP=SHR,
//        UNIT=TSILO
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18C.TICKET12,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//*
//Y2011   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET11,DISP=SHR,
//        UNIT=TSILO
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18C.TICKET11,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//*
//Y2010   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET10,DISP=SHR,
//        UNIT=TSILO
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18C.TICKET10,
//        DISP=(NEW,CATLG,DELETE),
```

Appendix A.72
JCL/SAS Code: COPY0218

```
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//*
//Y2009   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET09,DISP=SHR,
//        UNIT=TSILO
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18C.TICKET09,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//*
//Y2008   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET08,DISP=SHR,
//        UNIT=TSILO
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18C.TICKET08,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//*
//Y2007   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET07,DISP=SHR,
//        UNIT=TSILO
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18C.TICKET07,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//*
//Y2006   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET06,DISP=SHR,
//        UNIT=TSILO
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18C.TICKET06,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//*
//Y2005   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET05,DISP=SHR,
//        UNIT=TSILO
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18C.TICKET05,
//        DISP=(NEW,CATLG,DELETE),
```

Appendix A.72
JCL/SAS Code: COPY0218

```
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//*
//Y2004   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET04,DISP=SHR,
//        UNIT=TSILO
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18C.TICKET04,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//*
//Y2003   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET03,DISP=SHR,
//        UNIT=TSILO
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18C.TICKET03,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//*
//Y2002   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.TICKET02,DISP=SHR,
//        UNIT=TSILO
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18C.TICKET02,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//*
```

Appendix A.73
JCL/SAS Code: DCFERNEX

```
//#4941DCF JOB (12510000,T715,,SAS,,ITC9TH),MIAOMIAO-SHEN,CLASS=T,
// MSGCLASS=1,MSGLEVEL=(1,1),REGION=4096K,NOTIFY=#4941
//*****************************************************************
//* PROJECT:     BUILD DAF18 (50214)
//* PROJECT
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#4941.DAF18.ANN.PRDLIB(DCFERNEX)
//* DESCRIPTION: CREATES EXTRACT OF DCF EARNINGS TABLES
//*              TO OBTAIN THE EARNINGS DATA FOR THE ANNUAL FILES
//* PROGRAMMER:  MIAOMIAO SHEN 5/30/2019
//*****************************************************************
//S1 EXEC SAS9,LOAD='DBP8.DB2.SDSNLOAD',SORT='15000',
//       WORK='15000,15000',COND=EVEN
//ALE  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.DCFALERN.SA.V1,
//       DISP=(,CATLG,DELETE),
//       UNIT=TSILO,
//       VOL=(,,,255),
//       DCB=(BLKSIZE=6144,DSORG=PS,LRECL=6144,RECFM=FS)
//HALE DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.DCFHALER.SA.V1,
//       DISP=(,CATLG,DELETE),
//       UNIT=AFF=ALE,
//       VOL=(,,,255),
//       DCB=(BLKSIZE=6144,DSORG=PS,LRECL=6144,RECFM=FS)
//T16E DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.DCFT16ER.SA.V1,
//       DISP=(,CATLG,DELETE),
//       UNIT=AFF=ALE,
//       VOL=(,,,255),
//       DCB=(BLKSIZE=6144,DSORG=PS,LRECL=6144,RECFM=FS)
//HT16 DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.DCFHT16E.SA.V1,
//       DISP=(,CATLG,DELETE),
//       UNIT=AFF=ALE,
//       VOL=(,,,255),
//       DCB=(BLKSIZE=6144,DSORG=PS,LRECL=6144,RECFM=FS)
//T2ER DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.DCFT2ER.SA.V1,
//       DISP=(,CATLG,DELETE),
//       UNIT=AFF=ALE,
//       VOL=(,,,255),
//       DCB=(BLKSIZE=6144,DSORG=PS,LRECL=6144,RECFM=FS)
//HT2E DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.DCFHT2E.SA.V1,
//       DISP=(,CATLG,DELETE),
//       UNIT=AFF=ALE,
//       VOL=(,,,255),
//       DCB=(BLKSIZE=6144,DSORG=PS,LRECL=6144,RECFM=FS)
//T2WK DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.DCFT2WKD.SA.V1,
```

Appendix A.73
JCL/SAS Code: DCFERNEX

```
//      DISP=(,CATLG,DELETE),
//      UNIT=AFF=ALE,
//      VOL=(,,,255),
//      DCB=(BLKSIZE=6144,DSORG=PS,LRECL=6144,RECFM=FS)
//HT2W DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.DCFHT2WK.SA.V1,
//      DISP=(,CATLG,DELETE),
//      UNIT=AFF=ALE,
//      VOL=(,,,255),
//      DCB=(BLKSIZE=6144,DSORG=PS,LRECL=6144,RECFM=FS)
//SYSIN DD *

OPTION NOCENTER;

LIBNAME ALE  TAPE;
LIBNAME HALE TAPE;
LIBNAME T16E TAPE;
LIBNAME HT16 TAPE;
LIBNAME T2ER TAPE;
LIBNAME HT2E TAPE;
LIBNAME T2WK TAPE;
LIBNAME HT2W TAPE;
LIBNAME MDCF DB2 SSID=DBP8 SCHEMA=MDCF ;

* CREATE SAS EXTRACT OF ALLEGED EARNINGS GROUP DATA;
PROC SQL;
CREATE TABLE ALE.ALLGERNG AS
SELECT * FROM MDCF.ALLGERNG;
QUIT;
RUN;

* CREATE SAS EXTRACT OF HISTORY ALLEGED EARNINGS GROUP DATA;
PROC SQL;
CREATE TABLE HALE.HALLGERN AS
SELECT * FROM MDCF.HALLGERN;
QUIT;
RUN;

* CREATE SAS EXTRACT OF T16 EARNINGS GROUP DATA;
PROC SQL;
CREATE TABLE T16E.T16ERNGS AS
SELECT * FROM MDCF.T16ERNGS;
QUIT;
RUN;

* CREATE SAS EXTRACT OF HISTORY T16 EARNINGS GROUP DATA;
```

Appendix A.73
JCL/SAS Code: DCFERNEX

```
PROC SQL;
CREATE TABLE HT16.HT16ERNG AS
SELECT * FROM MDCF.HT16ERNG;
QUIT;

* CREATE SAS EXTRACT OF T2 EARNINGS GROUP DATA;
PROC SQL;
CREATE TABLE T2ER.T2ERNGS AS
SELECT * FROM MDCF.T2ERNGS;
QUIT;
RUN;

* CREATE SAS EXTRACT OF HISTORY T2 EARNINGS GROUP DATA;
PROC SQL;
CREATE TABLE HT2E.HT2ERNGS AS
SELECT * FROM MDCF.HT2ERNGS;
QUIT;
RUN;

* CREATE SAS EXTRACT OF T2 WORK GROUP DATA;
PROC SQL;
CREATE TABLE T2WK.T2WKDETN AS
SELECT * FROM MDCF.T2WKDETN
QUIT;
RUN;

* CREATE SAS EXTRACT OF HISTORY T2 WORK GROUP DATA;
PROC SQL;
CREATE TABLE HT2W.HT2WKDET AS
SELECT * FROM MDCF.HT2WKDET;
QUIT;
RUN;

PROC CONTENTS DATA=ALE.ALLGERNG;
RUN;
PROC CONTENTS DATA=HALE.HALLGERN;
RUN;
PROC CONTENTS DATA=T16E.T16ERNGS;
RUN;
PROC CONTENTS DATA=HT16.HT16ERNG;
RUN;
PROC CONTENTS DATA=T2ER.T2ERNGS;
RUN;
PROC CONTENTS DATA=HT2E.HT2ERNGS;
RUN;
```

Appendix A.73
JCL/SAS Code: DCFERNEX

```
PROC CONTENTS DATA=T2WK.T2WKDETN;
RUN;
PROC CONTENTS DATA=HT2W.HT2WKDET;
RUN;
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<MSHEN@MATHEMATICA-MPR.COM>
RCPT TO:<MSHEN@MATHEMATICA-MPR.COM>
DATA
FROM:   <MSHEN@MATHEMATICA-MPR.COM>
TO:     <MSHEN@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 DCFERNEX IS COMPLETE
```

Appendix A.74
JCL/SAS Code: ALGEARN

```
//#4941ALG  JOB (12510000,T715,,SAS,,ITC9FL),MIAOMIAO-SHEN,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#4941
//*****************************************************************
//* PROJECT:     BUILD DAF18 50214
//* PROJECT
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#4941.DAF18.ANN.PRDLIB(ALGEARN)
//* DESCRIPTION: BUILDS THE YYMM EARNINGS VARIABLES FROM THE DCF
//*              ALLEGED EARNINGS TABLE
//* PROGRAMMER:  MIAOMIAO SHEN 5/30/2019
//*****************************************************************
//*
//SAS       EXEC SAS9,
//          WORK='120000,60000'
//*
//*
//IN1   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.DCFALERN.SA.V1,DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.ALGEARN.SA.V1,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//TEMP1 DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP2 DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN DD *

OPTIONS LS=132 COMPRESS=YES MPRINT MACROGEN OBS=MAX;

  /* CHANGE ENDYR AND ENDMMN FOR EACH RUN */
%LET BEGYR=1994;
%LET ENDYR=2018; /* CHANGE AS NEEDED */
%LET ENDMN=12;   /* CHANGE AS NEEDED */

  /* STEP TO ASSIGN MACRO VARIABLES TO HANDLE TIME SERIES DATA */
%LET NUMYRS=%EVAL(&ENDYR.-&BEGYR.+1);

%MACRO START;
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

*************** ALLEGED EARNINGS PROCESSING *************************;

DATA ALLERN;
   SET IN1.ALLGERNG;
```

Appendix A.74
JCL/SAS Code: ALGEARN

```
    * IF THE EARNINGS DATE IS IN A REPORTING YEAR THEN KEEP;
    WHERE
      (ERNGS_DT>="01JAN&BEGYR."D) AND
      (ERNGS_DT<="31DEC&ENDYR."D) AND
      (CID='00');

    * ATTACH FORMAT TO THE ERNGS_DT FIELD SO IT WILL APPEAR AS YYMM;
    ATTRIB ERNGS_DT FORMAT=YYMMN4.;

RUN;

PROC SORT DATA=ALLERN;
    BY COSSN;
RUN;

* CREATE ONE OBSERVATION PER SSN WITH YYMM VARIABLES CONTAINING THE
  ALLLEGED EARNINGS AMOUNT;
PROC TRANSPOSE DATA=ALLERN OUT=TEMP1.ALLERN(DROP=_NAME_ _LABEL_)
  PREFIX=ALLGAMT;
    BY COSSN;
    ID ERNGS_DT;
    VAR ALLGD_AMT;
RUN;

DATA TEMP2.ALGEARN;
    SET TEMP1.ALLERN;
     * THIS ARRAY WILL ENSURE THAT THERE IS A VARIABLE FOR EVERY
      EARNINGS TYPE FOR EVERY YYMM COMBINATION.  ALTHOUGH UNLIKELY
      IT IS POSSIBLE THAT THERE WILL BE NO BENES WHO HAD A CERTAIN
      EARNINGS TYPE IN A GIVEN MONTH -- IF THIS WERE TO HAPPEN THEN
      THERE WOULD BE NO YYMM VARIABLE FOR THAT EARNING TYPE SINCE THE
      PROC TRANSPOSE IN THE PREVIOUS STEP ONLY CREATES VARIABLES FOR
      DATA IT ENCOUNTERS;
    ARRAY OVARS {1,&NUMYRS.,12}
        %DO MM=1 %TO &TOTMOS; ALLGAMT&&YY&MM %END;;
RUN;

* SORT THE YYMM VARIABLES INTO THE RIGHT ORDER;
PROC CONTENTS DATA = TEMP2.ALGEARN OUT = TEMP2.VARS(KEEP = NAME);
RUN;

PROC SQL;
SELECT NAME INTO :SORTED_COLS SEPARATED BY ' '
FROM TEMP2.VARS
ORDER BY NAME;
```

Appendix A.74
JCL/SAS Code: ALGEARN

```
QUIT;

DATA OUT.ALGEARN;
RETAIN &SORTED_COLS;
SET TEMP2.ALGEARN;
RUN;

PROC CONTENTS DATA=OUT.ALGEARN;
RUN;

%MEND START;
%START;
ENDSAS;

//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<MSHEN@MATHEMATICA-MPR.COM>
RCPT TO:<MSHEN@MATHEMATICA-MPR.COM>
DATA
FROM:   <MSHEN@MATHEMATICA-MPR.COM>
TO:     <MSHEN@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 ALGEARN IS COMPLETE
```

Appendix A.75
JCL/SAS Code: T2WKDETN

```
//#4941T2W  JOB (12510000,T715,,SAS,,ITC9FL),MIAOMIAO-SHEN,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#4941
//*****************************************************************
//* PROJECT:     BUILD DAF18 50214
//* PROJECT
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#4941.DAF18.ANN.PRDLIB(T2WKDETN)
//* DESCRIPTION: BUILDS THE YYMM EARNINGS VARIABLES FROM THE DCF
//*              T2WKDETN TABLE
//* PROGRAMMER:  MIAOMIAO SHEN 5/30/2019
//*****************************************************************
//*
//SAS       EXEC SAS9,
//          WORK='120000,60000'
//*
//*
//IN1   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.DCFT2WKD.SA.V1,DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.T2WKDETN.SA.V1,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//TEMP1 DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP2 DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP3 DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN DD *

OPTIONS LS=132 COMPRESS=YES MPRINT MACROGEN OBS=MAX;

  /* CHANGE ENDYR AND ENDMN FOR EACH RUN */
%LET BEGYR=1994;
%LET ENDYR=2018; /* CHANGE AS NEEDED */
%LET ENDMN=12;   /* CHANGE AS NEEDED */

  /* STEP TO ASSIGN MACRO VARIABLES TO HANDLE TIME SERIES DATA */
%LET NUMYRS=%EVAL(&ENDYR.-&BEGYR.+1);

%MACRO START;
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

******************** T2 WORK PROCESSING ******************************;

DATA TEMP1.T2WKDETN;
```

Appendix A.75
JCL/SAS Code: T2WKDETN

```
    SET IN1.T2WKDETN;

    * IF THE EARNINGS DATE IS IN A REPORTING YEAR THEN KEEP;
    WHERE
      (ERNGS_DT>="01JAN&BEGYR."D) AND
      (ERNGS_DT<="31DEC&ENDYR."D) AND
      (CID='00');

    * ATTACH FORMAT TO THE ERNGS_DT FIELD SO IT WILL APPEAR AS YYMM;
    ATTRIB ERNGS_DT FORMAT=YYMMN4.;

  RUN;

  PROC SORT DATA=TEMP1.T2WKDETN;
    BY COSSN ERNGS_DT DESCENDING LU_TS;
  RUN;

  PROC SORT DATA=TEMP1.T2WKDETN NODUPKEYS;
    BY COSSN ERNGS_DT;
  RUN;

  * CREATE ONE OBSERVATION PER SSN WITH YYMM VARIABLES CONTAINING EACH
   OR THE EARNINGS AMOUNTS;
  %MACRO T2WKD(ERNVAR,ERNPREF);
  PROC TRANSPOSE DATA=TEMP1.T2WKDETN
   OUT=TEMP2.&ERNPREF.(DROP = _NAME_ _LABEL_)
   PREFIX=&ERNPREF.;
    BY COSSN;
    ID ERNGS_DT;
    VAR &ERNVAR.;
  RUN;

  %MEND T2WKD;

  %T2WKD(SPCL_CDNS_AMT,T2CDNAMT);
  %T2WKD(WRK_EXP_AMT,T2EXPAMT);
  %T2WKD(SBDY_AMT,T2SBDYAMT);
  %T2WKD(SE_UNBIZEXP_AMT,T2UBEAMT);
  %T2WKD(WRK_DETN_CD,TWPDATA);
  %T2WKD(FRAUD_VRFD_SW,T2FRAUDVER);

  DATA TEMP3.T2WKDETN;
    MERGE TEMP2.T2CDNAMT
        TEMP2.T2EXPAMT
        TEMP2.T2SBDYAMT
```

Appendix A.75
JCL/SAS Code: T2WKDETN

```
        TEMP2.T2UBEAMT
        TEMP2.TWPDATA
        TEMP2.T2FRAUDVER
        ;
    BY COSSN;
RUN;

* SORT THE YYMM VARIABLES INTO THE RIGHT ORDER;
PROC CONTENTS DATA = TEMP3.T2WKDETN OUT = TEMP3.VARS(KEEP = NAME);
RUN;

PROC SQL;
SELECT NAME INTO :SORTED_COLS SEPARATED BY ' '
FROM TEMP3.VARS
ORDER BY NAME;
QUIT;

DATA OUT.T2WKDETN;
RETAIN &SORTED_COLS;
SET TEMP3.T2WKDETN;
RUN;

PROC CONTENTS DATA=OUT.T2WKDETN;
RUN;

%MEND START;
%START;
ENDSAS;

//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<MSHEN@MATHEMATICA-MPR.COM>
RCPT TO:<MSHEN@MATHEMATICA-MPR.COM>
DATA
FROM:   <MSHEN@MATHEMATICA-MPR.COM>
TO:     <MSHEN@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 T2WKDETN IS COMPLETE
```

Appendix A.76
JCL/SAS Code: T2EARN

```
//#4941T2   JOB (12510000,T715,,SAS,,ITC9FL),MIAOMIAO-SHEN,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#4941
//*****************************************************************
//* PROJECT:     BUILD DAF18 (50214)
//* PROJECT
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#4941.DAF18.ANN.PRDLIB(T2EARN)
//* DESCRIPTION: BUILDS THE YYMM EARNINGS VARIABLES FROM THE DCF
//*              T2EARN TABLE
//* PROGRAMMER:  MIAOMIAO SHEN 6/3/2019
//*****************************************************************
//*
//SAS       EXEC SAS9,
//         WORK='120000,60000'
//*
//*
//IN1   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.DCFT2ER.SA.V1,DISP=SHR
//BLD   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIEDCF.SA.V1,DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.T2EARN.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//TEMP1  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP2  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP3  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP4  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN  DD *

OPTIONS LS=132 COMPRESS=YES MPRINT MACROGEN OBS=MAX;

  /* CHANGE ENDYR AND ENDMMN FOR EACH RUN */
%LET BEGYR=1994;
%LET ENDYR=2018; /* CHANGE AS NEEDED */
%LET ENDMN=12;   /* CHANGE AS NEEDED */

  /* STEP TO ASSIGN MACRO VARIABLES TO HANDLE TIME SERIES DATA */
%LET NUMYRS=%EVAL(&ENDYR.-&BEGYR.+1);

%MACRO START;
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";
```

Appendix A.76
JCL/SAS Code: T2EARN

```
*************** T2 EARNINGS PROCESSING ******************************;

DATA TEMP1.T2ERN;
   SET IN1.T2ERNGS;

   * IF THE EARNINGS DATE IS IN A REPORTING YEAR THEN KEEP;
   WHERE
     (ERNGS_DT>="01JAN&BEGYR."D) AND
     (ERNGS_DT<="31DEC&ENDYR."D) AND
     (CID='00');

   * ATTACH FORMAT TO THE ERNGS_DT FIELD SO IT WILL APPEAR AS YYMM;
   ATTRIB ERNGS_DT FORMAT=YYMMN4.;

RUN;

PROC SORT DATA=TEMP1.T2ERN;
   BY COSSN;
RUN;

* CREATE ONE OBSERVATION PER SSN WITH YYMM VARIABLES CONTAINING EACH
  OR THE EARNINGS AMOUNTS;
%MACRO T2EARN(ERNVAR,ERNPREF);
PROC TRANSPOSE DATA=TEMP1.T2ERN
  OUT=TEMP2.&ERNPREF.(DROP = _NAME_ _LABEL_)
  PREFIX=&ERNPREF.;
   BY COSSN;
   ID ERNGS_DT;
   VAR &ERNVAR.;
RUN;

%MEND T2EARN;

%T2EARN(GRS_AMT,T2GRSAMT);
%T2EARN(SE_NET_AMT,T2NETAMT);
%T2EARN(SE_HRS,T2SEHRS);
%T2EARN(VRFD_IND,T2VERIND);
%T2EARN(SE_VRFD_IND,T2SEVERIND);

DATA TEMP3.T2EARN;
   MERGE TEMP2.T2GRSAMT
       TEMP2.T2NETAMT
       TEMP2.T2SEHRS
       TEMP2.T2VERIND
       TEMP2.T2SEVERIND
```

Appendix A.76
JCL/SAS Code: T2EARN

```
        ;
    BY COSSN;
RUN;

* SORT THE YYMM VARIABLES INTO THE RIGHT ORDER;
PROC CONTENTS DATA = TEMP3.T2EARN OUT = TEMP3.VARS(KEEP = NAME);
RUN;

PROC SQL;
SELECT NAME INTO :SORTED_COLS SEPARATED BY ' '
FROM TEMP3.VARS
ORDER BY NAME;
QUIT;

DATA TEMP4.T2EARN;
RETAIN &SORTED_COLS;
SET TEMP3.T2EARN;
RUN;

PROC CONTENTS DATA=TEMP4.T2EARN;
RUN;

*************** BUILD DIERNLVL ******************************;
DATA OUT.T2EARN;
   MERGE TEMP4.T2EARN (IN=DCF)
       BLD.MIEDCF (KEEP = SSN BLINDDT RENAME=(SSN=COSSN));
   BY COSSN;
   IF DCF;

  * SET INPUT ARRAY *;
  ARRAY T2GRSAMT (&BEGYR.:&ENDYR.,1:12)
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T2GRSAMT&YR.01-T2GRSAMT&YR.12
            %END;;

  ARRAY T2NETAMT (&BEGYR.:&ENDYR.,1:12)
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T2NETAMT&YR.01-T2NETAMT&YR.12
            %END;;

  ARRAY T2EXPAMT (&BEGYR.:&ENDYR.,1:12)
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
```

Appendix A.76
JCL/SAS Code: T2EARN

```
            T2EXPAMT&YR.01-T2EXPAMT&YR.12
            %END;;

ARRAY T2SBDYAMT (&BEGYR.:&ENDYR.,1:12)
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T2SBDYAMT&YR.01-T2SBDYAMT&YR.12
            %END;;

ARRAY T2CDNAMT (&BEGYR.:&ENDYR.,1:12)
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T2CDNAMT&YR.01-T2CDNAMT&YR.12
            %END;;

* SET TWP VALUES *;
* VALUES FROM HTTPS://WWW.SSA.GOV/OACT/COLA/TWP.HTML *;
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(TWPA)";

* SET SGA VALUES - NON-BLIND *;
* VALUES FROM HTTPS://WWW.SSA.GOV/OACT/COLA/SGA.HTML *;
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(SGANB)";

* SET SGA VALUES - BLIND *;
* VALUES FROM HTTPS://WWW.SSA.GOV/OACT/COLA/SGA.HTML *;
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(SGAB)";

* SET UP OUTPUT ARRAY *;
ARRAY DIERNLVL (&BEGYR.:&ENDYR.,1:12) $
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            DIERNLVL&YR.01-DIERNLVL&YR.12
            %END;;

DO YR=&BEGYR. TO &ENDYR.;
  DO MO = 1 TO 12;
    * MONTHLY TOTAL SSDI GROSS EARNINGS AMOUNT *;
    T2TENAMT = SUM(T2GRSAMT(YR,MO),T2NETAMT(YR,MO));

    * MONTHLY TOTAL SSDI INCOME EXCLUSIONS *;
    T2INCEXL = SUM(T2EXPAMT(YR,MO),
              T2SBDYAMT(YR,MO),
              T2CDNAMT(YR,MO));

    * MONTHLY SSDI COUNTABLE EARNINGS *;
```

Appendix A.76
JCL/SAS Code: T2EARN

```
        T2CNTERN = SUM(T2TENAMT,T2INCEXL*-1);

       * CREATE DIERNLVL *;
       IF T2TENAMT = 0 THEN DIERNLVL(YR,MO) = "0";
       ELSE IF 0 < T2TENAMT < TWPA(YR)
         THEN DIERNLVL(YR,MO) = "L";

       ELSE IF MONTH(BLINDDT) NE . AND
             MDY(MO,1,YR) >= BLINDDT THEN DO;
         IF TWPA(YR) <= T2TENAMT < SGAB(YR)
           THEN DIERNLVL(YR,MO) = "T";
         ELSE IF T2TENAMT >= SGAB(YR) AND
               T2CNTERN <  SGAB(YR)
           THEN DIERNLVL(YR,MO) = "G";
         ELSE IF T2CNTERN >= SGAB(YR)
           THEN DIERNLVL(YR,MO) = "S";
       END;

       ELSE IF MDY(MO,1,YR) < BLINDDT
           OR MONTH(BLINDDT)=. THEN DO;
         IF TWPA(YR) <= T2TENAMT < SGANB(YR)
           THEN DIERNLVL(YR,MO) = "T";
         ELSE IF T2TENAMT >= SGANB(YR) AND
               T2CNTERN <  SGANB(YR)
           THEN DIERNLVL(YR,MO) = "G";
         ELSE IF T2CNTERN >= SGANB(YR)
           THEN DIERNLVL(YR,MO) = "S";
       END;
     END; /* END OF MO LOOP */
   END; /* END OF YR LOOP */
RUN;

PROC FORMAT;
  VALUE AMTV
  0               = "$0"
  0-<100          = "$0 - LESS THAN $100"
  %DO I = 1 %TO 300;
  %EVAL(100*&I)-<%EVAL(100*(&I+1))
  = "$ %EVAL(100*&I) - LESS THAN $ %EVAL(100*(&I+1))"
  %END;;
RUN;

* CHECK FREQ OF DIERNLVL VARIABLE *;
TITLE1 "CROSSTAB OF DIERNLVL AND TOTAL SSDI GROSS EARNINGS AMOUNT";
TITLE2 "FOR MARCH,JUNE,SEPTEMBER AND DECEMBER";
```

Appendix A.76
JCL/SAS Code: T2EARN

```
%DO YEAR=&BEGYR. %TO &ENDYR.;
%LET YR=%SUBSTR(&YEAR.,3,2);
  %LET MO=03 06 09 12;
  %DO I=1 %TO 4;
  %LET VAR=%SCAN(&MO,&I);
  PROC FREQ DATA=OUT.T2EARN;
    TABLES DIERNLVL&YR.&VAR*T2TENAMT / LIST MISSING;
    FORMAT T2TENAMT AMTV.;
  RUN;
  %END; /*END OF MO LOOP*/
 %END; /*END OF YEAR LOOP*/
 TITLE;

%MEND;
%START;
ENDSAS;

//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<MSHEN@MATHEMATICA-MPR.COM>
RCPT TO:<MSHEN@MATHEMATICA-MPR.COM>
DATA
FROM:   <MSHEN@MATHEMATICA-MPR.COM>
TO:     <MSHEN@MATHEMATICA-MPR.COM>
SUBJECT: T2EARN IS COMPLETE
```

Appendix A.77
JCL/SAS Code: SSIERNLV

```
//$4671SSI  JOB (12510000,T715,,SAS,,ITC9FL),DAWN-PHELPS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: BUILD DAF16 (50214)
//* PROJECT
//* DIRECTOR:    JODY SCHIMMEL HYDE
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF18.ANN.PRDLIB(SSIERNLV)
//*
//* DESCRIPTION: BUILDS THE YYMM EARNINGS VARIABLES FROM THE SSR
//*              EARNINGS FILE
//*
//* UPDATED:     MIAOMIAO SHEN 7/25/2019 FOR DAF18
//*****************************************************************
//*
//SAS       EXEC SAS9,
//         WORK='120000,60000'
//*
//*
//IN1   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSREARN.SA.V1,DISP=SHR
//BLD   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIEDCF.SA.V1,DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.SSRERNLV.SA.V2,
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO,VOL=(,,,10)
//TEMP1  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//       SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP2  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//       SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP3  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//       SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP4  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//       SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN  DD *

OPTIONS LS=132 COMPRESS=YES MPRINT MACROGEN OBS=MAX;

%LET BEGYR=1994;
%LET ENDYR=2018; /* CHANGE AS NEEDED */
%LET ENDMN=12;   /* CHANGE AS NEEDED */

  /* ASSIGN MACRO VARIABLES TO HANDLE TIME SERIES DATA */
%LET NUMYRS=%EVAL(&ENDYR.-&BEGYR.+1);

%MACRO START;
```

Appendix A.77
JCL/SAS Code: SSIERNLV

```
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

*************** BUILD SSIERNLVL ********************************;

DATA OUT.SSREARN;
  MERGE IN1.SSREARN (IN=SSR)
      BLD.MIEDCF  (IN=BLD KEEP = SSN BLINDDT);
  BY SSN;

  IF SSR;

  * SET INPUT ARRAY *;
  * IETYP = W;
  ARRAY T16GRSAMT (&BEGYR.:&ENDYR.,1:12)
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T16GRSAMT&YR.01-T16GRSAMT&YR.12
            %END;;
  * IETYP = N;
  ARRAY T16NETAMT (&BEGYR.:&ENDYR.,1:12)
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T16NETAMT&YR.01-T16NETAMT&YR.12
            %END;;
  * IETYP = T;
  ARRAY T16EXPAMT (&BEGYR.:&ENDYR.,1:12)
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T16EXPAMT&YR.01-T16EXPAMT&YR.12
            %END;;
  * IETYP = D;
  ARRAY T16PASAMT  (&BEGYR.:&ENDYR.,1:12)
             %DO YEAR=&BEGYR %TO &ENDYR;
             %LET YR=%SUBSTR(&YEAR.,3,2);
             T16PASAMT&YR.01-T16PASAMT&YR.12
             %END;;
  * IETYP = B;
  ARRAY T16EXLAMT (&BEGYR.:&ENDYR.,1:12)
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T16EXLAMT&YR.01-T16EXLAMT&YR.12
            %END;;
  * IETYP = C;
  ARRAY T16BEXPAMT (&BEGYR.:&ENDYR.,1:12)
             %DO YEAR=&BEGYR %TO &ENDYR;
```

Appendix A.77
JCL/SAS Code: SSIERNLV

```
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T16BEXPAMT&YR.01-T16BEXPAMT&YR.12
            %END;;
 * IETYP = S;
 ARRAY T16SEAMT  (&BEGYR.:&ENDYR.,1:12)
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T16SEAMT&YR.01-T16SEAMT&YR.12
            %END;;

 * SET FBR VALUES *;
 * VALUES FROM HTTPS://WWW.SSA.GOV/OACT/COLA/SSIAMTS.HTML *;
 %INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(FBRIN)";

* SET SGA VALUES - NON-BLIND *;
* VALUES FROM HTTPS://WWW.SSA.GOV/OACT/COLA/SGA.HTML *;
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(SGANB)";

* SET SGA VALUES - BLIND *;
* VALUES FROM HTTPS://WWW.SSA.GOV/OACT/COLA/SGA.HTML *;
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(SGAB)";

* SET UP OUTPUT ARRAY *;
ARRAY SSIERNLVL (&BEGYR.:&ENDYR.,1:12) $
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            SSIERNLVL&YR.01-SSIERNLVL&YR.12
            %END;;

 DO YR=&BEGYR. TO &ENDYR.;
   DO MO = 1 TO 12;
     * MONTHLY TOTAL SSI GROSS EARNINGS AMOUNT *;
     T16TENAMT = SUM(T16GRSAMT(YR,MO),
                 T16SEAMT(YR,MO),
                 T16NETAMT(YR,MO)*-1);

     * MONTHLY TOTAL SSI INCOME EXCLUSIONS *;
     T16INCEXL = SUM(T16EXLAMT(YR,MO),
                 T16BEXPAMT(YR,MO),
                 T16PASAMT(YR,MO),
                 T16EXPAMT(YR,MO));

     * MONTHLY SSI COUNTABLE EARNINGS *;
     T16CNTERN = SUM(T16TENAMT,T16INCEXL*-1);
```

Appendix A.77
JCL/SAS Code: SSIERNLV

```
        * CREATE SSIERNLVL *;
        IF T16TENAMT = 0 THEN SSIERNLVL(YR,MO) = "0";
        ELSE IF 0 < T16TENAMT < FBRIN(YR)
          THEN SSIERNLVL(YR,MO) = "L";

        ELSE IF MONTH(BLINDDT) NE . AND
              MDY(MO,1,YR) >= BLINDDT THEN DO;
          IF FBRIN(YR) <= T16TENAMT < SGAB(YR) AND
            FBRIN(YR) > T16CNTERN
            THEN SSIERNLVL(YR,MO) = "F";
          ELSE IF FBRIN(YR) <= T16TENAMT < SGAB(YR) AND
                FBRIN(YR) <= T16CNTERN
            THEN SSIERNLVL(YR,MO) = "B";
          ELSE IF T16TENAMT >= SGAB(YR) AND
                T16CNTERN < FBRIN(YR)
            THEN SSIERNLVL(YR,MO) = "A";
          ELSE IF T16TENAMT >= SGAB(YR) AND
                FBRIN(YR) <= T16CNTERN < SGAB(YR)
            THEN SSIERNLVL(YR,MO) = "G";
          ELSE IF T16CNTERN >= SGAB(YR)
            THEN SSIERNLVL(YR,MO) = "S";
        END;

        ELSE IF MDY(MO,1,YR) < BLINDDT
             OR MONTH(BLINDDT)=. THEN DO;
          IF FBRIN(YR) <= T16TENAMT < SGANB(YR) AND
            FBRIN(YR) > T16CNTERN
            THEN SSIERNLVL(YR,MO) = "F";
          ELSE IF FBRIN(YR) <= T16TENAMT < SGANB(YR) AND
                FBRIN(YR) <= T16CNTERN
            THEN SSIERNLVL(YR,MO) = "B";
          ELSE IF T16TENAMT >= SGANB(YR) AND
                T16CNTERN < FBRIN(YR)
            THEN SSIERNLVL(YR,MO) = "A";
          ELSE IF T16TENAMT >= SGANB(YR) AND
                FBRIN(YR) <= T16CNTERN < SGANB(YR)
            THEN SSIERNLVL(YR,MO) = "G";
          ELSE IF T16CNTERN >= SGANB(YR)
            THEN SSIERNLVL(YR,MO) = "S";
        END;
      END; /* END OF MO LOOP */
    END; /* END OF YR LOOP */
  RUN;

  %MEND START;
```

Appendix A.77
JCL/SAS Code: SSIERNLV

```
%START;
ENDSAS;
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<DPHELPS@MATHEMATICA-MPR.COM>
RCPT TO:<DPHELPS@MATHEMATICA-MPR.COM>
DATA
FROM:   <DPHELPS@MATHEMATICA-MPR.COM>
TO:     <DPHELPS@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 SSIERNLV IS COMPLETE
```

Appendix A.78
JCL/SAS Code: ALLEARN

```
//#6502EAR JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:    BUILD DAF18 (50214)
//* PROJECT
//* DIRECTOR:   CASSANDRA PICKENS JEWELL
//* PROGRAM:    OPDR.TG.PRD.ETTW.#4941.DAF18.ANN.PRDLIB(ALLEARN)
//* PURPOSE:    COMBINE DCF EARNINGS DATA
//* PROGRAMMER: ALEX BRYCE 12/04/2019 FOR DAF18 (RERUN)
//* E-MAIL      ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//JS030   EXEC SAS9,
//       WORK='120000,60000'             * SPACE IN BLKS *
//*
//T2E   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.T2EARN.SA.V1,DISP=SHR
//T2W   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.T2WKDETN.SA.V1,DISP=SHR
//SSI   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.SSRERNLV.SA.V2,DISP=SHR
//ALG   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.ALGEARN.SA.V1,DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ALLEARN.SA.V2,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//SYSIN   DD *
OPTIONS NOCENTER LS=132 PS=60 COMPRESS=BINARY MPRINT OBS=MAX;

%LET BEGYR=1994;
%LET ENDYR=2018; /* CHANGE AS NEEDED */
%LET ENDMN=12;   /* CHANGE AS NEEDED */

  /* STEP TO ASSIGN MACRO VARIABLES TO HANDLE TIME SERIES DATA */
%MACRO START;
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

DATA OUT.ALLEARN (RENAME=(COSSN=SSN));
MERGE
  T2E.T2EARN
    ( KEEP=COSSN
    %DO MM=1 %TO &TOTMOS;
      T2GRSAMT&&YY&MM
      T2NETAMT&&YY&MM
      T2SEHRS&&YY&MM
      T2SEVERIND&&YY&MM
      T2VERIND&&YY&MM
      DIERNLVL&&YY&MM
     %END;
```

Appendix A.78
JCL/SAS Code: ALLEARN

```
        )
    T2W.T2WKDETN
      ( KEEP=COSSN
     %DO MM=1 %TO &TOTMOS;
       TWPDATA&&YY&MM
       T2CDNAMT&&YY&MM
       T2EXPAMT&&YY&MM
       T2FRAUDVER&&YY&MM
       T2SBDYAMT&&YY&MM
       T2UBEAMT&&YY&MM
      %END;
      )
   SSI.SSREARN
       ( KEEP=SSN
     %DO MM=1 %TO &TOTMOS;
       T16BEXPAMT&&YY&MM
       T16EXLAMT&&YY&MM
       T16EXPAMT&&YY&MM
       T16GRSAMT&&YY&MM
       T16NETAMT&&YY&MM
       T16PASAMT&&YY&MM
       T16SEAMT&&YY&MM
       SSIERNLVL&&YY&MM
      %END;
        RENAME=(SSN=COSSN)
      )
   ALG.ALGEARN
       ( KEEP=COSSN
     %DO MM=1 %TO &TOTMOS;
       ALLGAMT&&YY&MM
      %END;
      )
    ;
     BY COSSN;
  RUN;
  %MEND;
  %START;

  PROC CONTENTS DATA=OUT.ALLEARN;
  RUN;

  //**************************************************
  //SENDNOTE EXEC PGM=IEBGENER
  //SYSIN    DD DUMMY
  //SYSPRINT DD SYSOUT=*
```

Appendix A.78
JCL/SAS Code: ALLEARN

```
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 ALLEARN ARE COMPLETE
```

Appendix A.79
JCL/SAS Code: JCLYRSP

```
//#6502MSP JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//*
//*     *-------------------------------------------------*
//*     ¦  THE MACRO SPLIT PROGRAM                        ¦
//*     *-------------------------------------------------*
//*
//*
//* CREATED BY: SERGE LUKASHANETS, 5/26/2016
//* MODIFIED BY: ALEX BRYCE 12/04/2019 FOR DAF18 (RERUN)
//* E-MAIL      ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//  SET REG='64M'
//*
//JS010  EXEC SAS9,
//      WORK='200000,100000', F10
//      REGION=&REG,
//      PARM='MEMSIZE=&REG'
//*
//***DATA FOR SPLIT
//IN1    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ALLEARN.SA.V2,DISP=SHR
//***OUT YEARLY FILES
//OUT94  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN1994.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT95  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN1995.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT96  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN1996.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT97  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN1997.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT98  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN1998.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT99  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN1999.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT00  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2000.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
```

Appendix A.79
JCL/SAS Code: JCLYRSP

```
//OUT01  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2001.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT02  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2002.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT03  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2003.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT04  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2004.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT05  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2005.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT06  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2006.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT07  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2007.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT08  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2008.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT09  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2009.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT10  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2010.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT11  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2011.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT12  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2012.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT13  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2013.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT14  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2014.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT15  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2015.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
```

Appendix A.79
JCL/SAS Code: JCLYRSP

```
//OUT16  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2016.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT17  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2017.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT18  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2018.SA.V2,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//SYSIN   DD *
OPTIONS NOCENTER COMPRESS=YES MPRINT OBS=MAX;

%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(MSPLIT)";

%OUTP(IN1.ALLEARN,OUT,ERN,1994,2018,SSN);

PROC CONTENTS DATA=OUT94.ERN;RUN;
PROC CONTENTS DATA=OUT95.ERN;RUN;
PROC CONTENTS DATA=OUT96.ERN;RUN;
PROC CONTENTS DATA=OUT97.ERN;RUN;
PROC CONTENTS DATA=OUT98.ERN;RUN;
PROC CONTENTS DATA=OUT99.ERN;RUN;
PROC CONTENTS DATA=OUT00.ERN;RUN;
PROC CONTENTS DATA=OUT01.ERN;RUN;
PROC CONTENTS DATA=OUT02.ERN;RUN;
PROC CONTENTS DATA=OUT03.ERN;RUN;
PROC CONTENTS DATA=OUT04.ERN;RUN;
PROC CONTENTS DATA=OUT05.ERN;RUN;
PROC CONTENTS DATA=OUT06.ERN;RUN;
PROC CONTENTS DATA=OUT07.ERN;RUN;
PROC CONTENTS DATA=OUT08.ERN;RUN;
PROC CONTENTS DATA=OUT09.ERN;RUN;
PROC CONTENTS DATA=OUT10.ERN;RUN;
PROC CONTENTS DATA=OUT11.ERN;RUN;
PROC CONTENTS DATA=OUT12.ERN;RUN;
PROC CONTENTS DATA=OUT13.ERN;RUN;
PROC CONTENTS DATA=OUT14.ERN;RUN;
PROC CONTENTS DATA=OUT15.ERN;RUN;
PROC CONTENTS DATA=OUT16.ERN;RUN;
PROC CONTENTS DATA=OUT17.ERN;RUN;
PROC CONTENTS DATA=OUT18.ERN;RUN;
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
```

Appendix A.79
JCL/SAS Code: JCLYRSP

```
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 JCLYRSP IS COMPLETE
```

Appendix A.80
JCL/SAS Code: FIPS_FORMAT

```
/*********************************************************************
*      PROJECT NAME:  DAF16                                *
*          SUBTASK:  CREATE FLAT FILE OF ZIP-FIPS CROSSWALK        *
* PROJECT-TASK NUMBER:  50214                                *
*        PROGRAMMER:  MIRIAM LOEWENBERG                      *
*      DATE WRITTEN:  08 JAN 2010                            *
*      UPDATED:      MIAOMIAO SHEN 8/29/2019 FOR DAF18            *
*     INPUT FILE(S):  MCZ.SAS7BDAT                           *
*                                                 *
*  THIS PROGRAM READS SAS FILE AND OUTPUTS FLAT FILE for ZIP-FIP CONV  *
*  FILE IS FROM INTRANET, SEARCH FOR PZLAFMT AND DOWNLOADED ONE       *
*  WITH MOST RECENT DATE                                  *
*********************************************************************/
OPTIONS PS=60 LS=132 NOCENTER FORMCHAR="|----|+|---+=|-/\<>*";

LIBNAME INLIB "M:\DAF18\TASK 12 Annuals Pre-Processing\Data";

DATA ZIP (KEEP=ZIPCODE FIPSCODE);
  SET INLIB.MCZ;
  FIPSCODE=CATS(STATEFIPS,COUNTYFIPS);
  LABEL ZIPCODE="ZIPCODE"
      FIPSCODE="FIPSCODE";
RUN;

* ZIP CODES CAN SPAN MORE THAN ONE FIPS CODE;
* WE KEEP THE ZIP CODE APPEARING FIRST IN THE DATA;

PROC SORT DATA=ZIP NODUPKEY; BY ZIPCODE; RUN;

options comamid=tcp; %let SY56=SY56.sspf.ssa.gov; %let tcpsec=_prompt_; options remote=sy56.spawner; run;

* UPLOAD DATA TO MAINFRAME *;
SIGNON;
RSUBMIT;

LIBNAME FIPS 'OPDR.TG.PRD.ETTW.#4941.DAF18.FIPSFRMT.SA.V1';
OPTION COMPRESS=BINARY REMOTE=session_id;

PROC UPLOAD DATA=ZIP
        OUT=FIPS.FIPSFRMT(COMPRESS=BINARY);
RUN;

ENDRSUBMIT;
SIGNOFF;
```

Appendix A.81
JCL/SAS Code: FIPSFORM

```
//#4941PVF  JOB (12510000,T715,,SAS,,ITC9FL),MIAOMIAO-SHEN,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#4941
//*************************************************************
//* PROJECT: BUILD DAF17 (50214)
//* PROJECT
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.#4941.DAF18.ANN.PRDLIB(FIPSFORM)
//*
//* DESCRIPTION: CREATE FIPS FORMATS FROM PROVIDER ZIP/FIPS CROSSWALK
//*
//* PROGRAMMER:  MIAOMIAO SHEN 8/29/2019
//*******************************************************************
//STEP1    EXEC SAS9
//TEMP1    DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,
//          VOL=(,,,10)
//FIPS     DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.FIPSFRMT.SA.V1,DISP=SHR
//LIBRARY  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.FIPS.FMTLIB,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD *

OPTIONS NOCENTER LS=132 PS=60 COMPRESS=YES;
 /* THIS PROGRAM READS SORD CREATE FORMAT STATEMENT
    FROM UPDATED ZIP-FIPS FILE */
PROC PRINT DATA=FIPS.FIPSFRMT (OBS=25); RUN;

*CREATES ZIP-FIPS FORMAT USING DATA SET CROSSWALK;
*"IF _N_ = 1" SECTION HANDLES ZIP CODES THAT DO NOT APPEAR IN CROSSWALK;

DATA TEMP1.FIPS;
 SET FIPS.FIPSFRMT(RENAME=(ZIPCODE=START FIPSCODE=LABEL));
 FMTNAME='$FIPS';
 OUTPUT;
 IF _N_ = 1 THEN DO;
  START='OTHER';
  LABEL = ' ';
  OUTPUT;
 END;
RUN;

PROC FORMAT CNTLIN=TEMP1.FIPS LIBRARY=LIBRARY FMTLIB;
RUN;
```

Appendix A.82
JCL/SAS Code: ANNCURR

```
//#6502ANN JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNCURR)
//* PURPOSE:  CREATE YEARLY FILES FOR CURRENT YEAR WITH MONTHLY
//*          FIELDS FROM JAN TO DEC
//* UPDATE:   ALEX BRYCE
//* EMAIL:    ABRYCE@MATHEMATICA-MPR.COM
//*          ALEX.BRYCE@SSA.GOV
//*****************************************************************
//JS030   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="2018"'
//*
//* SSI LONGITUDINAL FILE
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSIELIG.SA.V1,DISP=SHR
//* MBR DATA
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.MBRREST.SA.V1,DISP=SHR
//* 831-833 DATA
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.ALLCDCOM.SA.V1,DISP=SHR
//* DCF DATA
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ALLEARN.SA.V2,DISP=SHR
//* CER FILE
//CER   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.COMBCER.SA.V1,DISP=SHR
//* DX FILE
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPROC.SA.V1,DISP=SHR
//* DBAD FILE
//DBAD  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.CMBDBAD.SA.V1,DISP=SHR
//* DEMO FILE
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//* PREVIOUS YEAR FILE
//OLD   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF17I.Y2017.SA.FX1,DISP=SHR
//* FIPS FORMAT LIBRARY
//LIBRARY  DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18.FIPS.FMTLIB,DISP=SHR
//* MIECDF
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIEDCF.SA.V1,DISP=SHR
//*
//TEMP  DD DSN=&&TEMP,
//       DISP=(NEW,DELETE,DELETE),
//       SPACE=(CYL,(1000,100),RLSE),VOL=(,,,10)
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2018.SA.V1,
//       DISP=(NEW,CATLG,DELETE),
```

Appendix A.82
JCL/SAS Code: ANNCURR

```
//        UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2018CON.SA.V1,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUT3  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.PSTMR.SA.V1,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//SYSIN   DD *

OPTIONS NOCENTER LS=132 PS=60 COMPRESS=BINARY MPRINT OBS=MAX
      FMTSEARCH=(LIBRARY);

 *** CHANGE ENDYR AND ENDMMN FOR EACH RUN;

 %LET YR = SUBSTR(&SYSPARM,3,2);
 %LET PYR = %SUBSTR(%EVAL(&SYSPARM-1),3,2);

 %LET BEGYR=&SYSPARM;
 %LET ENDYR=&SYSPARM; /* CHANGE AS NEEDED */
 %LET ENDMN=12;      /* CHANGE AS NEEDED */

 * CHECK AND CHANGE AS NEEDED NUBER OF HI AND SMI OCCURRENCES;
 * FIND IT FROM THE MBR SOURCE LAYOUT - MBRREAD PROGRAM;
 %LET NUMHI = 10;
 %LET NUMSMI = 20;

 /* STEP TO ASSIGN MACRO VARIABLES TO HANDLE TIME SERIES DATA */
%MACRO START;
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

 /* DELETE DUPLICATE SSNs IN DBAD FILE */
PROC SORT DATA = DBAD.DBAD OUT=TEMP.DBAD NODUPKEY;
BY SSN;
RUN;

DATA OUT1.Y&SYSPARM
    OUT3.PSTMR(KEEP=SSN PST_MR);
MERGE
  FIN.DMSTW (IN=INFIN KEEP=SSN DODBEST DOBBEST PST_MR
          RENAME=(PST_MR=PST_MR_DM))
  SSR.SSIELIG(KEEP=SSN MFT SSI:
        %DO MM=1 %TO &TOTMOS;
          EICM&&YY&MM FAMT&&YY&MM FPMT&&YY&MM
          SPMT&&YY&MM SAMT&&YY&MM UINC&&YY&MM
          LIVF&&YY&MM MTST&&YY&MM PSTA&&YY&MM
```

Appendix A.82
JCL/SAS Code: ANNCURR

```
        SCON&&YY&MM CURCOMP&&YY&MM STUDM&&YY&MM
      %END;)
MBR.MBR(KEEP=SSN HI_START: HI_TERM: SMI_STAR: SMI_TERM: SSDI:
      %DO MM=1 %TO &TOTMOS;
        DUED&&YY&MM LAF&&YY&MM     WIC&&YY&MM
        RFD&&YY&MM  RFST&&YY&MM    BPD&&YY&MM
        DPEN&&YY&MM DUEO&&YY&MM    PAYD&&YY&MM
        PAYO&&YY&MM MBA&&YY&MM     MBP&&YY&MM
        CDR&&YY&MM  MEDPREM&&YY&MM DIRPAY&&YY&MM
      %END;)
T831.ALLCDCOM(KEEP=SSN
          %DO MM=1 %TO &TOTMOS;
            ALX&&YY&MM EDX&&YY&MM
          %END;)
ERN.ALLEARN(KEEP=SSN
         %DO MM=1 %TO &TOTMOS;
           T2GRSAMT&&YY&MM   T2NETAMT&&YY&MM
           T2SEHRS&&YY&MM    T2SEVERIND&&YY&MM
           T2VERIND&&YY&MM   DIERNLVL&&YY&MM
           TWPDATA&&YY&MM    T2CDNAMT&&YY&MM
           T2EXPAMT&&YY&MM   T2FRAUDVER&&YY&MM
           T2SBDYAMT&&YY&MM  T2UBEAMT&&YY&MM
           T16BEXPAMT&&YY&MM T16EXLAMT&&YY&MM
           T16EXPAMT&&YY&MM  T16GRSAMT&&YY&MM
           T16NETAMT&&YY&MM  T16PASAMT&&YY&MM
           T16SEAMT&&YY&MM   SSIERNLVL&&YY&MM
           ALLGAMT&&YY&MM
         %END;)
CER.CER(KEEP=SSN
      %DO MM=1 %TO &TOTMOS;
        IEA_BLIND&&YY&MM IEA_PASS&&YY&MM IEA_LOSS&&YY&MM
        IEA_NESE&&YY&MM  IEA_IRWE&&YY&MM IEA_WAGE&&YY&MM
        IEA_SEIE&&YY&MM
        IET4&&YY&MM      MEDC&&YY&MM     IUA_SSDI&&YY&MM
        IUA_WC&&YY&MM    IUA_TANF&&YY&MM RZIP&&YY&MM
      %END;
      RENAME=(%DO MM=1 %TO &TOTMOS;
           RZIP&&YY&MM=ZIP_SSI&&YY&MM
           %END;))
DXP.DXPROC(KEEP=SSN
        %DO MM=1 %TO &TOTMOS;
          DXPRIBEST&&YY&MM DXSECBEST&&YY&MM
          DXPRI_SSI&&YY&MM DXSEC_SSI&&YY&MM
          DXPRI_DI&&YY&MM DXSEC_DI&&YY&MM
        %END;)
```

Appendix A.82
JCL/SAS Code: ANNCURR

```
TEMP.DBAD(KEEP=SSN
        %DO MM=1 %TO &TOTMOS; ZIP_DI&&YY&MM %END;)
MED.MIEDCF(KEEP=SSN
         %DO MM=1 %TO &TOTMOS; MEDEX&&YY&MM %END;)
OLD.Y20&PYR. (KEEP = SSN ZIP_DI&PYR.12)
;
BY SSN;

/* DELETE CASES NOT IN THE MASTER FINDER */
IF INFIN;

/* TO REDUSE THE SIZE OF THE ANNUALS FILES CRETE
   FLAGS FOR DECEASED INDIVIDUALS AND UNBORNED */
IF YEAR(DODBEST) NE . AND YEAR(DODBEST) < &ENDYR THEN FL_DEATH=1;
   ELSE FL_DEATH=0;
IF YEAR(DOBBEST) NE . AND YEAR(DOBBEST) > &ENDYR THEN FL_UNBORN=1;
   ELSE FL_UNBORN=0;

/* NEW IN DAF15: REMOVE INDIVIDUALS WHO DIED BEFORE 1996 */
IF YEAR(DODBEST) NE . AND YEAR(DODBEST) < 1996 THEN DELETE;

ARRAY FPMT(*) %DO MM=1 %TO &TOTMOS; FPMT&&YY&MM %END;;
ARRAY FAMT(*) %DO MM=1 %TO &TOTMOS; FAMT&&YY&MM %END;;
ARRAY PSTA(*) %DO MM=1 %TO &TOTMOS; PSTA&&YY&MM %END;;
ARRAY MTST(*) %DO MM=1 %TO &TOTMOS; MTST&&YY&MM %END;;
ARRAY SPMT(*) %DO MM=1 %TO &TOTMOS; SPMT&&YY&MM %END;;
ARRAY SAMT(*) %DO MM=1 %TO &TOTMOS; SAMT&&YY&MM %END;;
ARRAY SCON(*) %DO MM=1 %TO &TOTMOS; SCON&&YY&MM %END;;
ARRAY DUED(*) %DO MM=1 %TO &TOTMOS; DUED&&YY&MM %END;;
ARRAY LAFCODE (*) %DO MM=1 %TO &TOTMOS; LAF&&YY&MM %END;;

ARRAY PAYS (*) %DO MM=1 %TO &TOTMOS; PAYS&&YY&MM %END;;
ARRAY DUES (*) %DO MM=1 %TO &TOTMOS; DUES&&YY&MM %END;;

/* REVISION  2009- TAKE THE ZERO OUT OF THE CODE */

DO I = 1 TO DIM(FPMT);
   PAYS(I) = SUM(OF FPMT(I),SPMT(I));
   DUES(I) = SUM(OF FAMT(I),SAMT(I));
END;

/* CONCURRENT BENEFICIARY INDICATOR */
/* REVISION 2008 - INDICATOR WILL FLAG BENEFICIARIES RECEIVING
   A PAYMENT (IN CURRENT PAY) IN BOTH PROGRAMS, SSI AND SSDI */
ARRAY CONC (*) %DO MM=1 %TO &TOTMOS; CONC&&YY&MM %END;;
```

Appendix A.82
JCL/SAS Code: ANNCURR

```
DO I = 1 TO DIM(DUED);
  IF (DUES(I) > 0 AND PSTA(I) IN ('C01' 'M01' 'M02')) AND
    (DUED(I) > 0 AND SUBSTR(LAFCODE(I),1,1) IN ('C' 'E'))
  THEN CONC(I) = 1;
  ELSE CONC(I) = 0;
END;

/* CREATE MONTHLY INDICATORS FOR 1619A-1619B*/
ARRAY PROA(*) %DO MM=1 %TO &TOTMOS; PROA&&YY&MM %END;;
ARRAY PROB(*) %DO MM=1 %TO &TOTMOS; PROB&&YY&MM %END;;
ARRAY EICM(*) %DO MM=1 %TO &TOTMOS; EICM&&YY&MM %END;;

/* PROB */
/* REVISION 2008 - CREATE ONLY FOR SSI */
DO I = 1 TO DIM(MTST);
  IF MTST(I) IN ('A','B','F') AND
    PSTA(I) IN ('N01', 'P01', 'E01') AND
    EICM(I) > 0
  THEN PROB(I) = 1;
  ELSE IF PSTA(I) NE ' ' THEN PROB(I) = 0;
END;

/* FOR PROA (THIS SHOULD YIELD NO CASES WHERE PROB = 1
  AND PROA = 1) */
DO I = 1 TO DIM(SCON);
  IF SCON(I) IN ('D','E','F','G') AND
    PSTA(I) IN ('C01', 'M01','M02') AND
    DUES(I) > 0 AND
    EICM(I) > 0
    THEN PROA(I) = 1;
  ELSE IF PSTA(I) NE ' ' THEN PROA(I) = 0;
END;

/* CREATE A MEDICARE INDICATOR */
/* INPUT ARRAYS */
ARRAY HI_START(*)    HI_START1-HI_START&NUMHI.;
ARRAY HI_TERM(*)     HI_TERM1-HI_TERM&NUMHI.;
ARRAY SMI_START(*)   SMI_STAR1-SMI_STAR&NUMSMI.;
ARRAY SMI_TERM(*)    SMI_TERM1-SMI_TERM&NUMSMI.;

/* OUTPUT ARRAYS */
ARRAY MEDR (*) %LET YR=%SUBSTR(&BEGYR.,3,2);
              MEDR&YR.01-MEDR&YR.12;
```

Appendix A.82
JCL/SAS Code: ANNCURR

```
/* FIND THE EARLIEST HI START DATE */
HI_START_EARL = MIN(OF HI_START1-HI_START&NUMHI.);

/* IF ALL HI AND SMI DATES ARE MISSING THEN MEDICARE
  INDICATOR IS MISSING */
/* IF HI AND SMI DATES ARE PRESENT THEN SET MEDICARE
  INDICATOR TO 0 */

DO K=1 TO 12;
  IF N(OF HI_START(*))=0 AND N(OF HI_TERM(*))=0 AND
    N(OF SMI_START(*))=0 AND N(OF SMI_TERM(*))=0
    THEN MEDR(K) = .;
  ELSE MEDR(K) = 0;

DO M = 1 TO &NUMSMI UNTIL(MEDR(K) = 1);
  IF (HI_START_EARL NE . AND
     HI_START_EARL <= INTNX('MONTH',MDY(K,1,&BEGYR.),0,'END')) OR
    (SMI_START(M) NE . AND SMI_TERM(M) NE . AND
     SMI_START(M) <= INTNX('MONTH',MDY(K,1,&BEGYR.),0,'END')
     <= SMI_TERM(M)) OR
    (SMI_START(M) NE . AND SMI_TERM(M) = . AND
     SMI_START(M) <= INTNX('MONTH',MDY(K,1,&BEGYR.),0,'END'))
  THEN MEDR(K) = 1;
END; /* END OF M LOOP */

/* SET TO MISSING IF BENE DIES */
IF INTNX('MONTH',MDY(K,1,&BEGYR.),0,'END') > DODBEST AND
  DODBEST NE . THEN MEDR(K) = .;
END; /* END OF K LOOP */

DROP HI_START: HI_TERM: SMI_STAR: SMI_TERM: M K;

/* FILL IN MISSING ZIP WITH DATA AVAILABLE FROM LAST
  MONTH PRIOR TO S7 SUSPENSION */
ARRAY ZIP_DI(*) $ %DO MM=1 %TO &TOTMOS; ZIP_DI&&YY&MM %END;;
IF UPCASE(LAF&YR.01) = 'S7' THEN ZIP_DI&YR.01=ZIP_DI&PYR.12;
DO MM=2 TO &TOTMOS;
  IF UPCASE(LAFCODE(MM)) = 'S7' THEN ZIP_DI(MM) = ZIP_DI(MM-1);
END;
DROP ZIP_DI&PYR.12;

/* CREATE MONTHLY STATE INDICATORS FOR PHASE CONSTRUCTION */
LENGTH %DO MM=1 %TO &TOTMOS; PST&&YY&MM %END; $2;
ARRAY ZIP_SSI (*)   %DO MM=1 %TO &TOTMOS; ZIP_SSI&&YY&MM %END;;
ARRAY PST     (*) $ %DO MM=1 %TO &TOTMOS; PST&&YY&MM     %END;;
```

Appendix A.82
JCL/SAS Code: ANNCURR

```
DO I = 1 TO DIM(ZIP_SSI);
  IF ZIP_SSI(I) NE ' ' THEN PST(I) = ZIPSTATE(ZIP_SSI(I));
END;
/* IF NO VALUE FOR SSI USE DI */
DO I = 1 TO DIM(ZIP_DI);
  IF PST(I)=' ' AND ZIP_DI(I) NE ' '
    THEN PST(I)=ZIPSTATE(ZIP_DI(I));
END;

/* CREATE SINGLE STATE VARIABLE PST_MR - NEW FOR DAF16 */
LENGTH PST_MR $2.;
DO I = DIM(PST) TO 1 BY -1 UNTIL (NOT MISSING(PST_MR));
  IF NOT MISSING(PST(I)) AND
    PST(I) NE "--"
    THEN PST_MR=PST(I);
END;
IF PST_MR=" " THEN PST_MR=PST_MR_DM;

/* CREATE FIPS_SSIyymm AND FIPS_DIyymm -
  IT WILL BE DONE IN ANOTHER PROCESSING NEXT YEAR */
ARRAY FIPS_SSI (*) $5 %DO MM=1 %TO &TOTMOS;
                FIPS_SSI&&YY&MM  %END;;
ARRAY FIPS_DI  (*) $5 %DO MM=1 %TO &TOTMOS;
                FIPS_DI&&YY&MM   %END;;
ARRAY FIPS_BEST(*) $5 %DO MM=1 %TO &TOTMOS;
                FIPS_BEST&&YY&MM %END;;

DO I = 1 TO DIM(ZIP_SSI);
  FIPS_SSI(I) = PUT(ZIP_SSI(I),$FIPS.);
  FIPS_DI(I)  = PUT(ZIP_DI(I) ,$FIPS.);

  /* CREATE BEST FIPS */
  IF FIPS_SSI(I) NE ' ' THEN FIPS_BEST(I) = FIPS_SSI(I);
  ELSE FIPS_BEST(I) = FIPS_DI(I);
END;

/* CREATE MONTHLY INDICATORS FOR IRWE PASS AND
  SELF-EMPLOY - REMICS */
ARRAY IET4(*) $ %DO MM=1 %TO &TOTMOS; IET4&&YY&MM %END;;
ARRAY SIND(*)   %DO MM=1 %TO &TOTMOS; SIND&&YY&MM %END;;

DO I = 1 TO DIM(IET4);
  IF IET4(I) = 'S' THEN SIND(I) = 1;
  ELSE SIND(I) = 0;
```

Appendix A.82
JCL/SAS Code: ANNCURR

```
END;

/* TRIAL WORK PERIOD INDICATOR MOVED TO DCF */
ARRAY EARN     (*) %DO MM=1 %TO &TOTMOS; EARN&&YY&MM     %END;;
ARRAY IEA_NESE (*) %DO MM=1 %TO &TOTMOS; IEA_NESE&&YY&MM  %END;;
ARRAY IEA_WAGE (*) %DO MM=1 %TO &TOTMOS; IEA_WAGE&&YY&MM  %END;;
ARRAY EIND     (*) %DO MM=1 %TO &TOTMOS; EIND&&YY&MM      %END;;
ARRAY SGA      (*) %DO MM=1 %TO &TOTMOS; SSIERNSGA&&YY&MM %END;;

/*INCLUDE BLIND AND NONBLIND SGA VALUES FROM UTILITY LIBRARY*/
/*USE ENDYR TO REFERENCE TO SGA VALUES AS NEEDED*/
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(SGAB)";
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(SGANB)";

DO I = 1 TO DIM(EARN);
  EARN(I) = .;
  IF IEA_NESE(I) > .Z OR IEA_WAGE(I) > .Z THEN DO;
    EARN(I) = SUM(OF IEA_NESE(I),IEA_WAGE(I));
  END;

  IF EARN(I) > 0 THEN EIND(I) = 1;
  ELSE IF EARN(I) = 0 THEN EIND(I) = 0;
  ELSE EIND(I) = .;

  /* SGA IS DIFFERENT FOR BLIND PEOPLE */
  /* REVISED CODE UPDATED EVERY YEAR - THIS IS COMPUTED
    ONLY FOR THE NEW YEAR OF DATA COLLECTION. UPDATED
    EARNINGS CEILINGS ARE INCLUDED. EARLIER YEARS ALREADY
    HAVE THE VARIABLE AND IT IS MERGED ON FROM THE OLD FILE */
  IF SUBSTR(MFT,1,1) = 'B' THEN DO;/* BLIND PEOPLE */
    IF EARN(I) >= SGAB(&ENDYR.) THEN SGA(I) = 1;
    ELSE IF 0 <= EARN(I) < SGAB(&ENDYR.) THEN SGA(I) = 0;
    ELSE SGA(I) = .;
  END;
  ELSE DO;
    IF EARN(I) >= SGANB(&ENDYR.) THEN SGA(I) = 1;
    ELSE IF 0 <= EARN(I) < SGANB(&ENDYR.) THEN SGA(I) = 0;
    ELSE SGA(I) = .;
  END;
END; /* LOOP THROUGH EARNINGS */

/*CREATE AN INDICATOR FOR 1619(B) */
ARRAY MEDC (*) $  %DO MM=1 %TO &TOTMOS; MEDC&&YY&MM %END;;
ARRAY MEDE (*)    %DO MM=1 %TO &TOTMOS; MEDE&&YY&MM %END;;
```

Appendix A.82
JCL/SAS Code: ANNCURR

```
    DO I = 1 TO DIM(MEDC);
      IF MEDC(I) IN ('C','W','Y') THEN MEDE(I) = 1;
      ELSE IF MEDC(I) > ' ' THEN MEDE(I) = 0;
      ELSE MEDE(I) = .;
    END;

    DROP I MFT IET4:;
  RUN;
  %MEND;
  %START;

  TITLE "CONTENTS OF YEAR Y&SYSPARM";
  PROC CONTENTS DATA=OUT1.Y&SYSPARM
            OUT=OUT2.ANN&SYSPARM._CON;
  RUN;
  TITLE;

  PROC FREQ DATA=OUT1.Y&SYSPARM;
    TABLES MEDR: LAF: PSTA: / LIST MISSING;
    TABLES PST_MR PST_MR*PST_MR_DM / LIST MISSING;
  RUN;

  PROC MEANS DATA=OUT1.Y&SYSPARM;
    VAR DUED:
       PAYD:
       PAYO:
       DUEO:
       FAMT:
       FPMT:
       SAMT:
       PAYS:
       DUES:
       SPMT:
       UINC:
       EICM:
       PROA:
       PROB:
       DIRPAY:
       MEDPREM:
       ;
  RUN;

  TITLE "PRINT OF YEAR Y&SYSPARM";
  PROC PRINT DATA=OUT1.Y&SYSPARM(FIRSTOBS=10000 OBS=10025);
  RUN;
```

Appendix A.82
JCL/SAS Code: ANNCURR

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 ANNCURR IS COMPLETE
```

Appendix A.83
JCL/SAS Code: SGAB

```
************************************************************;      ;
************************** SGAB *************************;
************************************************************;      ;

* THIS IS AN INCLUDE FILE FOR YEARLY SGA BLIND RATES;
* FIND TABLE AT HTTPS://WWW.SSA.GOV/OACT/COLA/SGA.HTML ;
* UPDATED THROUGH 2018 ;
ARRAY SGAB(1994:2018) SGAB1994-SGAB2018
                    ( 930  /*1994*/
                     940  /*1995*/
                     960  /*1996*/
                    1000  /*1997*/
                    1050  /*1998*/
                    1110  /*1999*/
                    1170  /*2000*/
                    1240  /*2001*/
                    1300  /*2002*/
                    1330  /*2003*/
                    1350  /*2004*/
                    1380  /*2005*/
                    1450  /*2006*/
                    1500  /*2007*/
                    1570  /*2008*/
                    1640  /*2009*/
                    1640  /*2010*/
                    1640  /*2011*/
                    1690  /*2012*/
                    1740  /*2013*/
                    1800  /*2014*/
                    1820  /*2015*/
                    1820  /*2016*/
                    1950  /*2017*/
                    1970  /*2018*/
                    );
```

Appendix A.84
JCL/SAS Code: SGANB

```
************************************************************;      ;
************************** SGANB *************************;      ;
************************************************************;      ;

* THIS IS AN INCLUDE FILE FOR YEARLY SGA NON-BLIND RATES;
* FIND TABLE AT HTTPS://WWW.SSA.GOV/OACT/COLA/SGA.HTML ;
* UPDATED THROUGH 2018 ;
 ARRAY SGANB(1994:2018) SGANB1994-SGANB2018
                    ( 500  /*1994*/
                      500  /*1995*/
                      500  /*1996*/
                      500  /*1997*/
                      500  /*1998*/
                      700  /*1999*/
                      700  /*2000*/
                      740  /*2001*/
                      780  /*2002*/
                      800  /*2003*/
                      810  /*2004*/
                      830  /*2005*/
                      860  /*2006*/
                      900  /*2007*/
                      940  /*2008*/
                      980  /*2009*/
                     1000  /*2010*/
                     1000  /*2011*/
                     1010  /*2012*/
                     1040  /*2013*/
                     1070  /*2014*/
                     1090  /*2015*/
                     1130  /*2016*/
                     1170  /*2017*/
                     1180  /*2018*/
                     );
```

Appendix A.85
JCL/SAS Code: Y94JCL

```
//#6502Y94 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(Y94JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR DAF18
//*         MONTHLY FIELDS FROM JAN 1994-DEC 1994
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* CREATED BY: ALEX BRYCE
//* MPR PHONE 202 554-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="1994"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y1994E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y1994NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR1994.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR1994.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM94.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN1994.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY94.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE1994.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y1994.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y1994CON.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//        DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.85
JCL/SAS Code: Y94JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y94 IS COMPLETE.
```

Appendix A.86
JCL/SAS Code: Y95JCL

```
//#6502Y94 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(Y95JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR 2018
//*         MONTHLY FIELDS FROM JAN 1995-DEC 1995
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* PROGRAMMER: ALEX BRYCE
//* MPR PHONE 202 554-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="1995"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y1995E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y1995NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR1995.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR1995.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM95.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN1995.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY95.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE1995.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y1995.SA.V1,
//       DISP=(NEW,CATLG,DELETE),
//       UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y1995CON.SA.V1,
//       DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//       SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//       DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.86
JCL/SAS Code: Y95JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y95 IS COMPLETE.
```

Appendix A.87
JCL/SAS Code: Y96JCL

```
//#6502Y94 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(Y96JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR DAF18
//*         MONTHLY FIELDS FROM JAN 1996-DEC 1996
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* PROGRAMMER: ALEX BRYCE
//* MPR PHONE 202 554-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="1996"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y1996E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y1996NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR1996.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR1996.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM96.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN1996.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY96.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE1996.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y1996.SA.V1,
//       DISP=(NEW,CATLG,DELETE),
//       UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y1996CON.SA.V1,
//       DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//       SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//       DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.87
JCL/SAS Code: Y96JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y96 IS COMPLETE.
```

Appendix A.88
JCL/SAS Code: Y97JCL

```
//#6502Y94 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(Y97JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR DAF18
//*         MONTHLY FIELDS FROM JAN 1997-DEC 1997
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* PROGRAMMER: ALEX BRYCE
//* MPR PHONE 202 554-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="1997"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y1997E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y1997NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR1997.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR1997.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM97.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN1997.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY97.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE1997.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y1997.SA.V1,
//       DISP=(NEW,CATLG,DELETE),
//       UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y1997CON.SA.V1,
//       DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//       SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//       DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.88
JCL/SAS Code: Y97JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y97 IS COMPLETE.
```

Appendix A.89
JCL/SAS Code: Y98JCL

```
//#6502Y94 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(Y98JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR DAF18
//*         MONTHLY FIELDS FROM JAN 1998-DEC 1998
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* PROGRAMMER: ALEX BRYCE
//* MPR PHONE 202 554-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="1998"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y1998E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y1998NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR1998.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR1998.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM98.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN1998.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY98.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE1998.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y1998.SA.V1,
//       DISP=(NEW,CATLG,DELETE),
//       UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y1998CON.SA.V1,
//       DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//       SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//       DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.89
JCL/SAS Code: Y98JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y98 IS COMPLETE.
```

Appendix A.90
JCL/SAS Code: Y99JCL

```
//#6502Y94 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(Y99JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR DAF18
//*         MONTHLY FIELDS FROM JAN 1999-DEC 1999
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* PROGRAMMER: ALEX BRYCE
//* MPR PHONE 202 554-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="1999"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y1999E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y1999NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR1999.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR1999.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM99.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN1999.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY99.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE1999.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y1999.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y1999CON.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//        DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.90
JCL/SAS Code: Y99JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y99 IS COMPLETE.
```

Appendix A.91
JCL/SAS Code: Y00JCL

```
//#6502Y00 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(Y00JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR DAF17
//*         MONTHLY FIELDS FROM JAN 2000-DEC 2000
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* PROGRAMMER: ALEX BRYCE
//* MPR PHONE 202 554-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="2000"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y2000E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y2000NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2000.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2000.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM00.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2000.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY00.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2000.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2000.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2000CON.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//        DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.91
JCL/SAS Code: Y00JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y00 IS COMPLETE.
```

Appendix A.92
JCL/SAS Code: Y01JCL

```
//#6502Y00 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.SSRF.PRDLIB(Y01JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR DAF18
//*         MONTHLY FIELDS FROM JAN 2001-DEC 2001
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* PROGRAMMER: ALEX BRYCE
//* MPR PHONE 202 554-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="2001"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y2001E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y2001NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2001.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2001.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM01.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2001.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY01.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2001.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2001.SA.V1,
//       DISP=(NEW,CATLG,DELETE),
//       UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2001CON.SA.V1,
//       DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//       SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//       DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.92
JCL/SAS Code: Y01JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y01 IS COMPLETE.
```

Appendix A.93
JCL/SAS Code: Y02JCL

```
//#6502Y00 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.SSRF.PRDLIB(Y02JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR DAF18
//*         MONTHLY FIELDS FROM JAN 2002-DEC 2002
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* PROGRAMMER: ALEX BRYCE
//* MPR PHONE 202 554-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="2002"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y2002E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y2002NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2002.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2002.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM02.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2002.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY02.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2002.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2002.SA.V1,
//       DISP=(NEW,CATLG,DELETE),
//       UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2002CON.SA.V1,
//       DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//       SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//       DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.93
JCL/SAS Code: Y02JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y02 IS COMPLETE.
```

Appendix A.94
JCL/SAS Code: Y03JCL

```
//#6502Y00 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.SSRF.PRDLIB(Y03JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR DAF18
//*         MONTHLY FIELDS FROM JAN 2003-DEC 2003
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* PROGRAMMER: ALEX BRYCE
//* MPR PHONE 202 554-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="2003"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y2003E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y2003NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2003.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2003.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM03.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2003.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY03.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2003.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2003.SA.V1,
//       DISP=(NEW,CATLG,DELETE),
//       UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2003CON.SA.V1,
//       DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//       SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//       DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.94
JCL/SAS Code: Y03JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y03 IS COMPLETE.
```

Appendix A.95
JCL/SAS Code: Y04JCL

```
//#6502Y00 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(Y04JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR DAF18
//*         MONTHLY FIELDS FROM JAN 2004-DEC 2004
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* PROGRAMMER: ALEX BRYCE
//* MPR PHONE 202 554-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="2004"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y2004E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y2004NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2004.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2004.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM04.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2004.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY04.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2004.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2004.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2004CON.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//        DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.95
JCL/SAS Code: Y04JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y04 IS COMPLETE.
```

Appendix A.96
JCL/SAS Code: Y05JCL

```
//#6502Y00 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.SSRF.PRDLIB(Y05JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR DAF17
//*         MONTHLY FIELDS FROM JAN 2005-DEC 2005
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* PROGRAMMER: ALEX BRYCE
//* MPR PHONE 202 554-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="2005"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y2005E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y2005NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2005.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2005.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM05.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2005.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY05.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2005.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2005.SA.V1,
//       DISP=(NEW,CATLG,DELETE),
//       UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2005CON.SA.V1,
//       DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//       SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//       DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.96
JCL/SAS Code: Y05JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y05 IS COMPLETE.
```

Appendix A.97
JCL/SAS Code: Y06JCL

```
//#6502Y06 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(Y06JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR DAF18
//*         MONTHLY FIELDS FROM JAN 2006-DEC 2006
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* PROGRAMMER: ALEX BRYCE
//* MPR PHONE 202 554-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="2006"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y2006E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y2006NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2006.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2006.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM06.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2006.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY06.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2006.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2006.SA.V1,
//       DISP=(NEW,CATLG,DELETE),
//       UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2006CON.SA.V1,
//       DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//       SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//       DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.97
JCL/SAS Code: Y06JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y06 IS COMPLETE.
```

Appendix A.98
JCL/SAS Code: Y07JCL

```
//#6502Y06 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(Y07JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR DAF18
//*         MONTHLY FIELDS FROM JAN 2007-DEC 2007
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* PROGRAMMER: ALEX BRYCE
//* MPR PHONE 202 554-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="2007"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y2007E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y2007NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2007.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2007.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM07.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2007.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY07.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2007.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2007.SA.V1,
//       DISP=(NEW,CATLG,DELETE),
//       UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2007CON.SA.V1,
//       DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//       SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//       DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.98
JCL/SAS Code: Y07JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y07 IS COMPLETE.
```

Appendix A.99
JCL/SAS Code: Y08JCL

```
//#6502Y06 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(Y08JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR DAF18
//*         MONTHLY FIELDS FROM JAN 2008-DEC 2008
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* PROGRAMMER: ALEX BRYCE
//* MPR PHONE 202 554-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="2008"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y2008E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y2008NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2008.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2008.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM08.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2008.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY08.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2008.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2008.SA.V1,
//       DISP=(NEW,CATLG,DELETE),
//       UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2008CON.SA.V1,
//       DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//       SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//       DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.99
JCL/SAS Code: Y08JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y08 IS COMPLETE.
```

Appendix A.100
JCL/SAS Code: Y09JCL

```
//#6502Y06 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(Y09JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR DAF18
//*         MONTHLY FIELDS FROM JAN 2009-DEC 2009
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* PROGRAMMER: ALEX BRYCE
//* MPR PHONE 202 554-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="2009"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y2009E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y2009NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2009.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2009.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM09.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2009.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY09.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2009.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2009.SA.V1,
//       DISP=(NEW,CATLG,DELETE),
//       UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2009CON.SA.V1,
//       DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//       SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//       DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.100
JCL/SAS Code: Y09JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y09 IS COMPLETE.
```

Appendix A.101
JCL/SAS Code: Y10JCL

```
//#6502Y06 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(Y10JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR DAF18
//*         MONTHLY FIELDS FROM JAN 2010-DEC 2010
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* PROGRAMMER: ALEX BRYCE
//* MPR PHONE 202 552-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="2010"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y2010E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y2010NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2010.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2010.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM10.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2010.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY10.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2010.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2010.SA.V1,
//       DISP=(NEW,CATLG,DELETE),
//       UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2010CON.SA.V1,
//       DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//       SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//       DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.101
JCL/SAS Code: Y10JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y10 IS COMPLETE.
```

Appendix A.102
JCL/SAS Code: Y11JCL

```
//#6502Y06 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(Y11JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR DAF18
//*         MONTHLY FIELDS FROM JAN 2011-DEC 2011
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* PROGRAMMER: ALEX BRYCE
//* MPR PHONE 202 554-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="2011"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y2011E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y2011NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2011.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2011.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM11.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2011.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY11.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2011.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2011.SA.V1,
//       DISP=(NEW,CATLG,DELETE),
//       UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2011CON.SA.V1,
//       DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//       SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//       DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.102
JCL/SAS Code: Y11JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y11 IS COMPLETE.
```

Appendix A.103
JCL/SAS Code: Y12JCL

```
//#6502Y12 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(Y12JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR DAF18
//*         MONTHLY FIELDS FROM JAN 2012-DEC 2012
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* PROGRAMMER: ALEX BRYCE
//* MPR PHONE 202 554-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="2012"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y2012E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y2012NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2012.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2012.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM12.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2012.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY12.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2012.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2012.SA.V1,
//       DISP=(NEW,CATLG,DELETE),
//       UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2012CON.SA.V1,
//       DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//       SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//       DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.103
JCL/SAS Code: Y12JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y12 IS COMPLETE.
```

Appendix A.104
JCL/SAS Code: Y13JCL

```
//#6502Y12 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(Y13JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR DAF18
//*         MONTHLY FIELDS FROM JAN 2013-DEC 2013
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* PROGRAMMER: ALEX BRYCE
//* MPR PHONE 202 554-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="2013"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y2013E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y2013NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2013.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2013.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM13.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2013.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY13.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2013.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2013.SA.V1,
//       DISP=(NEW,CATLG,DELETE),
//       UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2013CON.SA.V1,
//       DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//       SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//       DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.104
JCL/SAS Code: Y13JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y13 IS COMPLETE.
```

Appendix A.105
JCL/SAS Code: Y14JCL

```
//#6502Y12 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(Y14JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR DAF18
//*         MONTHLY FIELDS FROM JAN 2014-DEC 2014
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* PROGRAMMER: ALEX BRYCE
//* MPR PHONE 202 554-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="2014"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y2014E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y2014NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2014.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2014.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM14.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2014.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY14.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2014.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2014.SA.V1,
//       DISP=(NEW,CATLG,DELETE),
//       UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2014CON.SA.V1,
//       DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//       SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//       DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.105
JCL/SAS Code: Y14JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y14 IS COMPLETE.
```

Appendix A.106
JCL/SAS Code: Y15JCL

```
//#6502Y12 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(Y15JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR DAF18
//*         MONTHLY FIELDS FROM JAN 2015-DEC 2015
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* PROGRAMMER: ALEX BRYCE
//* MPR PHONE 202 554-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="2015"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y2015E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y2015NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2015.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2015.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM15.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2015.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY15.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2015.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2015.SA.V1,
//       DISP=(NEW,CATLG,DELETE),
//       UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2015CON.SA.V1,
//       DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//       SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//       DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.106
JCL/SAS Code: Y15JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y15 IS COMPLETE.
```

Appendix A.107
JCL/SAS Code: Y16JCL

```
//#6502Y12 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(Y16JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR DAF18
//*         MONTHLY FIELDS FROM JAN 2016-DEC 2016
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* PROGRAMMER: ALEX BRYCE
//* MPR PHONE 202 554-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="2016"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y2016E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y2016NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2016.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2016.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM16.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2016.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY16.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2016.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2016.SA.V1,
//       DISP=(NEW,CATLG,DELETE),
//       UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2016CON.SA.V1,
//       DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//       SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//       DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.107
JCL/SAS Code: Y16JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y16 IS COMPLETE.
```

Appendix A.108
JCL/SAS Code: Y17JCL

```
//#6502Y12 JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:  DAF 50214
//* DIRECTOR:
//* PROGRAM:  OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(Y16JCL)
//* PURPOSE:  CREATE YEARLY FILES FOR DAF18
//*         MONTHLY FIELDS FROM JAN 2016-DEC 2016
//*         DCF VARIABLES NOT INCLUDED BEFORE 2000
//* PROGRAMMER: ALEX BRYCE
//* MPR PHONE 202 554-7556
//* E-MAIL ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="2017"'
//* INPUTS
//OLDE  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF17P.Y2017E,DISP=SHR
//OLDNE DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.Y2017NE,DISP=SHR
//SSR   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSR2017.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MBR2017.SA.V1,DISP=SHR
//T831  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.CDCOM17.SA.V1,DISP=SHR
//ERN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.ERN2017.SA.V2,DISP=SHR
//DXP   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.DXPY17.SA.V1,DISP=SHR
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MED   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIE2017.SA.V1,DISP=SHR
//* OUTPUTS
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2017.SA.V1,
//       DISP=(NEW,CATLG,DELETE),
//       UNIT=TSILO
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y2017CON.SA.V1,
//       DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//       SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(ANNPREV),
//       DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix A.108
JCL/SAS Code: Y17JCL

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 Y16 IS COMPLETE.
```

Appendix A.109
JCL/SAS Code: ANNPREV

```
/*********************************************************/
/* FILENAME: ANNPREV                                     */
/* PURPOSE:TO CREATE YEARLY FILE FOR 1994-2017           */
/* CREATED:  07/13/06 BY MIRIAM LOEWENBERG               */
/* MODIFIED: 09/09/13 BY SVETLANA BRONNIKOV              */
/*        08/26/2015 BY MIAOMIAO SHEN FOR DAF14          */
/*        10/13/2016 BY MIAOMIAO SHEN FOR DAF15          */
/*        10/26/2017 BY MIAOMIAO SHEN FOR DAF16          */
/*        07/24/2018 BY MIAOMIAO SHEN FOR DAF17          */
/*        09/26/2019 BY ALEX BRYCE FOR DAF18             */
/*********************************************************/
OPTIONS NOCENTER LS=132 PS=60 COMPRESS=BINARY OBS=MAX;

%LET YR = SUBSTR(&SYSPARM,3,2);

%LET BEGYR=&SYSPARM;
%LET ENDYR=&SYSPARM; /* CHANGE AS NEEDED */
%LET ENDMN=12;      /* CHANGE AS NEEDED */

/* CHECK AND CHANGE AS NEEDED NUMBER OF HI AND SMI OCCURRENCES */
/* FIND IT FROM THE MBR SOURCES */
%LET NUMHI = 10;
%LET NUMSMI = 20;

/* STEP TO ASSIGN MACRO VARIABLES TO HANDLE TIME SERIES DATA */
%MACRO START;
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

DATA OUT1.Y&SYSPARM;
MERGE
  OLDE.Y&SYSPARM     (DROP=DOBBEST DODBEST DOEI DXPRIBEST: FRADATE
                SEX SSDI9: SSDI0: SSDI1: SSDI_ONSET
                SSI9: SSI0: SSI1: SSIELIG_FIRST TKT0: TKT1:)
  OLDNE.Y&SYSPARM.NE (DROP=DOBBEST DODBEST DOEI DXPRIBEST: FRADATE
                SEX SSDI9: SSDI0: SSDI1: SSDI_ONSET
                SSI9: SSI0: SSI1: SSIELIG_FIRST TKT0: TKT1:)
  FIN.DMSTW (IN=INFIN KEEP=SSN DODBEST DOBBEST)
  SSR.SSR(KEEP=SSN SSI:
       %DO MM=1 %TO &TOTMOS;
       EICM&&YY&MM FAMT&&YY&MM
       FPMT&&YY&MM SPMT&&YY&MM
       SAMT&&YY&MM UINC&&YY&MM
       LIVF&&YY&MM MTST&&YY&MM
```

Appendix A.109
JCL/SAS Code: ANNPREV

```
        PSTA&&YY&MM SCON&&YY&MM
        CURCOMP&&YY&MM STUDM&&YY&MM
        %END;)
MBR.MBR (KEEP=SSN HI_START: HI_TERM: SMI_STAR: SMI_TERM: SSDI:
        %DO MM=1 %TO &TOTMOS;
        DUED&&YY&MM LAF&&YY&MM
        WIC&&YY&MM  RFD&&YY&MM
        RFST&&YY&MM BPD&&YY&MM
        DPEN&&YY&MM DUEO&&YY&MM
        PAYD&&YY&MM PAYO&&YY&MM
        MBA&&YY&MM  MBP&&YY&MM
        CDR&&YY&MM  MEDPREM&&YY&MM
        DIRPAY&&YY&MM
        %END;)
T831.ALLCDCOM (KEEP=SSN
            %DO MM=1 %TO &TOTMOS;
            ALX&&YY&MM
            EDX&&YY&MM
            %END;)
ERN.ERN (KEEP=SSN
        %DO MM=1 %TO &TOTMOS;
          T2GRSAMT&&YY&MM   T2NETAMT&&YY&MM
          T2SEHRS&&YY&MM    T2SEVERIND&&YY&MM
          T2VERIND&&YY&MM   DIERNLVL&&YY&MM
          TWPDATA&&YY&MM    T2CDNAMT&&YY&MM
          T2EXPAMT&&YY&MM   T2FRAUDVER&&YY&MM
          T2SBDYAMT&&YY&MM  T2UBEAMT&&YY&MM
          T16BEXPAMT&&YY&MM T16EXLAMT&&YY&MM
          T16EXPAMT&&YY&MM  T16GRSAMT&&YY&MM
          T16NETAMT&&YY&MM  T16PASAMT&&YY&MM
          T16SEAMT&&YY&MM   SSIERNLVL&&YY&MM
          ALLGAMT&&YY&MM
        %END;)
DXP.DXPROC(KEEP=SSN
         %DO MM=1 %TO &TOTMOS;
         DXPRIBEST&&YY&MM DXSECBEST&&YY&MM
         DXPRI_SSI&&YY&MM DXSEC_SSI&&YY&MM
         DXPRI_DI&&YY&MM  DXSEC_DI&&YY&MM
         %END;)
MED.MIEDCF(KEEP=SSN
         %DO MM=1 %TO &TOTMOS; MEDEX&&YY&MM %END;)
;
BY SSN;

/* KEEP RECORDS ONLY IN THE DEMO FILE */
```

Appendix A.109
JCL/SAS Code: ANNPREV

```
IF INFIN ;

/*NEW IN DAF15: REMOVE INDIVIDUALS WHO DIED BEFORE 1996 */
IF YEAR(DODBEST) NE . AND YEAR(DODBEST) < 1996 THEN DELETE;

/* INPUT ARRAY */
ARRAY FPMT(*)    %DO MM=1 %TO &TOTMOS; FPMT&&YY&MM %END;;
ARRAY FAMT(*)    %DO MM=1 %TO &TOTMOS; FAMT&&YY&MM %END;;
ARRAY PSTA(*)    %DO MM=1 %TO &TOTMOS; PSTA&&YY&MM %END;;
ARRAY MTST(*)    %DO MM=1 %TO &TOTMOS; MTST&&YY&MM %END;;
ARRAY SPMT(*)    %DO MM=1 %TO &TOTMOS; SPMT&&YY&MM %END;;
ARRAY SAMT(*)    %DO MM=1 %TO &TOTMOS; SAMT&&YY&MM %END;;
ARRAY SCON(*)    %DO MM=1 %TO &TOTMOS; SCON&&YY&MM %END;;
ARRAY DUED(*)    %DO MM=1 %TO &TOTMOS; DUED&&YY&MM %END;;
ARRAY LAFCODE(*) %DO MM=1 %TO &TOTMOS; LAF&&YY&MM  %END;;

/* OUTPUT ARRAY */
ARRAY PAYS(*) %DO MM=1 %TO &TOTMOS; PAYS&&YY&MM %END;;
ARRAY DUES(*) %DO MM=1 %TO &TOTMOS; DUES&&YY&MM %END;;

DO I = 1 TO DIM(FPMT);
  PAYS(I) = SUM(OF FPMT(I),SPMT(I));
  DUES(I) = SUM(OF FAMT(I),SAMT(I));
END;

/* CONCURRENT BENEFICIARY INDICATOR */
/* INDICATES BENEFICIARIES WHO RECEIVING A
  PAYMENT (IN CURRENT PAY) IN BOTH SSI AND SSDI */
ARRAY CONC(*) %DO MM=1 %TO &TOTMOS; CONC&&YY&MM %END;;

DO I = 1 TO DIM(DUED);
  IF (DUES(I) > 0 AND PSTA(I) IN ('C01' 'M01' 'M02')) AND
    (DUED(I) > 0 AND SUBSTR(LAFCODE(I),1,1) IN ('C' 'E'))
    THEN CONC(I) = 1;
  ELSE CONC(I) = 0;
END;

/* CREATE MONTHLY INDICATORS FOR 1619A-1619B*/
ARRAY PROA(*) %DO MM=1 %TO &TOTMOS; PROA&&YY&MM %END;;
ARRAY PROB(*) %DO MM=1 %TO &TOTMOS; PROB&&YY&MM %END;;
ARRAY EICM(*) %DO MM=1 %TO &TOTMOS; EICM&&YY&MM %END;;

/* PROB */
/* CREATE ONLY FOR SSI */
DO I = 1 TO DIM(MTST);
```

Appendix A.109
JCL/SAS Code: ANNPREV

```
  IF MTST(I) IN ('A','B','F') AND
    PSTA(I) IN ('N01', 'P01', 'E01') AND
    EICM(I) > 0
    THEN PROB(I) = 1;
  ELSE IF PSTA(I) NE ' ' THEN PROB(I) = 0;
END;

/* PROA */
/* THIS SHOULD YIELD NO CASES WHERE PROB=1 AND PROA=1 */
DO I = 1 TO DIM(SCON);
  IF SCON(I) IN ('D','E','F','G') AND
    PSTA(I) IN ('C01', 'M01','M02') AND
    DUES(I) > 0 AND
    EICM(I) > 0
    THEN PROA(I) = 1;
  ELSE IF PSTA(I) NE ' ' THEN PROA(I) = 0;
END;

/* CREATE A MEDICARE INDICATOR */
/* INPUT ARRAYS */
ARRAY HI_START(*)    HI_START1-HI_START&NUMHI.;
ARRAY HI_TERM(*)     HI_TERM1-HI_TERM&NUMHI.;
ARRAY SMI_START(*)   SMI_STAR1-SMI_STAR&NUMSMI.;
ARRAY SMI_TERM(*)    SMI_TERM1-SMI_TERM&NUMSMI.;

/* OUTPUT ARRAYS */
ARRAY MEDR(*) MEDR&YR.01-MEDR&YR.12;

/* FIND THE EARLIEST HI START DATE */
HI_START_EARL = MIN(OF HI_START1-HI_START&NUMHI.);

/* IF ALL HI AND SMI DATES ARE MISSING THEN
  MEDICARE INDICATOR IS MISSING */
/* IF HI AND SMI DATES ARE PRESENT THEN SET
  MEDICARE INDICATOR TO 0 */
DO K  =1 TO 12;
  IF N(OF HI_START(*))=0 AND N(OF HI_TERM(*))=0 AND
    N(OF SMI_START(*))=0 AND N(OF SMI_TERM(*))=0
    THEN MEDR(K) = .;
  ELSE MEDR(K) = 0;

  DO M = 1 TO &NUMSMI UNTIL(MEDR(K) = 1);
    IF (HI_START_EARL NE . AND
      HI_START_EARL <=
      INTNX('MONTH',MDY(K,1,&BEGYR.),0,'END')) OR
```

Appendix A.109
JCL/SAS Code: ANNPREV

```
          (SMI_START(M) NE . AND SMI_TERM(M) NE . AND
          SMI_START(M) <= INTNX('MONTH',MDY(K,1,&BEGYR.),0,'END')
          <= SMI_TERM(M)) OR
          (SMI_START(M) NE . AND SMI_TERM(M) = . AND
          SMI_START(M) <= INTNX('MONTH',MDY(K,1,&BEGYR.),0,'END'))
          THEN MEDR(K) = 1;
      END;

      /* SET TO MISSING IF BENE DIES */
      IF INTNX('MONTH',MDY(K,1,&BEGYR.),0,'END') > DODBEST AND
        DODBEST NE . THEN MEDR(K) = .;
    END;

    DROP HI_START: HI_TERM: SMI_STAR: SMI_TERM:
        M K I SSDI_ONSET_LAST;
  RUN;
  %MEND;
  %START;

  TITLE "CONTENTS OF YEAR &SYSPARM";
  PROC CONTENTS DATA=OUT1.Y&SYSPARM
            OUT=OUT2.ANN&SYSPARM._CON;
  RUN;

  TITLE "CHECK FREQS OF YEAR &SYSPARM";
  PROC FREQ DATA=OUT1.Y&SYSPARM;
    TABLES MEDR: LAF: PSTA: / LIST MISSING;
  RUN;

  TITLE "CHECK STATISTICAL FOR YEAR &SYSPARM";
  PROC MEANS DATA=OUT1.Y&SYSPARM;
    VAR DUED: PAYD: PAYO: DUEO: FAMT: FPMT: SAMT:
        PAYS: DUES: SPMT: UINC: EICM: PROA: PROB:
        DIRPAY: MEDPREM:;
  RUN;

  TITLE "PRINT 25 OBS FOR YEAR &SYSPARM";
  PROC PRINT DATA=OUT1.Y&SYSPARM(FIRSTOBS=10000 OBS=10025);
  RUN;
  TITLE;
```

Appendix A.110
JCL/SAS Code: FIN1994

```
//#6502F94 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:    DAF 50214
//* DIRECTOR:   LAURA KOSAR
//* PROGRAM:    OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN1994)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=1994,YY=94
//*
```

Appendix A.110
JCL/SAS Code: FIN1994

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN1994 COMPLETE
```

Appendix A.111
JCL/SAS Code: FIN1995

```
//#6502F94 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:    DAF 50214
//* DIRECTOR:   LAURA KOSAR
//* PROGRAM:    OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN1995)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=1995,YY=95
//*
```

Appendix A.111
JCL/SAS Code: FIN1995

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN1995 COMPLETE
```

Appendix A.112
JCL/SAS Code: FIN1996

```
//#6502F94 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    LAURA KOSAR
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN1996)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=1996,YY=96
//*
```

Appendix A.112
JCL/SAS Code: FIN1996

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN1996 COMPLETE
```

Appendix A.113
JCL/SAS Code: FIN1997

```
//#6502F94 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    LAURA KOSAR
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN1997)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 DAWN PHELPS
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//       PEND
//*
//RUN    EXEC STACK,YYYY=1997,YY=97
//*
```

Appendix A.113
JCL/SAS Code: FIN1997

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCES@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN1997 COMPLETE
```

Appendix A.114
JCL/SAS Code: FIN1998

```
//#6502F94 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:    DAF 50214
//* DIRECTOR:   LAURA KOSAR
//* PROGRAM:    OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN1998)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=1998,YY=98
//*
```

Appendix A.114
JCL/SAS Code: FIN1998

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN1998 COMPLETE
```

Appendix A.115
JCL/SAS Code: FIN1999

```
//#6502F99 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    LAURA KOSAR
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN1999)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=1999,YY=99
//*
```

Appendix A.115
JCL/SAS Code: FIN1999

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN1999 COMPLETE
```

Appendix A.116
JCL/SAS Code: FIN2000

```
//#6502F99 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:    DAF 50214
//* DIRECTOR:   LAURA KOSAR
//* PROGRAM:    OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN2000)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=2000,YY=00
//*
```

Appendix A.116
JCL/SAS Code: FIN2000

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN2000 COMPLETE
```

Appendix A.117
JCL/SAS Code: FIN2001

```
//#6502F99 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:    DAF 50214
//* DIRECTOR:   LAURA KOSAR
//* PROGRAM:    OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN2001)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=2001,YY=01
//*
```

Appendix A.117
JCL/SAS Code: FIN2001

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN2001 COMPLETE
```

Appendix A.118
JCL/SAS Code: FIN2002

```
//#6502F99 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    LAURA KOSAR
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN2002)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=2002,YY=02
//*
```

Appendix A.118
JCL/SAS Code: FIN2002

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN2002 COMPLETE
```

Appendix A.119
JCL/SAS Code: FIN2003

```
//#6502F99 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    LAURA KOSAR
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN2003)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=2003,YY=03
//*
```

Appendix A.119
JCL/SAS Code: FIN2003

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN2003 COMPLETE
```

Appendix A.120
JCL/SAS Code: FIN2004

```
//#6502F04 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:    DAF 50214
//* DIRECTOR:   LAURA KOSAR
//* PROGRAM:    OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN2004)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=2004,YY=04
//*
```

Appendix A.120
JCL/SAS Code: FIN2004

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN2004 COMPLETE
```

Appendix A.121
JCL/SAS Code: FIN2005

```
//#6502F04 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:    DAF 50214
//* DIRECTOR:   LAURA KOSAR
//* PROGRAM:    OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN2005)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=2005,YY=05
//*
```

Appendix A.121
JCL/SAS Code: FIN2005

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN2005 COMPLETE
```

Appendix A.122
JCL/SAS Code: FIN2006

```
//#6502F04 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:    DAF 50214
//* DIRECTOR:   LAURA KOSAR
//* PROGRAM:    OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN2006)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=2006,YY=06
//*
```

Appendix A.122
JCL/SAS Code: FIN2006

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN2006 COMPLETE
```

Appendix A.123
JCL/SAS Code: FIN2007

```
//#6502F04 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:    DAF 50214
//* DIRECTOR:   LAURA KOSAR
//* PROGRAM:    OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN2007)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=2007,YY=07
//*
```

Appendix A.123
JCL/SAS Code: FIN2007

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN2007 COMPLETE
```

Appendix A.124
JCL/SAS Code: FIN2008

```
//#6502F04 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:    DAF 50214
//* DIRECTOR:   LAURA KOSAR
//* PROGRAM:    OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN2008)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=2008,YY=08
//*
```

Appendix A.124
JCL/SAS Code: FIN2008

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN2008 COMPLETE
```

Appendix A.125
JCL/SAS Code: FIN2009

```
//#6502F09 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:    DAF 50214
//* DIRECTOR:   LAURA KOSAR
//* PROGRAM:    OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN2009)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=2009,YY=09
//*
```

Appendix A.125
JCL/SAS Code: FIN2009

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN2009 COMPLETE
```

Appendix A.126
JCL/SAS Code: FIN2010

```
//#6502F09 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:    DAF 50214
//* DIRECTOR:   LAURA KOSAR
//* PROGRAM:    OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN2010)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=2010,YY=10
//*
```

Appendix A.126
JCL/SAS Code: FIN2010

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN2010 COMPLETE
```

Appendix A.127
JCL/SAS Code: FIN2011

```
//#6502F09 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:    DAF 50214
//* DIRECTOR:   LAURA KOSAR
//* PROGRAM:    OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN2011)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=2011,YY=11
//*
```

Appendix A.127
JCL/SAS Code: FIN2011

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN2011 COMPLETE
```

Appendix A.128
JCL/SAS Code: FIN2012

```
//#6502F09 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:    DAF 50214
//* DIRECTOR:   LAURA KOSAR
//* PROGRAM:    OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN2012)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=2012,YY=12
//*
```

Appendix A.128
JCL/SAS Code: FIN2012

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN2012 COMPLETE
```

Appendix A.129
JCL/SAS Code: FIN2013

```
//#6502F09 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:    DAF 50214
//* DIRECTOR:   LAURA KOSAR
//* PROGRAM:    OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN2013)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=2013,YY=13
//*
```

Appendix A.129
JCL/SAS Code: FIN2013

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN2013 COMPLETE
```

Appendix A.130
JCL/SAS Code: FIN2014

```
//#6502F14 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:    DAF 50214
//* DIRECTOR:   LAURA KOSAR
//* PROGRAM:    OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN2014)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=2014,YY=14
//*
```

Appendix A.130
JCL/SAS Code: FIN2014

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN2014 COMPLETE
```

Appendix A.131
JCL/SAS Code: FIN2015

```
//#6502F14 JOB (12510000,T715,,SAS,,ITC9FL),PHELPS-DAWN,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:    DAF 50214
//* DIRECTOR:   LAURA KOSAR
//* PROGRAM:    OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN2015)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=2015,YY=15
//*
```

Appendix A.131
JCL/SAS Code: FIN2015

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN2015 COMPLETE
```

Appendix A.132
JCL/SAS Code: FIN2016

```
//#6502F14 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:    DAF 50214
//* DIRECTOR:   LAURA KOSAR
//* PROGRAM:    OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN2016)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=2016,YY=16
//*
```

Appendix A.132
JCL/SAS Code: FIN2016

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN2016 COMPLETE
```

Appendix A.133
JCL/SAS Code: FIN2017

```
//#6502F14 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    LAURA KOSAR
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN2017)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=2017,YY=17
//*
```

Appendix A.133
JCL/SAS Code: FIN2017

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN2017 COMPLETE
```

Appendix A.134
JCL/SAS Code: FIN2018

```
//#6502F14 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE-ALEX,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    LAURA KOSAR
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FIN2017)
//* DESCRIPTION: FINALIZE ANNUALS
//*            SPLIT ANNUALS - ENROLLED AND NON-ENROLLED ANNUALS
//* DATE:       12/10/2019 ALEX BRYCE
//*****************************************************************
//*
//STACK   PROC
//JS001   EXEC SAS9,
//       WORK='100000,50000',
//       PARM='SYSPARM="&YYYY"'
//*
//INANN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18I.Y&YYYY..SA.V1,DISP=SHR
//STWBFW DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW&YYYY..SA.V1,DISP=SHR
//COMM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//OUTE   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.E.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUTNE  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//OUTCNE DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.CAN&YY.NE.SA.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//NE10  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.NE,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(FINANN),
//         DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN    EXEC STACK,YYYY=2018,YY=18
//*
```

Appendix A.134
JCL/SAS Code: FIN2018

```
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: FIN2018 COMPLETE
```

Appendix A.135
JCL/SAS Code: FINANN

```
/*****************************************************************/
/* PROJECT: DAF 50214                                            */
/* DIRECTOR:                                                     */
/* PROGRAM: OPDR.TG.PRD.ETTW.#4941.DAF16.ANN.PRDLIB(FINANN)      */
/* PURPOSE: SPLIT ANNUALS FILES INTO ENROLLED/NON-ENROLLED       */
/*        ANY OBS MEETING ALL FOLLOWING CRITERIA WILL            */
/*        BE SENT TO NON-ENROLLED                                */
/*        FRADATE<=1/1/&YYYY : FRA ALL YEAR                      */
/*                                                               */
/*        LAFYYMM = ' '                                          */
/*        PSTAYYMM = ' '                                         */
/*                                                               */
/*        STWSSIYYMM =  .                                        */
/*        STWDIYYMM =  .                                         */
/*        STWCMYYMM =  .                                         */
/*                                                               */
/*        PAYDYYMM <= 0                                          */
/*        PAYSYYMM <= 0                                          */
/*        BFWSSIYYMM <= 0                                        */
/*        BFWDIYYMM <= 0                                         */
/*        BFWCMYYMM <= 0                                         */
/*                                                               */
/*!! UPDATE YY TO CURRENT DAF YEAR FOR SSI AND SSDI RANGE BELOW !*/
/*                                                               */
/*****************************************************************/
OPTIONS NOCENTER LS=132 PS=60 COMPRESS=BINARY MPRINT OBS=MAX;

%LET YYYY=&SYSPARM;
%LET   YR=%SUBSTR(&SYSPARM,3);

%PUT ***** FINALIZING ANNUAL &YYYY (&YR);

%MACRO SPLITANN;
DATA    OUTE.Y&YYYY.  ( DROP=V IN_ANN I)
     OUTNE.Y&YYYY.NE( DROP=V IN_ANN I)
     ;
MERGE INANN.Y&YYYY.(DROP= DOBBEST DODBEST
                    SSI94- SSI99
                    SSI00- SSI18
                    SSDI94-SSDI99
                    SSDI00-SSDI18
                    SSDI_ONSET
                    SSI_MIN_ELG SSIELIG_ADULT
                     %IF %EVAL(&YYYY<2018) %THEN %DO;
```

Appendix A.135
JCL/SAS Code: FINANN

```
                    BFWCM_DRAFT: BFWSSI_DRAFT:
                   %END;
                  )
    COMM.COMVARS(IN=KEEPCOM)
    STWBFW.BFW   (KEEP=SSN
              BMF&YR.: CFBMF&YR.: DENOM&YR.:
              FCI&YR.: NECALC&YR.: NONEARN&YR.:
              STWDI&YR.:     STWSSI&YR.:   STWCM&YR.:
              BFWDI&YR.:     BFWSSI&YR.:   BFWCM&YR.:
              BFWDI_PRIM&YR.:
              BFWDI_DEPEND&YR.:
              RENAME=(%DO M=1 %TO 12;
                      %LET MM=%SYSFUNC(PUTN(&M,Z2.));
                      BFWDI_PRIM&YR.&MM  =BFWDI_PRI&YR.&MM
                      BFWDI_DEPEND&YR.&MM=BFWDI_DEP&YR.&MM
                   %END;))
  ;
  BY SSN;
  IF KEEPCOM;

 /*MASK DAA VARIABLES*/
 ARRAY PSTA (12) PSTA&YR.01 - PSTA&YR.12;
 ARRAY CDR (12) CDR&YR.01 - CDR&YR.12;
 ARRAY WIC (12) WIC&YR.01 - WIC&YR.12;

 DO I = 1 TO 12;
   IF PSTA(I) IN('N10', 'N11', 'N12', 'N17', 'N18', 'N20', 'N36',
              'N37', 'N38', 'N39', 'N47', 'N48', 'N49', 'N50')
   THEN PSTA(I) = 'W01';

   IF CDR(I) IN('F', 'N', 'W') THEN CDR(I) = 'X';

   IF WIC(I) IN('A', 'B', 'C', 'N', 'P') THEN WIC(I) = 'S';
 END;


/* USING ARRAY FOR VARIABLES BEING COMPARED TO ' ' */
ARRAY CHARMISS (*)         LAF&YR.01 -         LAF&YR.12
                    PSTA&YR.01 -        PSTA&YR.12;

/* USING ARRAY FOR VARIABLES BEING COMPARED TO . */
ARRAY  NUMMISS (*)      STWSSI&YR.01 -      STWSSI&YR.12
                   STWDI&YR.01 -       STWDI&YR.12
                   STWCM&YR.01 -       STWCM&YR.12;
```

Appendix A.135
JCL/SAS Code: FINANN

```
/* USING ARRAY FOR VARIABLES BEING COMPATED TO 0 (>=0) */
ARRAY  LEQZERO (*)        PAYD&YR.01 -        PAYD&YR.12
                           PAYS&YR.01 -        PAYS&YR.12
                          BFWSSI&YR.01 -       BFWSSI&YR.12
                           BFWDI&YR.01 -       BFWDI&YR.12
                           BFWCM&YR.01 -       BFWCM&YR.12;

IN_ANN=0; *FLAG TO SPLIT DATASET BELOW;

/*SEARCHING THROUGH FIRST SET OF VARIABLES*/
DO V=1 TO DIM(CHARMISS) WHILE(IN_ANN=0);
  IF CHARMISS(V) NE ' ' THEN IN_ANN=1;
END;

/*SEARCHING THROUGH SECOND SET OF VARIABLES IF CRITERIA ABOVE NOT MET*/
IF IN_ANN=0 THEN
DO V=1 TO DIM(NUMMISS)  WHILE(IN_ANN=0);
  IF  NUMMISS(V) NE  .  THEN IN_ANN=1;
END;

/*SEARCHING THROUGH THIRD SET OF VARIABLES IF CRITERIA ABOVE NOT MET*/
IF IN_ANN=0 THEN
DO V=1 TO DIM(LEQZERO)  WHILE(IN_ANN=0);
  IF  LEQZERO(V)  >  0 THEN  IN_ANN=1;
END;

/*FRA ALL YEAR TRUMPS ALL PREVIOUS CRITERIA*/
IF FRADATE<="01JAN&YYYY."D AND FRADATE NE .
THEN IN_ANN=0;

%INCLUDE "OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(LABELS)";

/*DROP VARIABLES THAT SHOULD NOT BE ON FINAL DAF18 ANNUALS*/
 %IF &YR=18 %THEN %DO;
     DROP MM SSDI_ONSET_LAST PST_MR PST_MR_DM
         FL_DEATH FL_UNBORN SGAB: SGANB: ;
 %END;

* OUTPUT ENROLLED ANNUALS;
IF IN_ANN=1 THEN OUTPUT   OUTE.Y&YYYY;

*OUTPUT NONENROLLED ANNUALS;
ELSE OUTPUT  OUTNE.Y&YYYY.NE;

RUN;
```

Appendix A.135
JCL/SAS Code: FINANN

```
%MEND SPLITANN;
%SPLITANN;

PROC FORMAT;
VALUE $WICDAA  'A' = 'A'
            'B' = 'B'
            'C' = 'C'
            'N' = 'N'
            'P' = 'P'
            'S' = 'S'
            OTHER = 'NOT DAA';
VALUE $CDRDAA 'F' = 'F'
           'N' = 'N'
           'W' = 'W'
           'X' = 'X'
           OTHER = 'NOT DAA';
VALUE $PSTADAA 'N10' = 'N10'
            'N11' = 'N11'
            'N12' = 'N12'
            'N17' = 'N17'
            'N18' = 'N18'
            'N20' = 'N20'
            'N36' = 'N36'
            'N37' = 'N37'
            'N38' = 'N38'
            'N39' = 'N39'
            'N47' = 'N47'
            'N48' = 'N48'
            'N49' = 'N49'
            'N50' = 'N50'
            'W01' = 'W01'
            OTHER = 'NOT DAA';
RUN;

TITLE "CHECK DAA MASKING IN ENROLLED FILE";
PROC FREQ DATA = OUTE.Y&YYYY.;
TABLES WIC: CDR: PSTA: / LIST MISSING;
FORMAT WIC: $WICDAA. CDR: $CDRDAA. PSTA: $PSTADAA.;
RUN;

TITLE "CHECK DAA MASKING IN NON-ENROLLED FILE";
PROC FREQ DATA = OUTNE.Y&YYYY.NE;
TABLES WIC: CDR: PSTA: / LIST MISSING;
FORMAT WIC: $WICDAA. CDR: $CDRDAA. PSTA: $PSTADAA.;
```

Appendix A.135
JCL/SAS Code: FINANN

```
RUN;

TITLE "FULL ENROLLED ANNUALS";
PROC CONTENTS DATA = OUTE.Y&YYYY.
          OUT = OUTCE.ANN&YR.CON; RUN;
TITLE "FULL NONENROLLED ANNUALS";
PROC CONTENTS DATA = OUTNE.Y&YYYY.NE
          OUT = OUTCNE.ANN&YR.CON; RUN;

 /* CREATE 10%DM FOR ANNUAL FILES */
DATA E10.Y&YYYY.;
  SET OUTE.Y&YYYY.;
  IF (SUBSTR(SSN,8,1) IN ('0', '2', '4', '7', '9'))
     AND (SUBSTR(SSN,9,1) IN ('0', '5'));
RUN;

DATA NE10.Y&YYYY.NE;
  SET OUTNE.Y&YYYY.NE;
  IF (SUBSTR(SSN,8,1) IN ('0', '2', '4', '7', '9'))
     AND (SUBSTR(SSN,9,1) IN ('0', '5'));
RUN;
```

Appendix A.136
JCL/SAS Code: LABELS

```
label
ALLGAMT&YR.01="ALLEGED EARNINGS AMOUNT &YR.01"
ALLGAMT&YR.02="ALLEGED EARNINGS AMOUNT &YR.02"
ALLGAMT&YR.03="ALLEGED EARNINGS AMOUNT &YR.03"
ALLGAMT&YR.04="ALLEGED EARNINGS AMOUNT &YR.04"
ALLGAMT&YR.05="ALLEGED EARNINGS AMOUNT &YR.05"
ALLGAMT&YR.06="ALLEGED EARNINGS AMOUNT &YR.06"
ALLGAMT&YR.07="ALLEGED EARNINGS AMOUNT &YR.07"
ALLGAMT&YR.08="ALLEGED EARNINGS AMOUNT &YR.08"
ALLGAMT&YR.09="ALLEGED EARNINGS AMOUNT &YR.09"
ALLGAMT&YR.10="ALLEGED EARNINGS AMOUNT &YR.10"
ALLGAMT&YR.11="ALLEGED EARNINGS AMOUNT &YR.11"
ALLGAMT&YR.12="ALLEGED EARNINGS AMOUNT &YR.12"
ALX&YR.01="ADJUDICATIVE LEVEL OF DECISION &YR.01"
ALX&YR.02="ADJUDICATIVE LEVEL OF DECISION &YR.02"
ALX&YR.03="ADJUDICATIVE LEVEL OF DECISION &YR.03"
ALX&YR.04="ADJUDICATIVE LEVEL OF DECISION &YR.04"
ALX&YR.05="ADJUDICATIVE LEVEL OF DECISION &YR.05"
ALX&YR.06="ADJUDICATIVE LEVEL OF DECISION &YR.06"
ALX&YR.07="ADJUDICATIVE LEVEL OF DECISION &YR.07"
ALX&YR.08="ADJUDICATIVE LEVEL OF DECISION &YR.08"
ALX&YR.09="ADJUDICATIVE LEVEL OF DECISION &YR.09"
ALX&YR.10="ADJUDICATIVE LEVEL OF DECISION &YR.10"
ALX&YR.11="ADJUDICATIVE LEVEL OF DECISION &YR.11"
ALX&YR.12="ADJUDICATIVE LEVEL OF DECISION &YR.12"
BFWCM&YR.01=
"COMBINED (SSDI/SSI) ESTIMATED BENEFITS FORGONE FOR WORK &YR.01"
BFWCM&YR.02=
"COMBINED (SSDI/SSI) ESTIMATED BENEFITS FORGONE FOR WORK &YR.02"
BFWCM&YR.03=
"COMBINED (SSDI/SSI) ESTIMATED BENEFITS FORGONE FOR WORK &YR.03"
BFWCM&YR.04=
"COMBINED (SSDI/SSI) ESTIMATED BENEFITS FORGONE FOR WORK &YR.04"
BFWCM&YR.05=
"COMBINED (SSDI/SSI) ESTIMATED BENEFITS FORGONE FOR WORK &YR.05"
BFWCM&YR.06=
"COMBINED (SSDI/SSI) ESTIMATED BENEFITS FORGONE FOR WORK &YR.06"
BFWCM&YR.07=
"COMBINED (SSDI/SSI) ESTIMATED BENEFITS FORGONE FOR WORK &YR.07"
BFWCM&YR.08=
"COMBINED (SSDI/SSI) ESTIMATED BENEFITS FORGONE FOR WORK &YR.08"
BFWCM&YR.09=
"COMBINED (SSDI/SSI) ESTIMATED BENEFITS FORGONE FOR WORK &YR.09"
BFWCM&YR.10=
```

Appendix A.136
JCL/SAS Code: LABELS

```
"COMBINED (SSDI/SSI) ESTIMATED BENEFITS FORGONE FOR WORK &YR.10"
BFWCM&YR.11=
"COMBINED (SSDI/SSI) ESTIMATED BENEFITS FORGONE FOR WORK &YR.11"
BFWCM&YR.12=
"COMBINED (SSDI/SSI) ESTIMATED BENEFITS FORGONE FOR WORK &YR.12"
BFWDI&YR.01="SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.01"
BFWDI&YR.02="SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.02"
BFWDI&YR.03="SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.03"
BFWDI&YR.04="SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.04"
BFWDI&YR.05="SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.05"
BFWDI&YR.06="SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.06"
BFWDI&YR.07="SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.07"
BFWDI&YR.08="SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.08"
BFWDI&YR.09="SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.09"
BFWDI&YR.10="SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.10"
BFWDI&YR.11="SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.11"
BFWDI&YR.12="SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.12"
BFWDI_DEP&YR.01=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.01, AUXILIARY BENEFICIARY"
BFWDI_DEP&YR.02=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.02, AUXILIARY BENEFICIARY"
BFWDI_DEP&YR.03=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.03, AUXILIARY BENEFICIARY"
BFWDI_DEP&YR.04=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.04, AUXILIARY BENEFICIARY"
BFWDI_DEP&YR.05=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.05, AUXILIARY BENEFICIARY"
BFWDI_DEP&YR.06=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.06, AUXILIARY BENEFICIARY"
BFWDI_DEP&YR.07=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.07, AUXILIARY BENEFICIARY"
BFWDI_DEP&YR.08=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.08, AUXILIARY BENEFICIARY"
BFWDI_DEP&YR.09=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.09, AUXILIARY BENEFICIARY"
BFWDI_DEP&YR.10=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.10, AUXILIARY BENEFICIARY"
BFWDI_DEP&YR.11=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.11, AUXILIARY BENEFICIARY"
BFWDI_DEP&YR.12=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.12, AUXILIARY BENEFICIARY"
BFWDI_PRI&YR.01=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.01, PRIMARY BENEFICIARY"
BFWDI_PRI&YR.02=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.02, PRIMARY BENEFICIARY"
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Appendix A.136
JCL/SAS Code: LABELS

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BFWDI_PRI&YR.03=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.03, PRIMARY BENEFICIARY"
BFWDI_PRI&YR.04=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.04, PRIMARY BENEFICIARY"
BFWDI_PRI&YR.05=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.05, PRIMARY BENEFICIARY"
BFWDI_PRI&YR.06=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.06, PRIMARY BENEFICIARY"
BFWDI_PRI&YR.07=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.07, PRIMARY BENEFICIARY"
BFWDI_PRI&YR.08=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.08, PRIMARY BENEFICIARY"
BFWDI_PRI&YR.09=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.09, PRIMARY BENEFICIARY"
BFWDI_PRI&YR.10=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.10, PRIMARY BENEFICIARY"
BFWDI_PRI&YR.11=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.11, PRIMARY BENEFICIARY"
BFWDI_PRI&YR.12=
"SSDI ESTIMATED BENEFITS FORGONE FOR WORK &YR.12, PRIMARY BENEFICIARY"
BFWSSI&YR.01="SSI ESTIMATED BENEFITS FORGONE FOR WORK &YR.01"
BFWSSI&YR.02="SSI ESTIMATED BENEFITS FORGONE FOR WORK &YR.02"
BFWSSI&YR.03="SSI ESTIMATED BENEFITS FORGONE FOR WORK &YR.03"
BFWSSI&YR.04="SSI ESTIMATED BENEFITS FORGONE FOR WORK &YR.04"
BFWSSI&YR.05="SSI ESTIMATED BENEFITS FORGONE FOR WORK &YR.05"
BFWSSI&YR.06="SSI ESTIMATED BENEFITS FORGONE FOR WORK &YR.06"
BFWSSI&YR.07="SSI ESTIMATED BENEFITS FORGONE FOR WORK &YR.07"
BFWSSI&YR.08="SSI ESTIMATED BENEFITS FORGONE FOR WORK &YR.08"
BFWSSI&YR.09="SSI ESTIMATED BENEFITS FORGONE FOR WORK &YR.09"
BFWSSI&YR.10="SSI ESTIMATED BENEFITS FORGONE FOR WORK &YR.10"
BFWSSI&YR.11="SSI ESTIMATED BENEFITS FORGONE FOR WORK &YR.11"
BFWSSI&YR.12="SSI ESTIMATED BENEFITS FORGONE FOR WORK &YR.12"
BPD&YR.01="SSDI BENEFIT PAYMENT DESIGNATION &YR.01"
BPD&YR.02="SSDI BENEFIT PAYMENT DESIGNATION &YR.02"
BPD&YR.03="SSDI BENEFIT PAYMENT DESIGNATION &YR.03"
BPD&YR.04="SSDI BENEFIT PAYMENT DESIGNATION &YR.04"
BPD&YR.05="SSDI BENEFIT PAYMENT DESIGNATION &YR.05"
BPD&YR.06="SSDI BENEFIT PAYMENT DESIGNATION &YR.06"
BPD&YR.07="SSDI BENEFIT PAYMENT DESIGNATION &YR.07"
BPD&YR.08="SSDI BENEFIT PAYMENT DESIGNATION &YR.08"
BPD&YR.09="SSDI BENEFIT PAYMENT DESIGNATION &YR.09"
BPD&YR.10="SSDI BENEFIT PAYMENT DESIGNATION &YR.10"
BPD&YR.11="SSDI BENEFIT PAYMENT DESIGNATION &YR.11"
BPD&YR.12="SSDI BENEFIT PAYMENT DESIGNATION &YR.12"
BMF&YR.01="BUDGET MONTH FACTOR &YR.01"
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Appendix A.136
JCL/SAS Code: LABELS

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BMF&YR.02="BUDGET MONTH FACTOR &YR.02"
BMF&YR.03="BUDGET MONTH FACTOR &YR.03"
BMF&YR.04="BUDGET MONTH FACTOR &YR.04"
BMF&YR.05="BUDGET MONTH FACTOR &YR.05"
BMF&YR.06="BUDGET MONTH FACTOR &YR.06"
BMF&YR.07="BUDGET MONTH FACTOR &YR.07"
BMF&YR.08="BUDGET MONTH FACTOR &YR.08"
BMF&YR.09="BUDGET MONTH FACTOR &YR.09"
BMF&YR.10="BUDGET MONTH FACTOR &YR.10"
BMF&YR.11="BUDGET MONTH FACTOR &YR.11"
BMF&YR.12="BUDGET MONTH FACTOR &YR.12"
CDR&YR.01="SSDI CESSATION OF DISABILITY REASON &YR.01"
CDR&YR.02="SSDI CESSATION OF DISABILITY REASON &YR.02"
CDR&YR.03="SSDI CESSATION OF DISABILITY REASON &YR.03"
CDR&YR.04="SSDI CESSATION OF DISABILITY REASON &YR.04"
CDR&YR.05="SSDI CESSATION OF DISABILITY REASON &YR.05"
CDR&YR.06="SSDI CESSATION OF DISABILITY REASON &YR.06"
CDR&YR.07="SSDI CESSATION OF DISABILITY REASON &YR.07"
CDR&YR.08="SSDI CESSATION OF DISABILITY REASON &YR.08"
CDR&YR.09="SSDI CESSATION OF DISABILITY REASON &YR.09"
CDR&YR.10="SSDI CESSATION OF DISABILITY REASON &YR.10"
CDR&YR.11="SSDI CESSATION OF DISABILITY REASON &YR.11"
CDR&YR.12="SSDI CESSATION OF DISABILITY REASON &YR.12"
CFBMF&YR.01="COUNTERFACTUAL BUDGET MONTH FACTOR &YR.01"
CFBMF&YR.02="COUNTERFACTUAL BUDGET MONTH FACTOR &YR.02"
CFBMF&YR.03="COUNTERFACTUAL BUDGET MONTH FACTOR &YR.03"
CFBMF&YR.04="COUNTERFACTUAL BUDGET MONTH FACTOR &YR.04"
CFBMF&YR.05="COUNTERFACTUAL BUDGET MONTH FACTOR &YR.05"
CFBMF&YR.06="COUNTERFACTUAL BUDGET MONTH FACTOR &YR.06"
CFBMF&YR.07="COUNTERFACTUAL BUDGET MONTH FACTOR &YR.07"
CFBMF&YR.08="COUNTERFACTUAL BUDGET MONTH FACTOR &YR.08"
CFBMF&YR.09="COUNTERFACTUAL BUDGET MONTH FACTOR &YR.09"
CFBMF&YR.10="COUNTERFACTUAL BUDGET MONTH FACTOR &YR.10"
CFBMF&YR.11="COUNTERFACTUAL BUDGET MONTH FACTOR &YR.11"
CFBMF&YR.12="COUNTERFACTUAL BUDGET MONTH FACTOR &YR.12"
CONC&YR.01="CONCURRENT BENEFICIARY STATUS &YR.01"
CONC&YR.02="CONCURRENT BENEFICIARY STATUS &YR.02"
CONC&YR.03="CONCURRENT BENEFICIARY STATUS &YR.03"
CONC&YR.04="CONCURRENT BENEFICIARY STATUS &YR.04"
CONC&YR.05="CONCURRENT BENEFICIARY STATUS &YR.05"
CONC&YR.06="CONCURRENT BENEFICIARY STATUS &YR.06"
CONC&YR.07="CONCURRENT BENEFICIARY STATUS &YR.07"
CONC&YR.08="CONCURRENT BENEFICIARY STATUS &YR.08"
CONC&YR.09="CONCURRENT BENEFICIARY STATUS &YR.09"
CONC&YR.10="CONCURRENT BENEFICIARY STATUS &YR.10"
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JCL/SAS Code: LABELS

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CONC&YR.11="CONCURRENT BENEFICIARY STATUS &YR.11"
CONC&YR.12="CONCURRENT BENEFICIARY STATUS &YR.12"
CURCOMP&YR.01="CURRENT COMPOSITION CODE &YR.01"
CURCOMP&YR.02="CURRENT COMPOSITION CODE &YR.02"
CURCOMP&YR.03="CURRENT COMPOSITION CODE &YR.03"
CURCOMP&YR.04="CURRENT COMPOSITION CODE &YR.04"
CURCOMP&YR.05="CURRENT COMPOSITION CODE &YR.05"
CURCOMP&YR.06="CURRENT COMPOSITION CODE &YR.06"
CURCOMP&YR.07="CURRENT COMPOSITION CODE &YR.07"
CURCOMP&YR.08="CURRENT COMPOSITION CODE &YR.08"
CURCOMP&YR.09="CURRENT COMPOSITION CODE &YR.09"
CURCOMP&YR.10="CURRENT COMPOSITION CODE &YR.10"
CURCOMP&YR.11="CURRENT COMPOSITION CODE &YR.11"
CURCOMP&YR.12="CURRENT COMPOSITION CODE &YR.12"
DENOM&YR.01="DENOMINATOR FOR CALCULATING NONEARNED INCOME &YR.01"
DENOM&YR.02="DENOMINATOR FOR CALCULATING NONEARNED INCOME &YR.02"
DENOM&YR.03="DENOMINATOR FOR CALCULATING NONEARNED INCOME &YR.03"
DENOM&YR.04="DENOMINATOR FOR CALCULATING NONEARNED INCOME &YR.04"
DENOM&YR.05="DENOMINATOR FOR CALCULATING NONEARNED INCOME &YR.05"
DENOM&YR.06="DENOMINATOR FOR CALCULATING NONEARNED INCOME &YR.06"
DENOM&YR.07="DENOMINATOR FOR CALCULATING NONEARNED INCOME &YR.07"
DENOM&YR.08="DENOMINATOR FOR CALCULATING NONEARNED INCOME &YR.08"
DENOM&YR.09="DENOMINATOR FOR CALCULATING NONEARNED INCOME &YR.09"
DENOM&YR.10="DENOMINATOR FOR CALCULATING NONEARNED INCOME &YR.10"
DENOM&YR.11="DENOMINATOR FOR CALCULATING NONEARNED INCOME &YR.11"
DENOM&YR.12="DENOMINATOR FOR CALCULATING NONEARNED INCOME &YR.12"
DIERNLVL&YR.01="SSDI EARNING LEVEL INDICATOR &YR.01"
DIERNLVL&YR.02="SSDI EARNING LEVEL INDICATOR &YR.02"
DIERNLVL&YR.03="SSDI EARNING LEVEL INDICATOR &YR.03"
DIERNLVL&YR.04="SSDI EARNING LEVEL INDICATOR &YR.04"
DIERNLVL&YR.05="SSDI EARNING LEVEL INDICATOR &YR.05"
DIERNLVL&YR.06="SSDI EARNING LEVEL INDICATOR &YR.06"
DIERNLVL&YR.07="SSDI EARNING LEVEL INDICATOR &YR.07"
DIERNLVL&YR.08="SSDI EARNING LEVEL INDICATOR &YR.08"
DIERNLVL&YR.09="SSDI EARNING LEVEL INDICATOR &YR.09"
DIERNLVL&YR.10="SSDI EARNING LEVEL INDICATOR &YR.10"
DIERNLVL&YR.11="SSDI EARNING LEVEL INDICATOR &YR.11"
DIERNLVL&YR.12="SSDI EARNING LEVEL INDICATOR &YR.12"
DIRPAY&YR.01="SSDI ACTUAL BENEFIT PAID AMOUNT &YR.01"
DIRPAY&YR.02="SSDI ACTUAL BENEFIT PAID AMOUNT &YR.02"
DIRPAY&YR.03="SSDI ACTUAL BENEFIT PAID AMOUNT &YR.03"
DIRPAY&YR.04="SSDI ACTUAL BENEFIT PAID AMOUNT &YR.04"
DIRPAY&YR.05="SSDI ACTUAL BENEFIT PAID AMOUNT &YR.05"
DIRPAY&YR.06="SSDI ACTUAL BENEFIT PAID AMOUNT &YR.06"
DIRPAY&YR.07="SSDI ACTUAL BENEFIT PAID AMOUNT &YR.07"
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JCL/SAS Code: LABELS

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DIRPAY&YR.08="SSDI ACTUAL BENEFIT PAID AMOUNT &YR.08"
DIRPAY&YR.09="SSDI ACTUAL BENEFIT PAID AMOUNT &YR.09"
DIRPAY&YR.10="SSDI ACTUAL BENEFIT PAID AMOUNT &YR.10"
DIRPAY&YR.11="SSDI ACTUAL BENEFIT PAID AMOUNT &YR.11"
DIRPAY&YR.12="SSDI ACTUAL BENEFIT PAID AMOUNT &YR.12"
DOBBEST="BEST DATE OF BIRTH"
DODBEST="BEST DATE OF DEATH"
DOEI="SSDI INITIAL ENTITLEMENT DATE"
DPEN&YR.01="SSDI NUMBER OF DEPENDENTS &YR.01"
DPEN&YR.02="SSDI NUMBER OF DEPENDENTS &YR.02"
DPEN&YR.03="SSDI NUMBER OF DEPENDENTS &YR.03"
DPEN&YR.04="SSDI NUMBER OF DEPENDENTS &YR.04"
DPEN&YR.05="SSDI NUMBER OF DEPENDENTS &YR.05"
DPEN&YR.06="SSDI NUMBER OF DEPENDENTS &YR.06"
DPEN&YR.07="SSDI NUMBER OF DEPENDENTS &YR.07"
DPEN&YR.08="SSDI NUMBER OF DEPENDENTS &YR.08"
DPEN&YR.09="SSDI NUMBER OF DEPENDENTS &YR.09"
DPEN&YR.10="SSDI NUMBER OF DEPENDENTS &YR.10"
DPEN&YR.11="SSDI NUMBER OF DEPENDENTS &YR.11"
DPEN&YR.12="SSDI NUMBER OF DEPENDENTS &YR.12"
DUED&YR.01="SSDI BENEFIT DUE &YR.01"
DUED&YR.02="SSDI BENEFIT DUE &YR.02"
DUED&YR.03="SSDI BENEFIT DUE &YR.03"
DUED&YR.04="SSDI BENEFIT DUE &YR.04"
DUED&YR.05="SSDI BENEFIT DUE &YR.05"
DUED&YR.06="SSDI BENEFIT DUE &YR.06"
DUED&YR.07="SSDI BENEFIT DUE &YR.07"
DUED&YR.08="SSDI BENEFIT DUE &YR.08"
DUED&YR.09="SSDI BENEFIT DUE &YR.09"
DUED&YR.10="SSDI BENEFIT DUE &YR.10"
DUED&YR.11="SSDI BENEFIT DUE &YR.11"
DUED&YR.12="SSDI BENEFIT DUE &YR.12"
DUEO&YR.01="SSDI DEPENDENT BENEFIT DUE &YR.01"
DUEO&YR.02="SSDI DEPENDENT BENEFIT DUE &YR.02"
DUEO&YR.03="SSDI DEPENDENT BENEFIT DUE &YR.03"
DUEO&YR.04="SSDI DEPENDENT BENEFIT DUE &YR.04"
DUEO&YR.05="SSDI DEPENDENT BENEFIT DUE &YR.05"
DUEO&YR.06="SSDI DEPENDENT BENEFIT DUE &YR.06"
DUEO&YR.07="SSDI DEPENDENT BENEFIT DUE &YR.07"
DUEO&YR.08="SSDI DEPENDENT BENEFIT DUE &YR.08"
DUEO&YR.09="SSDI DEPENDENT BENEFIT DUE &YR.09"
DUEO&YR.10="SSDI DEPENDENT BENEFIT DUE &YR.10"
DUEO&YR.11="SSDI DEPENDENT BENEFIT DUE &YR.11"
DUEO&YR.12="SSDI DEPENDENT BENEFIT DUE &YR.12"
DUES&YR.01="SSI BENEFIT DUE &YR.01"
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Appendix A.136
JCL/SAS Code: LABELS

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DUES&YR.02="SSI BENEFIT DUE &YR.02"
DUES&YR.03="SSI BENEFIT DUE &YR.03"
DUES&YR.04="SSI BENEFIT DUE &YR.04"
DUES&YR.05="SSI BENEFIT DUE &YR.05"
DUES&YR.06="SSI BENEFIT DUE &YR.06"
DUES&YR.07="SSI BENEFIT DUE &YR.07"
DUES&YR.08="SSI BENEFIT DUE &YR.08"
DUES&YR.09="SSI BENEFIT DUE &YR.09"
DUES&YR.10="SSI BENEFIT DUE &YR.10"
DUES&YR.11="SSI BENEFIT DUE &YR.11"
DUES&YR.12="SSI BENEFIT DUE &YR.12"
DXPRIBEST="PRIMARY DIAGNOSIS CODE MOST RECENT, BEST FROM ALL SOURCES"
DXPRI_DI&YR.01=
"SSDI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.01"
DXPRI_DI&YR.02=
"SSDI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.02"
DXPRI_DI&YR.03=
"SSDI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.03"
DXPRI_DI&YR.04=
"SSDI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.04"
DXPRI_DI&YR.05=
"SSDI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.05"
DXPRI_DI&YR.06=
"SSDI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.06"
DXPRI_DI&YR.07=
"SSDI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.07"
DXPRI_DI&YR.08=
"SSDI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.08"
DXPRI_DI&YR.09=
"SSDI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.09"
DXPRI_DI&YR.10=
"SSDI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.10"
DXPRI_DI&YR.11=
"SSDI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.11"
DXPRI_DI&YR.12=
"SSDI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.12"
DXPRI_SSI&YR.01=
"SSI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.01"
DXPRI_SSI&YR.02=
"SSI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.02"
DXPRI_SSI&YR.03=
"SSI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.03"
DXPRI_SSI&YR.04=
"SSI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.04"
DXPRI_SSI&YR.05=
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Appendix A.136
JCL/SAS Code: LABELS

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"SSI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.05"
DXPRI_SSI&YR.06=
"SSI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.06"
DXPRI_SSI&YR.07=
"SSI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.07"
DXPRI_SSI&YR.08=
"SSI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.08"
DXPRI_SSI&YR.09=
"SSI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.09"
DXPRI_SSI&YR.10=
"SSI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.10"
DXPRI_SSI&YR.11=
"SSI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.11"
DXPRI_SSI&YR.12=
"SSI PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.12"
DXPRIBEST&YR.01="PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.01"
DXPRIBEST&YR.02="PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.02"
DXPRIBEST&YR.03="PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.03"
DXPRIBEST&YR.04="PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.04"
DXPRIBEST&YR.05="PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.05"
DXPRIBEST&YR.06="PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.06"
DXPRIBEST&YR.07="PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.07"
DXPRIBEST&YR.08="PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.08"
DXPRIBEST&YR.09="PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.09"
DXPRIBEST&YR.10="PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.10"
DXPRIBEST&YR.11="PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.11"
DXPRIBEST&YR.12="PRIMARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.12"
DXSEC_DI&YR.01=
"SSDI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.01"
DXSEC_DI&YR.02=
"SSDI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.02"
DXSEC_DI&YR.03=
"SSDI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.03"
DXSEC_DI&YR.04=
"SSDI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.04"
DXSEC_DI&YR.05=
"SSDI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.05"
DXSEC_DI&YR.06=
"SSDI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.06"
DXSEC_DI&YR.07=
"SSDI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.07"
DXSEC_DI&YR.08=
"SSDI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.08"
DXSEC_DI&YR.09=
"SSDI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.09"
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Appendix A.136
JCL/SAS Code: LABELS

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DXSEC_DI&YR.10=
"SSDI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.10"
DXSEC_DI&YR.11=
"SSDI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.11"
DXSEC_DI&YR.12=
"SSDI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.12"
DXSEC_SSI&YR.01=
"SSI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.01"
DXSEC_SSI&YR.02=
"SSI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.02"
DXSEC_SSI&YR.03=
"SSI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.03"
DXSEC_SSI&YR.04=
"SSI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.04"
DXSEC_SSI&YR.05=
"SSI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.05"
DXSEC_SSI&YR.06=
"SSI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.06"
DXSEC_SSI&YR.07=
"SSI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.07"
DXSEC_SSI&YR.08=
"SSI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.08"
DXSEC_SSI&YR.09=
"SSI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.09"
DXSEC_SSI&YR.10=
"SSI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.10"
DXSEC_SSI&YR.11=
"SSI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.11"
DXSEC_SSI&YR.12=
"SSI SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.12"
DXSECBEST&YR.01=
"SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.01"
DXSECBEST&YR.02=
"SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.02"
DXSECBEST&YR.03=
"SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.03"
DXSECBEST&YR.04=
"SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.04"
DXSECBEST&YR.05=
"SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.05"
DXSECBEST&YR.06=
"SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.06"
DXSECBEST&YR.07=
"SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.07"
DXSECBEST&YR.08=
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Appendix A.136
JCL/SAS Code: LABELS

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"SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.08"
DXSECBEST&YR.09=
"SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.09"
DXSECBEST&YR.10=
"SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.10"
DXSECBEST&YR.11=
"SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.11"
DXSECBEST&YR.12=
"SECONDARY DIAGNOSIS CODE, BEST FROM ALL SOURCES &YR.12"
EARN&YR.01="SSI EARNED INCOME &YR.01"
EARN&YR.02="SSI EARNED INCOME &YR.02"
EARN&YR.03="SSI EARNED INCOME &YR.03"
EARN&YR.04="SSI EARNED INCOME &YR.04"
EARN&YR.05="SSI EARNED INCOME &YR.05"
EARN&YR.06="SSI EARNED INCOME &YR.06"
EARN&YR.07="SSI EARNED INCOME &YR.07"
EARN&YR.08="SSI EARNED INCOME &YR.08"
EARN&YR.09="SSI EARNED INCOME &YR.09"
EARN&YR.10="SSI EARNED INCOME &YR.10"
EARN&YR.11="SSI EARNED INCOME &YR.11"
EARN&YR.12="SSI EARNED INCOME &YR.12"
EDX&YR.01="EDUCATION LEVEL &YR.01"
EDX&YR.02="EDUCATION LEVEL &YR.02"
EDX&YR.03="EDUCATION LEVEL &YR.03"
EDX&YR.04="EDUCATION LEVEL &YR.04"
EDX&YR.05="EDUCATION LEVEL &YR.05"
EDX&YR.06="EDUCATION LEVEL &YR.06"
EDX&YR.07="EDUCATION LEVEL &YR.07"
EDX&YR.08="EDUCATION LEVEL &YR.08"
EDX&YR.09="EDUCATION LEVEL &YR.09"
EDX&YR.10="EDUCATION LEVEL &YR.10"
EDX&YR.11="EDUCATION LEVEL &YR.11"
EDX&YR.12="EDUCATION LEVEL &YR.12"
EICM&YR.01="SSI COUNTABLE EARNED INCOME &YR.01"
EICM&YR.02="SSI COUNTABLE EARNED INCOME &YR.02"
EICM&YR.03="SSI COUNTABLE EARNED INCOME &YR.03"
EICM&YR.04="SSI COUNTABLE EARNED INCOME &YR.04"
EICM&YR.05="SSI COUNTABLE EARNED INCOME &YR.05"
EICM&YR.06="SSI COUNTABLE EARNED INCOME &YR.06"
EICM&YR.07="SSI COUNTABLE EARNED INCOME &YR.07"
EICM&YR.08="SSI COUNTABLE EARNED INCOME &YR.08"
EICM&YR.09="SSI COUNTABLE EARNED INCOME &YR.09"
EICM&YR.10="SSI COUNTABLE EARNED INCOME &YR.10"
EICM&YR.11="SSI COUNTABLE EARNED INCOME &YR.11"
EICM&YR.12="SSI COUNTABLE EARNED INCOME &YR.12"
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Appendix A.136
JCL/SAS Code: LABELS

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EIND&YR.01="SSI EMPLOYMENT INDICATOR &YR.01"
EIND&YR.02="SSI EMPLOYMENT INDICATOR &YR.02"
EIND&YR.03="SSI EMPLOYMENT INDICATOR &YR.03"
EIND&YR.04="SSI EMPLOYMENT INDICATOR &YR.04"
EIND&YR.05="SSI EMPLOYMENT INDICATOR &YR.05"
EIND&YR.06="SSI EMPLOYMENT INDICATOR &YR.06"
EIND&YR.07="SSI EMPLOYMENT INDICATOR &YR.07"
EIND&YR.08="SSI EMPLOYMENT INDICATOR &YR.08"
EIND&YR.09="SSI EMPLOYMENT INDICATOR &YR.09"
EIND&YR.10="SSI EMPLOYMENT INDICATOR &YR.10"
EIND&YR.11="SSI EMPLOYMENT INDICATOR &YR.11"
EIND&YR.12="SSI EMPLOYMENT INDICATOR &YR.12"
FAMT&YR.01="SSI FEDERAL BENEFIT DUE &YR.01"
FAMT&YR.02="SSI FEDERAL BENEFIT DUE &YR.02"
FAMT&YR.03="SSI FEDERAL BENEFIT DUE &YR.03"
FAMT&YR.04="SSI FEDERAL BENEFIT DUE &YR.04"
FAMT&YR.05="SSI FEDERAL BENEFIT DUE &YR.05"
FAMT&YR.06="SSI FEDERAL BENEFIT DUE &YR.06"
FAMT&YR.07="SSI FEDERAL BENEFIT DUE &YR.07"
FAMT&YR.08="SSI FEDERAL BENEFIT DUE &YR.08"
FAMT&YR.09="SSI FEDERAL BENEFIT DUE &YR.09"
FAMT&YR.10="SSI FEDERAL BENEFIT DUE &YR.10"
FAMT&YR.11="SSI FEDERAL BENEFIT DUE &YR.11"
FAMT&YR.12="SSI FEDERAL BENEFIT DUE &YR.12"
FCI&YR.01="FEDERAL COUNTABLE INCOME FOR CALCULATING FAMT IN &YR.01"
FCI&YR.02="FEDERAL COUNTABLE INCOME FOR CALCULATING FAMT IN &YR.02"
FCI&YR.03="FEDERAL COUNTABLE INCOME FOR CALCULATING FAMT IN &YR.03"
FCI&YR.04="FEDERAL COUNTABLE INCOME FOR CALCULATING FAMT IN &YR.04"
FCI&YR.05="FEDERAL COUNTABLE INCOME FOR CALCULATING FAMT IN &YR.05"
FCI&YR.06="FEDERAL COUNTABLE INCOME FOR CALCULATING FAMT IN &YR.06"
FCI&YR.07="FEDERAL COUNTABLE INCOME FOR CALCULATING FAMT IN &YR.07"
FCI&YR.08="FEDERAL COUNTABLE INCOME FOR CALCULATING FAMT IN &YR.08"
FCI&YR.09="FEDERAL COUNTABLE INCOME FOR CALCULATING FAMT IN &YR.09"
FCI&YR.10="FEDERAL COUNTABLE INCOME FOR CALCULATING FAMT IN &YR.10"
FCI&YR.11="FEDERAL COUNTABLE INCOME FOR CALCULATING FAMT IN &YR.11"
FCI&YR.12="FEDERAL COUNTABLE INCOME FOR CALCULATING FAMT IN &YR.12"
FIPS_BEST&YR.01="FIPS CODE, BEST &YR.01"
FIPS_BEST&YR.02="FIPS CODE, BEST &YR.02"
FIPS_BEST&YR.03="FIPS CODE, BEST &YR.03"
FIPS_BEST&YR.04="FIPS CODE, BEST &YR.04"
FIPS_BEST&YR.05="FIPS CODE, BEST &YR.05"
FIPS_BEST&YR.06="FIPS CODE, BEST &YR.06"
FIPS_BEST&YR.07="FIPS CODE, BEST &YR.07"
FIPS_BEST&YR.08="FIPS CODE, BEST &YR.08"
FIPS_BEST&YR.09="FIPS CODE, BEST &YR.09"
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Appendix A.136
JCL/SAS Code: LABELS

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FIPS_BEST&YR.10="FIPS CODE, BEST &YR.10"
FIPS_BEST&YR.11="FIPS CODE, BEST &YR.11"
FIPS_BEST&YR.12="FIPS CODE, BEST &YR.12"
FIPS_DI&YR.01="SSDI FIPS CODE &YR.01"
FIPS_DI&YR.02="SSDI FIPS CODE &YR.02"
FIPS_DI&YR.03="SSDI FIPS CODE &YR.03"
FIPS_DI&YR.04="SSDI FIPS CODE &YR.04"
FIPS_DI&YR.05="SSDI FIPS CODE &YR.05"
FIPS_DI&YR.06="SSDI FIPS CODE &YR.06"
FIPS_DI&YR.07="SSDI FIPS CODE &YR.07"
FIPS_DI&YR.08="SSDI FIPS CODE &YR.08"
FIPS_DI&YR.09="SSDI FIPS CODE &YR.09"
FIPS_DI&YR.10="SSDI FIPS CODE &YR.10"
FIPS_DI&YR.11="SSDI FIPS CODE &YR.11"
FIPS_DI&YR.12="SSDI FIPS CODE &YR.12"
FIPS_SSI&YR.01="SSI FIPS CODE &YR.01"
FIPS_SSI&YR.02="SSI FIPS CODE &YR.02"
FIPS_SSI&YR.03="SSI FIPS CODE &YR.03"
FIPS_SSI&YR.04="SSI FIPS CODE &YR.04"
FIPS_SSI&YR.05="SSI FIPS CODE &YR.05"
FIPS_SSI&YR.06="SSI FIPS CODE &YR.06"
FIPS_SSI&YR.07="SSI FIPS CODE &YR.07"
FIPS_SSI&YR.08="SSI FIPS CODE &YR.08"
FIPS_SSI&YR.09="SSI FIPS CODE &YR.09"
FIPS_SSI&YR.10="SSI FIPS CODE &YR.10"
FIPS_SSI&YR.11="SSI FIPS CODE &YR.11"
FIPS_SSI&YR.12="SSI FIPS CODE &YR.12"
FPMT&YR.01="SSI FEDERAL BENEFIT PAID AMOUNT &YR.01"
FPMT&YR.02="SSI FEDERAL BENEFIT PAID AMOUNT &YR.02"
FPMT&YR.03="SSI FEDERAL BENEFIT PAID AMOUNT &YR.03"
FPMT&YR.04="SSI FEDERAL BENEFIT PAID AMOUNT &YR.04"
FPMT&YR.05="SSI FEDERAL BENEFIT PAID AMOUNT &YR.05"
FPMT&YR.06="SSI FEDERAL BENEFIT PAID AMOUNT &YR.06"
FPMT&YR.07="SSI FEDERAL BENEFIT PAID AMOUNT &YR.07"
FPMT&YR.08="SSI FEDERAL BENEFIT PAID AMOUNT &YR.08"
FPMT&YR.09="SSI FEDERAL BENEFIT PAID AMOUNT &YR.09"
FPMT&YR.10="SSI FEDERAL BENEFIT PAID AMOUNT &YR.10"
FPMT&YR.11="SSI FEDERAL BENEFIT PAID AMOUNT &YR.11"
FPMT&YR.12="SSI FEDERAL BENEFIT PAID AMOUNT &YR.12"
FRADATE = "FULL RETIREMENT DATE"
IEA_BLIND&YR.01=
"SSI EARNED INCOME EXCLUSION AMOUNT - BLIND WORK EXPENSE &YR.01"
IEA_BLIND&YR.02=
"SSI EARNED INCOME EXCLUSION AMOUNT - BLIND WORK EXPENSE &YR.02"
IEA_BLIND&YR.03=
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Appendix A.136
JCL/SAS Code: LABELS

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"SSI EARNED INCOME EXCLUSION AMOUNT - BLIND WORK EXPENSE &YR.03"
IEA_BLIND&YR.04=
"SSI EARNED INCOME EXCLUSION AMOUNT - BLIND WORK EXPENSE &YR.04"
IEA_BLIND&YR.05=
"SSI EARNED INCOME EXCLUSION AMOUNT - BLIND WORK EXPENSE &YR.05"
IEA_BLIND&YR.06=
"SSI EARNED INCOME EXCLUSION AMOUNT - BLIND WORK EXPENSE &YR.06"
IEA_BLIND&YR.07=
"SSI EARNED INCOME EXCLUSION AMOUNT - BLIND WORK EXPENSE &YR.07"
IEA_BLIND&YR.08=
"SSI EARNED INCOME EXCLUSION AMOUNT - BLIND WORK EXPENSE &YR.08"
IEA_BLIND&YR.09=
"SSI EARNED INCOME EXCLUSION AMOUNT - BLIND WORK EXPENSE &YR.09"
IEA_BLIND&YR.10=
"SSI EARNED INCOME EXCLUSION AMOUNT - BLIND WORK EXPENSE &YR.10"
IEA_BLIND&YR.11=
"SSI EARNED INCOME EXCLUSION AMOUNT - BLIND WORK EXPENSE &YR.11"
IEA_BLIND&YR.12=
"SSI EARNED INCOME EXCLUSION AMOUNT - BLIND WORK EXPENSE &YR.12"
IEA_SEIE&YR.01=
"SSI EARNED INCOME EXCLUSION AMOUNT - STUDENT EARNED INCOME &YR.01"
IEA_SEIE&YR.02=
"SSI EARNED INCOME EXCLUSION AMOUNT - STUDENT EARNED INCOME &YR.02"
IEA_SEIE&YR.03=
"SSI EARNED INCOME EXCLUSION AMOUNT - STUDENT EARNED INCOME &YR.03"
IEA_SEIE&YR.04=
"SSI EARNED INCOME EXCLUSION AMOUNT - STUDENT EARNED INCOME &YR.04"
IEA_SEIE&YR.05=
"SSI EARNED INCOME EXCLUSION AMOUNT - STUDENT EARNED INCOME &YR.05"
IEA_SEIE&YR.06=
"SSI EARNED INCOME EXCLUSION AMOUNT - STUDENT EARNED INCOME &YR.06"
IEA_SEIE&YR.07=
"SSI EARNED INCOME EXCLUSION AMOUNT - STUDENT EARNED INCOME &YR.07"
IEA_SEIE&YR.08=
"SSI EARNED INCOME EXCLUSION AMOUNT - STUDENT EARNED INCOME &YR.08"
IEA_SEIE&YR.09=
"SSI EARNED INCOME EXCLUSION AMOUNT - STUDENT EARNED INCOME &YR.09"
IEA_SEIE&YR.10=
"SSI EARNED INCOME EXCLUSION AMOUNT - STUDENT EARNED INCOME &YR.10"
IEA_SEIE&YR.11=
"SSI EARNED INCOME EXCLUSION AMOUNT - STUDENT EARNED INCOME &YR.11"
IEA_SEIE&YR.12=
"SSI EARNED INCOME EXCLUSION AMOUNT - STUDENT EARNED INCOME &YR.12"
IEA_IRWE&YR.01="SSI EARNED INCOME EXCLUSION AMOUNT - IRWE &YR.01"
IEA_IRWE&YR.02="SSI EARNED INCOME EXCLUSION AMOUNT - IRWE &YR.02"
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Appendix A.136
JCL/SAS Code: LABELS

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IEA_IRWE&YR.03="SSI EARNED INCOME EXCLUSION AMOUNT - IRWE &YR.03"
IEA_IRWE&YR.04="SSI EARNED INCOME EXCLUSION AMOUNT - IRWE &YR.04"
IEA_IRWE&YR.05="SSI EARNED INCOME EXCLUSION AMOUNT - IRWE &YR.05"
IEA_IRWE&YR.06="SSI EARNED INCOME EXCLUSION AMOUNT - IRWE &YR.06"
IEA_IRWE&YR.07="SSI EARNED INCOME EXCLUSION AMOUNT - IRWE &YR.07"
IEA_IRWE&YR.08="SSI EARNED INCOME EXCLUSION AMOUNT - IRWE &YR.08"
IEA_IRWE&YR.09="SSI EARNED INCOME EXCLUSION AMOUNT - IRWE &YR.09"
IEA_IRWE&YR.10="SSI EARNED INCOME EXCLUSION AMOUNT - IRWE &YR.10"
IEA_IRWE&YR.11="SSI EARNED INCOME EXCLUSION AMOUNT - IRWE &YR.11"
IEA_IRWE&YR.12="SSI EARNED INCOME EXCLUSION AMOUNT - IRWE &YR.12"
IEA_LOSS&YR.01=
"SSI EARNED INCOME EXCLUSION AMOUNT - NET LOSS FROM SELF-EMP &YR.01"
IEA_LOSS&YR.02=
"SSI EARNED INCOME EXCLUSION AMOUNT - NET LOSS FROM SELF-EMP &YR.02"
IEA_LOSS&YR.03=
"SSI EARNED INCOME EXCLUSION AMOUNT - NET LOSS FROM SELF-EMP &YR.03"
IEA_LOSS&YR.04=
"SSI EARNED INCOME EXCLUSION AMOUNT - NET LOSS FROM SELF-EMP &YR.04"
IEA_LOSS&YR.05=
"SSI EARNED INCOME EXCLUSION AMOUNT - NET LOSS FROM SELF-EMP &YR.05"
IEA_LOSS&YR.06=
"SSI EARNED INCOME EXCLUSION AMOUNT - NET LOSS FROM SELF-EMP &YR.06"
IEA_LOSS&YR.07=
"SSI EARNED INCOME EXCLUSION AMOUNT - NET LOSS FROM SELF-EMP &YR.07"
IEA_LOSS&YR.08=
"SSI EARNED INCOME EXCLUSION AMOUNT - NET LOSS FROM SELF-EMP &YR.08"
IEA_LOSS&YR.09=
"SSI EARNED INCOME EXCLUSION AMOUNT - NET LOSS FROM SELF-EMP &YR.09"
IEA_LOSS&YR.10=
"SSI EARNED INCOME EXCLUSION AMOUNT - NET LOSS FROM SELF-EMP &YR.10"
IEA_LOSS&YR.11=
"SSI EARNED INCOME EXCLUSION AMOUNT - NET LOSS FROM SELF-EMP &YR.11"
IEA_LOSS&YR.12=
"SSI EARNED INCOME EXCLUSION AMOUNT - NET LOSS FROM SELF-EMP &YR.12"
IEA_NESE&YR.01="SSI EARNED INCOME AMOUNT - FROM SELF-EMP &YR.01"
IEA_NESE&YR.02="SSI EARNED INCOME AMOUNT - FROM SELF-EMP &YR.02"
IEA_NESE&YR.03="SSI EARNED INCOME AMOUNT - FROM SELF-EMP &YR.03"
IEA_NESE&YR.04="SSI EARNED INCOME AMOUNT - FROM SELF-EMP &YR.04"
IEA_NESE&YR.05="SSI EARNED INCOME AMOUNT - FROM SELF-EMP &YR.05"
IEA_NESE&YR.06="SSI EARNED INCOME AMOUNT - FROM SELF-EMP &YR.06"
IEA_NESE&YR.07="SSI EARNED INCOME AMOUNT - FROM SELF-EMP &YR.07"
IEA_NESE&YR.08="SSI EARNED INCOME AMOUNT - FROM SELF-EMP &YR.08"
IEA_NESE&YR.09="SSI EARNED INCOME AMOUNT - FROM SELF-EMP &YR.09"
IEA_NESE&YR.10="SSI EARNED INCOME AMOUNT - FROM SELF-EMP &YR.10"
IEA_NESE&YR.11="SSI EARNED INCOME AMOUNT - FROM SELF-EMP &YR.11"
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Appendix A.136
JCL/SAS Code: LABELS

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IEA_NESE&YR.12="SSI EARNED INCOME AMOUNT - FROM SELF-EMP &YR.12"
IEA_PASS&YR.01="SSI EARNED INCOME EXCLUSION AMOUNT - PASS &YR.01"
IEA_PASS&YR.02="SSI EARNED INCOME EXCLUSION AMOUNT - PASS &YR.02"
IEA_PASS&YR.03="SSI EARNED INCOME EXCLUSION AMOUNT - PASS &YR.03"
IEA_PASS&YR.04="SSI EARNED INCOME EXCLUSION AMOUNT - PASS &YR.04"
IEA_PASS&YR.05="SSI EARNED INCOME EXCLUSION AMOUNT - PASS &YR.05"
IEA_PASS&YR.06="SSI EARNED INCOME EXCLUSION AMOUNT - PASS &YR.06"
IEA_PASS&YR.07="SSI EARNED INCOME EXCLUSION AMOUNT - PASS &YR.07"
IEA_PASS&YR.08="SSI EARNED INCOME EXCLUSION AMOUNT - PASS &YR.08"
IEA_PASS&YR.09="SSI EARNED INCOME EXCLUSION AMOUNT - PASS &YR.09"
IEA_PASS&YR.10="SSI EARNED INCOME EXCLUSION AMOUNT - PASS &YR.10"
IEA_PASS&YR.11="SSI EARNED INCOME EXCLUSION AMOUNT - PASS &YR.11"
IEA_PASS&YR.12="SSI EARNED INCOME EXCLUSION AMOUNT - PASS &YR.12"
IEA_WAGE&YR.01="SSI EARNED INCOME AMOUNT - FROM WAGES &YR.01"
IEA_WAGE&YR.02="SSI EARNED INCOME AMOUNT - FROM WAGES &YR.02"
IEA_WAGE&YR.03="SSI EARNED INCOME AMOUNT - FROM WAGES &YR.03"
IEA_WAGE&YR.04="SSI EARNED INCOME AMOUNT - FROM WAGES &YR.04"
IEA_WAGE&YR.05="SSI EARNED INCOME AMOUNT - FROM WAGES &YR.05"
IEA_WAGE&YR.06="SSI EARNED INCOME AMOUNT - FROM WAGES &YR.06"
IEA_WAGE&YR.07="SSI EARNED INCOME AMOUNT - FROM WAGES &YR.07"
IEA_WAGE&YR.08="SSI EARNED INCOME AMOUNT - FROM WAGES &YR.08"
IEA_WAGE&YR.09="SSI EARNED INCOME AMOUNT - FROM WAGES &YR.09"
IEA_WAGE&YR.10="SSI EARNED INCOME AMOUNT - FROM WAGES &YR.10"
IEA_WAGE&YR.11="SSI EARNED INCOME AMOUNT - FROM WAGES &YR.11"
IEA_WAGE&YR.12="SSI EARNED INCOME AMOUNT - FROM WAGES &YR.12"
IUA_SSDI&YR.01="SSI UNEARNED INCOME - FROM SSDI BENEFIT &YR.01"
IUA_SSDI&YR.02="SSI UNEARNED INCOME - FROM SSDI BENEFIT &YR.02"
IUA_SSDI&YR.03="SSI UNEARNED INCOME - FROM SSDI BENEFIT &YR.03"
IUA_SSDI&YR.04="SSI UNEARNED INCOME - FROM SSDI BENEFIT &YR.04"
IUA_SSDI&YR.05="SSI UNEARNED INCOME - FROM SSDI BENEFIT &YR.05"
IUA_SSDI&YR.06="SSI UNEARNED INCOME - FROM SSDI BENEFIT &YR.06"
IUA_SSDI&YR.07="SSI UNEARNED INCOME - FROM SSDI BENEFIT &YR.07"
IUA_SSDI&YR.08="SSI UNEARNED INCOME - FROM SSDI BENEFIT &YR.08"
IUA_SSDI&YR.09="SSI UNEARNED INCOME - FROM SSDI BENEFIT &YR.09"
IUA_SSDI&YR.10="SSI UNEARNED INCOME - FROM SSDI BENEFIT &YR.10"
IUA_SSDI&YR.11="SSI UNEARNED INCOME - FROM SSDI BENEFIT &YR.11"
IUA_SSDI&YR.12="SSI UNEARNED INCOME - FROM SSDI BENEFIT &YR.12"
IUA_WC&YR.01="SSI UNEARNED INCOME - FROM WORKERS' COMPENSATION &YR.01"
IUA_WC&YR.02="SSI UNEARNED INCOME - FROM WORKERS' COMPENSATION &YR.02"
IUA_WC&YR.03="SSI UNEARNED INCOME - FROM WORKERS' COMPENSATION &YR.03"
IUA_WC&YR.04="SSI UNEARNED INCOME - FROM WORKERS' COMPENSATION &YR.04"
IUA_WC&YR.05="SSI UNEARNED INCOME - FROM WORKERS' COMPENSATION &YR.05"
IUA_WC&YR.06="SSI UNEARNED INCOME - FROM WORKERS' COMPENSATION &YR.06"
IUA_WC&YR.07="SSI UNEARNED INCOME - FROM WORKERS' COMPENSATION &YR.07"
IUA_WC&YR.08="SSI UNEARNED INCOME - FROM WORKERS' COMPENSATION &YR.08"
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Appendix A.136
JCL/SAS Code: LABELS

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IUA_WC&YR.09="SSI UNEARNED INCOME - FROM WORKERS' COMPENSATION &YR.09"
IUA_WC&YR.10="SSI UNEARNED INCOME - FROM WORKERS' COMPENSATION &YR.10"
IUA_WC&YR.11="SSI UNEARNED INCOME - FROM WORKERS' COMPENSATION &YR.11"
IUA_WC&YR.12="SSI UNEARNED INCOME - FROM WORKERS' COMPENSATION &YR.12"
IUA_TANF&YR.01="SSI UNEARNED INCOME - FROM TANF &YR.01"
IUA_TANF&YR.02="SSI UNEARNED INCOME - FROM TANF &YR.02"
IUA_TANF&YR.03="SSI UNEARNED INCOME - FROM TANF &YR.03"
IUA_TANF&YR.04="SSI UNEARNED INCOME - FROM TANF &YR.04"
IUA_TANF&YR.05="SSI UNEARNED INCOME - FROM TANF &YR.05"
IUA_TANF&YR.06="SSI UNEARNED INCOME - FROM TANF &YR.06"
IUA_TANF&YR.07="SSI UNEARNED INCOME - FROM TANF &YR.07"
IUA_TANF&YR.08="SSI UNEARNED INCOME - FROM TANF &YR.08"
IUA_TANF&YR.09="SSI UNEARNED INCOME - FROM TANF &YR.09"
IUA_TANF&YR.10="SSI UNEARNED INCOME - FROM TANF &YR.10"
IUA_TANF&YR.11="SSI UNEARNED INCOME - FROM TANF &YR.11"
IUA_TANF&YR.12="SSI UNEARNED INCOME - FROM TANF &YR.12"
LAF&YR.01="SSDI LEDGER ACCOUNT FILE (LAF)- PARTICIPATION STATUS &YR.01"
LAF&YR.02="SSDI LEDGER ACCOUNT FILE (LAF)- PARTICIPATION STATUS &YR.02"
LAF&YR.03="SSDI LEDGER ACCOUNT FILE (LAF)- PARTICIPATION STATUS &YR.03"
LAF&YR.04="SSDI LEDGER ACCOUNT FILE (LAF)- PARTICIPATION STATUS &YR.04"
LAF&YR.05="SSDI LEDGER ACCOUNT FILE (LAF)- PARTICIPATION STATUS &YR.05"
LAF&YR.06="SSDI LEDGER ACCOUNT FILE (LAF)- PARTICIPATION STATUS &YR.06"
LAF&YR.07="SSDI LEDGER ACCOUNT FILE (LAF)- PARTICIPATION STATUS &YR.07"
LAF&YR.08="SSDI LEDGER ACCOUNT FILE (LAF)- PARTICIPATION STATUS &YR.08"
LAF&YR.09="SSDI LEDGER ACCOUNT FILE (LAF)- PARTICIPATION STATUS &YR.09"
LAF&YR.10="SSDI LEDGER ACCOUNT FILE (LAF)- PARTICIPATION STATUS &YR.10"
LAF&YR.11="SSDI LEDGER ACCOUNT FILE (LAF)- PARTICIPATION STATUS &YR.11"
LAF&YR.12="SSDI LEDGER ACCOUNT FILE (LAF)- PARTICIPATION STATUS &YR.12"
LIVF&YR.01="SSI LIVING ARRANGEMENT CODE &YR.01"
LIVF&YR.02="SSI LIVING ARRANGEMENT CODE &YR.02"
LIVF&YR.03="SSI LIVING ARRANGEMENT CODE &YR.03"
LIVF&YR.04="SSI LIVING ARRANGEMENT CODE &YR.04"
LIVF&YR.05="SSI LIVING ARRANGEMENT CODE &YR.05"
LIVF&YR.06="SSI LIVING ARRANGEMENT CODE &YR.06"
LIVF&YR.07="SSI LIVING ARRANGEMENT CODE &YR.07"
LIVF&YR.08="SSI LIVING ARRANGEMENT CODE &YR.08"
LIVF&YR.09="SSI LIVING ARRANGEMENT CODE &YR.09"
LIVF&YR.10="SSI LIVING ARRANGEMENT CODE &YR.10"
LIVF&YR.11="SSI LIVING ARRANGEMENT CODE &YR.11"
LIVF&YR.12="SSI LIVING ARRANGEMENT CODE &YR.12"
MBA&YR.01="SSDI BENEFIT DUE &YR.01"
MBA&YR.02="SSDI BENEFIT DUE &YR.02"
MBA&YR.03="SSDI BENEFIT DUE &YR.03"
MBA&YR.04="SSDI BENEFIT DUE &YR.04"
MBA&YR.05="SSDI BENEFIT DUE &YR.05"
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Appendix A.136
JCL/SAS Code: LABELS

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MBA&YR.06="SSDI BENEFIT DUE &YR.06"
MBA&YR.07="SSDI BENEFIT DUE &YR.07"
MBA&YR.08="SSDI BENEFIT DUE &YR.08"
MBA&YR.09="SSDI BENEFIT DUE &YR.09"
MBA&YR.10="SSDI BENEFIT DUE &YR.10"
MBA&YR.11="SSDI BENEFIT DUE &YR.11"
MBA&YR.12="SSDI BENEFIT DUE &YR.12"
MBP&YR.01="SSDI BENEFIT PAID &YR.01"
MBP&YR.02="SSDI BENEFIT PAID &YR.02"
MBP&YR.03="SSDI BENEFIT PAID &YR.03"
MBP&YR.04="SSDI BENEFIT PAID &YR.04"
MBP&YR.05="SSDI BENEFIT PAID &YR.05"
MBP&YR.06="SSDI BENEFIT PAID &YR.06"
MBP&YR.07="SSDI BENEFIT PAID &YR.07"
MBP&YR.08="SSDI BENEFIT PAID &YR.08"
MBP&YR.09="SSDI BENEFIT PAID &YR.09"
MBP&YR.10="SSDI BENEFIT PAID &YR.10"
MBP&YR.11="SSDI BENEFIT PAID &YR.11"
MBP&YR.12="SSDI BENEFIT PAID &YR.12"
MEDC&YR.01="SSI MEDICAID ELIGIBILITY CODE &YR.01"
MEDC&YR.02="SSI MEDICAID ELIGIBILITY CODE &YR.02"
MEDC&YR.03="SSI MEDICAID ELIGIBILITY CODE &YR.03"
MEDC&YR.04="SSI MEDICAID ELIGIBILITY CODE &YR.04"
MEDC&YR.05="SSI MEDICAID ELIGIBILITY CODE &YR.05"
MEDC&YR.06="SSI MEDICAID ELIGIBILITY CODE &YR.06"
MEDC&YR.07="SSI MEDICAID ELIGIBILITY CODE &YR.07"
MEDC&YR.08="SSI MEDICAID ELIGIBILITY CODE &YR.08"
MEDC&YR.09="SSI MEDICAID ELIGIBILITY CODE &YR.09"
MEDC&YR.10="SSI MEDICAID ELIGIBILITY CODE &YR.10"
MEDC&YR.11="SSI MEDICAID ELIGIBILITY CODE &YR.11"
MEDC&YR.12="SSI MEDICAID ELIGIBILITY CODE &YR.12"
MEDE&YR.01="SSI MEDICAID ELIGIBILITY &YR.01"
MEDE&YR.02="SSI MEDICAID ELIGIBILITY &YR.02"
MEDE&YR.03="SSI MEDICAID ELIGIBILITY &YR.03"
MEDE&YR.04="SSI MEDICAID ELIGIBILITY &YR.04"
MEDE&YR.05="SSI MEDICAID ELIGIBILITY &YR.05"
MEDE&YR.06="SSI MEDICAID ELIGIBILITY &YR.06"
MEDE&YR.07="SSI MEDICAID ELIGIBILITY &YR.07"
MEDE&YR.08="SSI MEDICAID ELIGIBILITY &YR.08"
MEDE&YR.09="SSI MEDICAID ELIGIBILITY &YR.09"
MEDE&YR.10="SSI MEDICAID ELIGIBILITY &YR.10"
MEDE&YR.11="SSI MEDICAID ELIGIBILITY &YR.11"
MEDE&YR.12="SSI MEDICAID ELIGIBILITY &YR.12"
MEDEX&YR.01="MEDICAL IMPROVEMENT CODE &YR.01"
MEDEX&YR.02="MEDICAL IMPROVEMENT CODE &YR.02"
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Appendix A.136
JCL/SAS Code: LABELS

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MEDEX&YR.03="MEDICAL IMPROVEMENT CODE &YR.03"
MEDEX&YR.04="MEDICAL IMPROVEMENT CODE &YR.04"
MEDEX&YR.05="MEDICAL IMPROVEMENT CODE &YR.05"
MEDEX&YR.06="MEDICAL IMPROVEMENT CODE &YR.06"
MEDEX&YR.07="MEDICAL IMPROVEMENT CODE &YR.07"
MEDEX&YR.08="MEDICAL IMPROVEMENT CODE &YR.08"
MEDEX&YR.09="MEDICAL IMPROVEMENT CODE &YR.09"
MEDEX&YR.10="MEDICAL IMPROVEMENT CODE &YR.10"
MEDEX&YR.11="MEDICAL IMPROVEMENT CODE &YR.11"
MEDEX&YR.12="MEDICAL IMPROVEMENT CODE &YR.12"
MEDPREM&YR.01="SSDI PHUS MEDICARE PREMIUM &YR.01"
MEDPREM&YR.02="SSDI PHUS MEDICARE PREMIUM &YR.02"
MEDPREM&YR.03="SSDI PHUS MEDICARE PREMIUM &YR.03"
MEDPREM&YR.04="SSDI PHUS MEDICARE PREMIUM &YR.04"
MEDPREM&YR.05="SSDI PHUS MEDICARE PREMIUM &YR.05"
MEDPREM&YR.06="SSDI PHUS MEDICARE PREMIUM &YR.06"
MEDPREM&YR.07="SSDI PHUS MEDICARE PREMIUM &YR.07"
MEDPREM&YR.08="SSDI PHUS MEDICARE PREMIUM &YR.08"
MEDPREM&YR.09="SSDI PHUS MEDICARE PREMIUM &YR.09"
MEDPREM&YR.10="SSDI PHUS MEDICARE PREMIUM &YR.10"
MEDPREM&YR.11="SSDI PHUS MEDICARE PREMIUM &YR.11"
MEDPREM&YR.12="SSDI PHUS MEDICARE PREMIUM &YR.12"
MEDR&YR.01="SSDI MEDICARE ELIGIBILITY &YR.01"
MEDR&YR.02="SSDI MEDICARE ELIGIBILITY &YR.02"
MEDR&YR.03="SSDI MEDICARE ELIGIBILITY &YR.03"
MEDR&YR.04="SSDI MEDICARE ELIGIBILITY &YR.04"
MEDR&YR.05="SSDI MEDICARE ELIGIBILITY &YR.05"
MEDR&YR.06="SSDI MEDICARE ELIGIBILITY &YR.06"
MEDR&YR.07="SSDI MEDICARE ELIGIBILITY &YR.07"
MEDR&YR.08="SSDI MEDICARE ELIGIBILITY &YR.08"
MEDR&YR.09="SSDI MEDICARE ELIGIBILITY &YR.09"
MEDR&YR.10="SSDI MEDICARE ELIGIBILITY &YR.10"
MEDR&YR.11="SSDI MEDICARE ELIGIBILITY &YR.11"
MEDR&YR.12="SSDI MEDICARE ELIGIBILITY &YR.12"
MTST&YR.01="SSI MEDICAL AND SOCIAL SERVICE INCOME TEST &YR.01"
MTST&YR.02="SSI MEDICAL AND SOCIAL SERVICE INCOME TEST &YR.02"
MTST&YR.03="SSI MEDICAL AND SOCIAL SERVICE INCOME TEST &YR.03"
MTST&YR.04="SSI MEDICAL AND SOCIAL SERVICE INCOME TEST &YR.04"
MTST&YR.05="SSI MEDICAL AND SOCIAL SERVICE INCOME TEST &YR.05"
MTST&YR.06="SSI MEDICAL AND SOCIAL SERVICE INCOME TEST &YR.06"
MTST&YR.07="SSI MEDICAL AND SOCIAL SERVICE INCOME TEST &YR.07"
MTST&YR.08="SSI MEDICAL AND SOCIAL SERVICE INCOME TEST &YR.08"
MTST&YR.09="SSI MEDICAL AND SOCIAL SERVICE INCOME TEST &YR.09"
MTST&YR.10="SSI MEDICAL AND SOCIAL SERVICE INCOME TEST &YR.10"
MTST&YR.11="SSI MEDICAL AND SOCIAL SERVICE INCOME TEST &YR.11"
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Appendix A.136
JCL/SAS Code: LABELS

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MTST&YR.12="SSI MEDICAL AND SOCIAL SERVICE INCOME TEST &YR.12"
NECALC&YR.01=
"FLAG INDICATING DIRECT CALUCLATION OF NON-EARNED INCOME IN &YR.01"
NECALC&YR.02=
"FLAG INDICATING DIRECT CALUCLATION OF NON-EARNED INCOME IN &YR.02"
NECALC&YR.03=
"FLAG INDICATING DIRECT CALUCLATION OF NON-EARNED INCOME IN &YR.03"
NECALC&YR.04=
"FLAG INDICATING DIRECT CALUCLATION OF NON-EARNED INCOME IN &YR.04"
NECALC&YR.05=
"FLAG INDICATING DIRECT CALUCLATION OF NON-EARNED INCOME IN &YR.05"
NECALC&YR.06=
"FLAG INDICATING DIRECT CALUCLATION OF NON-EARNED INCOME IN &YR.06"
NECALC&YR.07=
"FLAG INDICATING DIRECT CALUCLATION OF NON-EARNED INCOME IN &YR.07"
NECALC&YR.08=
"FLAG INDICATING DIRECT CALUCLATION OF NON-EARNED INCOME IN &YR.08"
NECALC&YR.09=
"FLAG INDICATING DIRECT CALUCLATION OF NON-EARNED INCOME IN &YR.09"
NECALC&YR.10=
"FLAG INDICATING DIRECT CALUCLATION OF NON-EARNED INCOME IN &YR.10"
NECALC&YR.11=
"FLAG INDICATING DIRECT CALUCLATION OF NON-EARNED INCOME IN &YR.12"
NECALC&YR.12=
"FLAG INDICATING DIRECT CALUCLATION OF NON-EARNED INCOME IN &YR.12"
NONEARN&YR.01="DEEMED AND ISM INCOME (CALCULATED) IN &YR.01"
NONEARN&YR.02="DEEMED AND ISM INCOME (CALCULATED) IN &YR.02"
NONEARN&YR.03="DEEMED AND ISM INCOME (CALCULATED) IN &YR.03"
NONEARN&YR.04="DEEMED AND ISM INCOME (CALCULATED) IN &YR.04"
NONEARN&YR.05="DEEMED AND ISM INCOME (CALCULATED) IN &YR.05"
NONEARN&YR.06="DEEMED AND ISM INCOME (CALCULATED) IN &YR.06"
NONEARN&YR.07="DEEMED AND ISM INCOME (CALCULATED) IN &YR.07"
NONEARN&YR.08="DEEMED AND ISM INCOME (CALCULATED) IN &YR.08"
NONEARN&YR.09="DEEMED AND ISM INCOME (CALCULATED) IN &YR.09"
NONEARN&YR.10="DEEMED AND ISM INCOME (CALCULATED) IN &YR.10"
NONEARN&YR.11="DEEMED AND ISM INCOME (CALCULATED) IN &YR.11"
NONEARN&YR.12="DEEMED AND ISM INCOME (CALCULATED) IN &YR.12"
PAYD&YR.01="SSDI PHUS BENEFIT PAID &YR.01"
PAYD&YR.02="SSDI PHUS BENEFIT PAID &YR.02"
PAYD&YR.03="SSDI PHUS BENEFIT PAID &YR.03"
PAYD&YR.04="SSDI PHUS BENEFIT PAID &YR.04"
PAYD&YR.05="SSDI PHUS BENEFIT PAID &YR.05"
PAYD&YR.06="SSDI PHUS BENEFIT PAID &YR.06"
PAYD&YR.07="SSDI PHUS BENEFIT PAID &YR.07"
PAYD&YR.08="SSDI PHUS BENEFIT PAID &YR.08"
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Appendix A.136
JCL/SAS Code: LABELS

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PAYD&YR.09="SSDI PHUS BENEFIT PAID &YR.09"
PAYD&YR.10="SSDI PHUS BENEFIT PAID &YR.10"
PAYD&YR.11="SSDI PHUS BENEFIT PAID &YR.11"
PAYD&YR.12="SSDI PHUS BENEFIT PAID &YR.12"
PAYO&YR.01="SSDI PHUS DEPENDENT BENEFIT PAID &YR.01"
PAYO&YR.02="SSDI PHUS DEPENDENT BENEFIT PAID &YR.02"
PAYO&YR.03="SSDI PHUS DEPENDENT BENEFIT PAID &YR.03"
PAYO&YR.04="SSDI PHUS DEPENDENT BENEFIT PAID &YR.04"
PAYO&YR.05="SSDI PHUS DEPENDENT BENEFIT PAID &YR.05"
PAYO&YR.06="SSDI PHUS DEPENDENT BENEFIT PAID &YR.06"
PAYO&YR.07="SSDI PHUS DEPENDENT BENEFIT PAID &YR.07"
PAYO&YR.08="SSDI PHUS DEPENDENT BENEFIT PAID &YR.08"
PAYO&YR.09="SSDI PHUS DEPENDENT BENEFIT PAID &YR.09"
PAYO&YR.10="SSDI PHUS DEPENDENT BENEFIT PAID &YR.10"
PAYO&YR.11="SSDI PHUS DEPENDENT BENEFIT PAID &YR.11"
PAYO&YR.12="SSDI PHUS DEPENDENT BENEFIT PAID &YR.12"
PAYS&YR.01="SSI BENEFIT PAID &YR.01"
PAYS&YR.02="SSI BENEFIT PAID &YR.02"
PAYS&YR.03="SSI BENEFIT PAID &YR.03"
PAYS&YR.04="SSI BENEFIT PAID &YR.04"
PAYS&YR.05="SSI BENEFIT PAID &YR.05"
PAYS&YR.06="SSI BENEFIT PAID &YR.06"
PAYS&YR.07="SSI BENEFIT PAID &YR.07"
PAYS&YR.08="SSI BENEFIT PAID &YR.08"
PAYS&YR.09="SSI BENEFIT PAID &YR.09"
PAYS&YR.10="SSI BENEFIT PAID &YR.10"
PAYS&YR.11="SSI BENEFIT PAID &YR.11"
PAYS&YR.12="SSI BENEFIT PAID &YR.12"
PROA&YR.01="SSI USE OF 1619A PROVISION INDICATOR &YR.01"
PROA&YR.02="SSI USE OF 1619A PROVISION INDICATOR &YR.02"
PROA&YR.03="SSI USE OF 1619A PROVISION INDICATOR &YR.03"
PROA&YR.04="SSI USE OF 1619A PROVISION INDICATOR &YR.04"
PROA&YR.05="SSI USE OF 1619A PROVISION INDICATOR &YR.05"
PROA&YR.06="SSI USE OF 1619A PROVISION INDICATOR &YR.06"
PROA&YR.07="SSI USE OF 1619A PROVISION INDICATOR &YR.07"
PROA&YR.08="SSI USE OF 1619A PROVISION INDICATOR &YR.08"
PROA&YR.09="SSI USE OF 1619A PROVISION INDICATOR &YR.09"
PROA&YR.10="SSI USE OF 1619A PROVISION INDICATOR &YR.10"
PROA&YR.11="SSI USE OF 1619A PROVISION INDICATOR &YR.11"
PROA&YR.12="SSI USE OF 1619A PROVISION INDICATOR &YR.12"
PROB&YR.01="SSI USE OF 1619B PROVISION INDICATOR &YR.01"
PROB&YR.02="SSI USE OF 1619B PROVISION INDICATOR &YR.02"
PROB&YR.03="SSI USE OF 1619B PROVISION INDICATOR &YR.03"
PROB&YR.04="SSI USE OF 1619B PROVISION INDICATOR &YR.04"
PROB&YR.05="SSI USE OF 1619B PROVISION INDICATOR &YR.05"
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Appendix A.136
JCL/SAS Code: LABELS

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PROB&YR.06="SSI USE OF 1619B PROVISION INDICATOR &YR.06"
PROB&YR.07="SSI USE OF 1619B PROVISION INDICATOR &YR.07"
PROB&YR.08="SSI USE OF 1619B PROVISION INDICATOR &YR.08"
PROB&YR.09="SSI USE OF 1619B PROVISION INDICATOR &YR.09"
PROB&YR.10="SSI USE OF 1619B PROVISION INDICATOR &YR.10"
PROB&YR.11="SSI USE OF 1619B PROVISION INDICATOR &YR.11"
PROB&YR.12="SSI USE OF 1619B PROVISION INDICATOR &YR.12"
PSTA&YR.01="SSI PAYMENT STATUS (PSTAT) &YR.01"
PSTA&YR.02="SSI PAYMENT STATUS (PSTAT) &YR.02"
PSTA&YR.03="SSI PAYMENT STATUS (PSTAT) &YR.03"
PSTA&YR.04="SSI PAYMENT STATUS (PSTAT) &YR.04"
PSTA&YR.05="SSI PAYMENT STATUS (PSTAT) &YR.05"
PSTA&YR.06="SSI PAYMENT STATUS (PSTAT) &YR.06"
PSTA&YR.07="SSI PAYMENT STATUS (PSTAT) &YR.07"
PSTA&YR.08="SSI PAYMENT STATUS (PSTAT) &YR.08"
PSTA&YR.09="SSI PAYMENT STATUS (PSTAT) &YR.09"
PSTA&YR.10="SSI PAYMENT STATUS (PSTAT) &YR.10"
PSTA&YR.11="SSI PAYMENT STATUS (PSTAT) &YR.11"
PSTA&YR.12="SSI PAYMENT STATUS (PSTAT) &YR.12"
PST&YR.01="STATE POSTAL CODE (BEST) &YR.01"
PST&YR.02="STATE POSTAL CODE (BEST) &YR.02"
PST&YR.03="STATE POSTAL CODE (BEST) &YR.03"
PST&YR.04="STATE POSTAL CODE (BEST) &YR.04"
PST&YR.05="STATE POSTAL CODE (BEST) &YR.05"
PST&YR.06="STATE POSTAL CODE (BEST) &YR.06"
PST&YR.07="STATE POSTAL CODE (BEST) &YR.07"
PST&YR.08="STATE POSTAL CODE (BEST) &YR.08"
PST&YR.09="STATE POSTAL CODE (BEST) &YR.09"
PST&YR.10="STATE POSTAL CODE (BEST) &YR.10"
PST&YR.11="STATE POSTAL CODE (BEST) &YR.11"
PST&YR.12="STATE POSTAL CODE (BEST) &YR.12"
RFD&YR.01="SSDI REASON FOR DEDUCTION CODE &YR.01"
RFD&YR.02="SSDI REASON FOR DEDUCTION CODE &YR.02"
RFD&YR.03="SSDI REASON FOR DEDUCTION CODE &YR.03"
RFD&YR.04="SSDI REASON FOR DEDUCTION CODE &YR.04"
RFD&YR.05="SSDI REASON FOR DEDUCTION CODE &YR.05"
RFD&YR.06="SSDI REASON FOR DEDUCTION CODE &YR.06"
RFD&YR.07="SSDI REASON FOR DEDUCTION CODE &YR.07"
RFD&YR.08="SSDI REASON FOR DEDUCTION CODE &YR.08"
RFD&YR.09="SSDI REASON FOR DEDUCTION CODE &YR.09"
RFD&YR.10="SSDI REASON FOR DEDUCTION CODE &YR.10"
RFD&YR.11="SSDI REASON FOR DEDUCTION CODE &YR.11"
RFD&YR.12="SSDI REASON FOR DEDUCTION CODE &YR.12"
RFST&YR.01="SSDI REASON FOR SUSPENSION OR TERMINATION CODE &YR.01"
RFST&YR.02="SSDI REASON FOR SUSPENSION OR TERMINATION CODE &YR.02"
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Appendix A.136
JCL/SAS Code: LABELS

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RFST&YR.03="SSDI REASON FOR SUSPENSION OR TERMINATION CODE &YR.03"
RFST&YR.04="SSDI REASON FOR SUSPENSION OR TERMINATION CODE &YR.04"
RFST&YR.05="SSDI REASON FOR SUSPENSION OR TERMINATION CODE &YR.05"
RFST&YR.06="SSDI REASON FOR SUSPENSION OR TERMINATION CODE &YR.06"
RFST&YR.07="SSDI REASON FOR SUSPENSION OR TERMINATION CODE &YR.07"
RFST&YR.08="SSDI REASON FOR SUSPENSION OR TERMINATION CODE &YR.08"
RFST&YR.09="SSDI REASON FOR SUSPENSION OR TERMINATION CODE &YR.09"
RFST&YR.10="SSDI REASON FOR SUSPENSION OR TERMINATION CODE &YR.10"
RFST&YR.11="SSDI REASON FOR SUSPENSION OR TERMINATION CODE &YR.11"
RFST&YR.12="SSDI REASON FOR SUSPENSION OR TERMINATION CODE &YR.12"
SAMT&YR.01="SSI STATE BENEFIT DUE &YR.01"
SAMT&YR.02="SSI STATE BENEFIT DUE &YR.02"
SAMT&YR.03="SSI STATE BENEFIT DUE &YR.03"
SAMT&YR.04="SSI STATE BENEFIT DUE &YR.04"
SAMT&YR.05="SSI STATE BENEFIT DUE &YR.05"
SAMT&YR.06="SSI STATE BENEFIT DUE &YR.06"
SAMT&YR.07="SSI STATE BENEFIT DUE &YR.07"
SAMT&YR.08="SSI STATE BENEFIT DUE &YR.08"
SAMT&YR.09="SSI STATE BENEFIT DUE &YR.09"
SAMT&YR.10="SSI STATE BENEFIT DUE &YR.10"
SAMT&YR.11="SSI STATE BENEFIT DUE &YR.11"
SAMT&YR.12="SSI STATE BENEFIT DUE &YR.12"
SCON&YR.01="SSI STATE CONCURRENT ELIGIBILITY CODE &YR.01"
SCON&YR.02="SSI STATE CONCURRENT ELIGIBILITY CODE &YR.02"
SCON&YR.03="SSI STATE CONCURRENT ELIGIBILITY CODE &YR.03"
SCON&YR.04="SSI STATE CONCURRENT ELIGIBILITY CODE &YR.04"
SCON&YR.05="SSI STATE CONCURRENT ELIGIBILITY CODE &YR.05"
SCON&YR.06="SSI STATE CONCURRENT ELIGIBILITY CODE &YR.06"
SCON&YR.07="SSI STATE CONCURRENT ELIGIBILITY CODE &YR.07"
SCON&YR.08="SSI STATE CONCURRENT ELIGIBILITY CODE &YR.08"
SCON&YR.09="SSI STATE CONCURRENT ELIGIBILITY CODE &YR.09"
SCON&YR.10="SSI STATE CONCURRENT ELIGIBILITY CODE &YR.10"
SCON&YR.11="SSI STATE CONCURRENT ELIGIBILITY CODE &YR.11"
SCON&YR.12="SSI STATE CONCURRENT ELIGIBILITY CODE &YR.12"
SEX="SEX"
SSIERNSGA&YR.01="SSI SGA FLAG &YR.01"
SSIERNSGA&YR.02="SSI SGA FLAG &YR.02"
SSIERNSGA&YR.03="SSI SGA FLAG &YR.03"
SSIERNSGA&YR.04="SSI SGA FLAG &YR.04"
SSIERNSGA&YR.05="SSI SGA FLAG &YR.05"
SSIERNSGA&YR.06="SSI SGA FLAG &YR.06"
SSIERNSGA&YR.07="SSI SGA FLAG &YR.07"
SSIERNSGA&YR.08="SSI SGA FLAG &YR.08"
SSIERNSGA&YR.09="SSI SGA FLAG &YR.09"
SSIERNSGA&YR.10="SSI SGA FLAG &YR.10"
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Appendix A.136
JCL/SAS Code: LABELS

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SSIERNSGA&YR.11="SSI SGA FLAG &YR.11"
SSIERNSGA&YR.12="SSI SGA FLAG &YR.12"
SIND&YR.01="SSI SELF-EMP INDICATOR &YR.01"
SIND&YR.02="SSI SELF-EMP INDICATOR &YR.02"
SIND&YR.03="SSI SELF-EMP INDICATOR &YR.03"
SIND&YR.04="SSI SELF-EMP INDICATOR &YR.04"
SIND&YR.05="SSI SELF-EMP INDICATOR &YR.05"
SIND&YR.06="SSI SELF-EMP INDICATOR &YR.06"
SIND&YR.07="SSI SELF-EMP INDICATOR &YR.07"
SIND&YR.08="SSI SELF-EMP INDICATOR &YR.08"
SIND&YR.09="SSI SELF-EMP INDICATOR &YR.09"
SIND&YR.10="SSI SELF-EMP INDICATOR &YR.10"
SIND&YR.11="SSI SELF-EMP INDICATOR &YR.11"
SIND&YR.12="SSI SELF-EMP INDICATOR &YR.12"
SPMT&YR.01="SSI STATE BENEFIT PAID &YR.01"
SPMT&YR.02="SSI STATE BENEFIT PAID &YR.02"
SPMT&YR.03="SSI STATE BENEFIT PAID &YR.03"
SPMT&YR.04="SSI STATE BENEFIT PAID &YR.04"
SPMT&YR.05="SSI STATE BENEFIT PAID &YR.05"
SPMT&YR.06="SSI STATE BENEFIT PAID &YR.06"
SPMT&YR.07="SSI STATE BENEFIT PAID &YR.07"
SPMT&YR.08="SSI STATE BENEFIT PAID &YR.08"
SPMT&YR.09="SSI STATE BENEFIT PAID &YR.09"
SPMT&YR.10="SSI STATE BENEFIT PAID &YR.10"
SPMT&YR.11="SSI STATE BENEFIT PAID &YR.11"
SPMT&YR.12="SSI STATE BENEFIT PAID &YR.12"
SSDI_ONSET="SSDI DISABILITY ONSET DATE EARLIEST PERIOD OF ELIGIBILITY"
SSDI94="SSDI CURRENT PAY STATUS IN 1994"
SSDI95="SSDI CURRENT PAY STATUS IN 1995"
SSDI96="SSDI CURRENT PAY STATUS IN 1996"
SSDI97="SSDI CURRENT PAY STATUS IN 1997"
SSDI98="SSDI CURRENT PAY STATUS IN 1998"
SSDI99="SSDI CURRENT PAY STATUS IN 1999"
SSDI00="SSDI CURRENT PAY STATUS IN 2000"
SSDI01="SSDI CURRENT PAY STATUS IN 2001"
SSDI02="SSDI CURRENT PAY STATUS IN 2002"
SSDI03="SSDI CURRENT PAY STATUS IN 2003"
SSDI04="SSDI CURRENT PAY STATUS IN 2004"
SSDI05="SSDI CURRENT PAY STATUS IN 2005"
SSDI06="SSDI CURRENT PAY STATUS IN 2006"
SSDI07="SSDI CURRENT PAY STATUS IN 2007"
SSDI08="SSDI CURRENT PAY STATUS IN 2008"
SSDI09="SSDI CURRENT PAY STATUS IN 2009"
SSDI10="SSDI CURRENT PAY STATUS IN 2010"
SSDI11="SSDI CURRENT PAY STATUS IN 2011"
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Appendix A.136
JCL/SAS Code: LABELS

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SSDI12="SSDI CURRENT PAY STATUS IN 2012"
SSDI13="SSDI CURRENT PAY STATUS IN 2013"
SSDI14="SSDI CURRENT PAY STATUS IN 2014"
SSDI15="SSDI CURRENT PAY STATUS IN 2015"
SSDI16="SSDI CURRENT PAY STATUS IN 2016"
SSDI17="SSDI CURRENT PAY STATUS IN 2017"
SSI94="SSI CURRENT PAY STATUS IN 1994"
SSI95="SSI CURRENT PAY STATUS IN 1995"
SSI96="SSI CURRENT PAY STATUS IN 1996"
SSI97="SSI CURRENT PAY STATUS IN 1997"
SSI98="SSI CURRENT PAY STATUS IN 1998"
SSI99="SSI CURRENT PAY STATUS IN 1999"
SSI00="SSI CURRENT PAY STATUS IN 2000"
SSI01="SSI CURRENT PAY STATUS IN 2001"
SSI02="SSI CURRENT PAY STATUS IN 2002"
SSI03="SSI CURRENT PAY STATUS IN 2003"
SSI04="SSI CURRENT PAY STATUS IN 2004"
SSI05="SSI CURRENT PAY STATUS IN 2005"
SSI06="SSI CURRENT PAY STATUS IN 2006"
SSI07="SSI CURRENT PAY STATUS IN 2007"
SSI08="SSI CURRENT PAY STATUS IN 2008"
SSI09="SSI CURRENT PAY STATUS IN 2009"
SSI10="SSI CURRENT PAY STATUS IN 2010"
SSI11="SSI CURRENT PAY STATUS IN 2011"
SSI12="SSI CURRENT PAY STATUS IN 2012"
SSI13="SSI CURRENT PAY STATUS IN 2013"
SSI14="SSI CURRENT PAY STATUS IN 2014"
SSI15="SSI CURRENT PAY STATUS IN 2015"
SSI16="SSI CURRENT PAY STATUS IN 2016"
SSI17="SSI CURRENT PAY STATUS IN 2017"
SSIELIG_FIRST="SSI EARLIEST ELIGIBILITY DATE (CONSTRUCTED)"
SSIERNLVL&YR.01="SSI EARNING LEVEL INDICATOR &YR.01"
SSIERNLVL&YR.02="SSI EARNING LEVEL INDICATOR &YR.02"
SSIERNLVL&YR.03="SSI EARNING LEVEL INDICATOR &YR.03"
SSIERNLVL&YR.04="SSI EARNING LEVEL INDICATOR &YR.04"
SSIERNLVL&YR.05="SSI EARNING LEVEL INDICATOR &YR.05"
SSIERNLVL&YR.06="SSI EARNING LEVEL INDICATOR &YR.06"
SSIERNLVL&YR.07="SSI EARNING LEVEL INDICATOR &YR.07"
SSIERNLVL&YR.08="SSI EARNING LEVEL INDICATOR &YR.08"
SSIERNLVL&YR.09="SSI EARNING LEVEL INDICATOR &YR.09"
SSIERNLVL&YR.10="SSI EARNING LEVEL INDICATOR &YR.10"
SSIERNLVL&YR.11="SSI EARNING LEVEL INDICATOR &YR.11"
SSIERNLVL&YR.12="SSI EARNING LEVEL INDICATOR &YR.12"
SSN="SOCIAL SECURITY NUMBER"
STWCM&YR.01=
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Appendix A.136
JCL/SAS Code: LABELS

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"COMBINED (SSDI/SSI) SUSPENSE OR TERMINATION DUE TO WORK &YR.01"
STWCM&YR.02=
"COMBINED (SSDI/SSI) SUSPENSE OR TERMINATION DUE TO WORK &YR.02"
STWCM&YR.03=
"COMBINED (SSDI/SSI) SUSPENSE OR TERMINATION DUE TO WORK &YR.03"
STWCM&YR.04=
"COMBINED (SSDI/SSI) SUSPENSE OR TERMINATION DUE TO WORK &YR.04"
STWCM&YR.05=
"COMBINED (SSDI/SSI) SUSPENSE OR TERMINATION DUE TO WORK &YR.05"
STWCM&YR.06=
"COMBINED (SSDI/SSI) SUSPENSE OR TERMINATION DUE TO WORK &YR.06"
STWCM&YR.07=
"COMBINED (SSDI/SSI) SUSPENSE OR TERMINATION DUE TO WORK &YR.07"
STWCM&YR.08=
"COMBINED (SSDI/SSI) SUSPENSE OR TERMINATION DUE TO WORK &YR.08"
STWCM&YR.09=
"COMBINED (SSDI/SSI) SUSPENSE OR TERMINATION DUE TO WORK &YR.09"
STWCM&YR.10=
"COMBINED (SSDI/SSI) SUSPENSE OR TERMINATION DUE TO WORK &YR.10"
STWCM&YR.11=
"COMBINED (SSDI/SSI) SUSPENSE OR TERMINATION DUE TO WORK &YR.11"
STWCM&YR.12=
"COMBINED (SSDI/SSI) SUSPENSE OR TERMINATION DUE TO WORK &YR.12"
STWDI&YR.01="SSDI SUSPENSE OR TERMINATION DUE TO WORK &YR.01"
STWDI&YR.02="SSDI SUSPENSE OR TERMINATION DUE TO WORK &YR.02"
STWDI&YR.03="SSDI SUSPENSE OR TERMINATION DUE TO WORK &YR.03"
STWDI&YR.04="SSDI SUSPENSE OR TERMINATION DUE TO WORK &YR.04"
STWDI&YR.05="SSDI SUSPENSE OR TERMINATION DUE TO WORK &YR.05"
STWDI&YR.06="SSDI SUSPENSE OR TERMINATION DUE TO WORK &YR.06"
STWDI&YR.07="SSDI SUSPENSE OR TERMINATION DUE TO WORK &YR.07"
STWDI&YR.08="SSDI SUSPENSE OR TERMINATION DUE TO WORK &YR.08"
STWDI&YR.09="SSDI SUSPENSE OR TERMINATION DUE TO WORK &YR.09"
STWDI&YR.10="SSDI SUSPENSE OR TERMINATION DUE TO WORK &YR.10"
STWDI&YR.11="SSDI SUSPENSE OR TERMINATION DUE TO WORK &YR.11"
STWDI&YR.12="SSDI SUSPENSE OR TERMINATION DUE TO WORK &YR.12"
STWSSI&YR.01="SSI SUSPENSE OR TERMINATION DUE TO WORK &YR.01"
STWSSI&YR.02="SSI SUSPENSE OR TERMINATION DUE TO WORK &YR.02"
STWSSI&YR.03="SSI SUSPENSE OR TERMINATION DUE TO WORK &YR.03"
STWSSI&YR.04="SSI SUSPENSE OR TERMINATION DUE TO WORK &YR.04"
STWSSI&YR.05="SSI SUSPENSE OR TERMINATION DUE TO WORK &YR.05"
STWSSI&YR.06="SSI SUSPENSE OR TERMINATION DUE TO WORK &YR.06"
STWSSI&YR.07="SSI SUSPENSE OR TERMINATION DUE TO WORK &YR.07"
STWSSI&YR.08="SSI SUSPENSE OR TERMINATION DUE TO WORK &YR.08"
STWSSI&YR.09="SSI SUSPENSE OR TERMINATION DUE TO WORK &YR.09"
STWSSI&YR.10="SSI SUSPENSE OR TERMINATION DUE TO WORK &YR.10"
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Appendix A.136
JCL/SAS Code: LABELS

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STWSSI&YR.11="SSI SUSPENSE OR TERMINATION DUE TO WORK &YR.11"
STWSSI&YR.12="SSI SUSPENSE OR TERMINATION DUE TO WORK &YR.12"
STUDM&YR.01="SSI Student Indicator (SSR) &YR.01"
STUDM&YR.02="SSI Student Indicator (SSR) &YR.02"
STUDM&YR.03="SSI Student Indicator (SSR) &YR.03"
STUDM&YR.04="SSI Student Indicator (SSR) &YR.04"
STUDM&YR.05="SSI Student Indicator (SSR) &YR.05"
STUDM&YR.06="SSI Student Indicator (SSR) &YR.06"
STUDM&YR.07="SSI Student Indicator (SSR) &YR.07"
STUDM&YR.08="SSI Student Indicator (SSR) &YR.08"
STUDM&YR.09="SSI Student Indicator (SSR) &YR.09"
STUDM&YR.10="SSI Student Indicator (SSR) &YR.10"
STUDM&YR.11="SSI Student Indicator (SSR) &YR.11"
STUDM&YR.12="SSI Student Indicator (SSR) &YR.12"
TKT02="TICKET ACTIVE IN 2002"
TKT03="TICKET ACTIVE IN 2003"
TKT04="TICKET ACTIVE IN 2004"
TKT05="TICKET ACTIVE IN 2005"
TKT06="TICKET ACTIVE IN 2006"
TKT07="TICKET ACTIVE IN 2007"
TKT08="TICKET ACTIVE IN 2008"
TKT09="TICKET ACTIVE IN 2009"
TKT10="TICKET ACTIVE IN 2010"
TKT11="TICKET ACTIVE IN 2011"
TKT12="TICKET ACTIVE IN 2012"
TKT13="TICKET ACTIVE IN 2013"
TKT14="TICKET ACTIVE IN 2014"
TKT15="TICKET ACTIVE IN 2015"
TKT16="TICKET ACTIVE IN 2016"
TKT17="TICKET ACTIVE IN 2017"
TWPDATA&YR.01="SSDI TRIAL WORK PERIOD CODE &YR.01"
TWPDATA&YR.02="SSDI TRIAL WORK PERIOD CODE &YR.02"
TWPDATA&YR.03="SSDI TRIAL WORK PERIOD CODE &YR.03"
TWPDATA&YR.04="SSDI TRIAL WORK PERIOD CODE &YR.04"
TWPDATA&YR.05="SSDI TRIAL WORK PERIOD CODE &YR.05"
TWPDATA&YR.06="SSDI TRIAL WORK PERIOD CODE &YR.06"
TWPDATA&YR.07="SSDI TRIAL WORK PERIOD CODE &YR.07"
TWPDATA&YR.08="SSDI TRIAL WORK PERIOD CODE &YR.08"
TWPDATA&YR.09="SSDI TRIAL WORK PERIOD CODE &YR.09"
TWPDATA&YR.10="SSDI TRIAL WORK PERIOD CODE &YR.10"
TWPDATA&YR.11="SSDI TRIAL WORK PERIOD CODE &YR.11"
TWPDATA&YR.12="SSDI TRIAL WORK PERIOD CODE &YR.12"
T16BEXPAMT&YR.01=
  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.01"
T16BEXPAMT&YR.02=
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Appendix A.136
JCL/SAS Code: LABELS

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  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.02"
T16BEXPAMT&YR.03=
  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.03"
T16BEXPAMT&YR.04=
  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.04"
T16BEXPAMT&YR.05=
  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.05"
T16BEXPAMT&YR.06=
  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.06"
T16BEXPAMT&YR.07=
  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.07"
T16BEXPAMT&YR.08=
  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.08"
T16BEXPAMT&YR.09=
  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.09"
T16BEXPAMT&YR.10=
  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.10"
T16BEXPAMT&YR.11=
  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.11"
T16BEXPAMT&YR.12=
  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.12"
T16EXLAMT&YR.01="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.01"
T16EXLAMT&YR.02="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.02"
T16EXLAMT&YR.03="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.03"
T16EXLAMT&YR.04="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.04"
T16EXLAMT&YR.05="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.05"
T16EXLAMT&YR.06="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.06"
T16EXLAMT&YR.07="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.07"
T16EXLAMT&YR.08="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.08"
T16EXLAMT&YR.09="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.09"
T16EXLAMT&YR.10="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.10"
T16EXLAMT&YR.11="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.11"
T16EXLAMT&YR.12="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.12"
T16EXPAMT&YR.01=
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.01"
T16EXPAMT&YR.02=
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.02"
T16EXPAMT&YR.03=
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.03"
T16EXPAMT&YR.04=
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.04"
T16EXPAMT&YR.05=
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.05"
T16EXPAMT&YR.06=
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.06"
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Appendix A.136
JCL/SAS Code: LABELS

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T16EXPAMT&YR.07=
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.07"
T16EXPAMT&YR.08=
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.08"
T16EXPAMT&YR.09=
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.09"
T16EXPAMT&YR.10=
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.10"
T16EXPAMT&YR.11=
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.11"
T16EXPAMT&YR.12=
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.12"
T16GRSAMT&YR.01="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.01"
T16GRSAMT&YR.02="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.02"
T16GRSAMT&YR.03="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.03"
T16GRSAMT&YR.04="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.04"
T16GRSAMT&YR.05="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.05"
T16GRSAMT&YR.06="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.06"
T16GRSAMT&YR.07="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.07"
T16GRSAMT&YR.08="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.08"
T16GRSAMT&YR.09="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.09"
T16GRSAMT&YR.10="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.10"
T16GRSAMT&YR.11="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.11"
T16GRSAMT&YR.12="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.12"
T16NETAMT&YR.01="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.01"
T16NETAMT&YR.02="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.02"
T16NETAMT&YR.03="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.03"
T16NETAMT&YR.04="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.04"
T16NETAMT&YR.05="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.05"
T16NETAMT&YR.06="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.06"
T16NETAMT&YR.07="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.07"
T16NETAMT&YR.08="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.08"
T16NETAMT&YR.09="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.09"
T16NETAMT&YR.10="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.10"
T16NETAMT&YR.11="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.11"
T16NETAMT&YR.12="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.12"
T16PASAMT&YR.01="SSI PASS AMOUNT (SSR) &YR.01"
T16PASAMT&YR.02="SSI PASS AMOUNT (SSR) &YR.02"
T16PASAMT&YR.03="SSI PASS AMOUNT (SSR) &YR.03"
T16PASAMT&YR.04="SSI PASS AMOUNT (SSR) &YR.04"
T16PASAMT&YR.05="SSI PASS AMOUNT (SSR) &YR.05"
T16PASAMT&YR.06="SSI PASS AMOUNT (SSR) &YR.06"
T16PASAMT&YR.07="SSI PASS AMOUNT (SSR) &YR.07"
T16PASAMT&YR.08="SSI PASS AMOUNT (SSR) &YR.08"
T16PASAMT&YR.09="SSI PASS AMOUNT (SSR) &YR.09"
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Appendix A.136
JCL/SAS Code: LABELS

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T16PASAMT&YR.10="SSI PASS AMOUNT (SSR) &YR.10"
T16PASAMT&YR.11="SSI PASS AMOUNT (SSR) &YR.11"
T16PASAMT&YR.12="SSI PASS AMOUNT (SSR) &YR.12"
T16SEAMT&YR.01="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.01"
T16SEAMT&YR.02="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.02"
T16SEAMT&YR.03="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.03"
T16SEAMT&YR.04="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.04"
T16SEAMT&YR.05="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.05"
T16SEAMT&YR.06="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.06"
T16SEAMT&YR.07="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.07"
T16SEAMT&YR.08="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.08"
T16SEAMT&YR.09="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.09"
T16SEAMT&YR.10="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.10"
T16SEAMT&YR.11="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.11"
T16SEAMT&YR.12="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.12"
T2CDNAMT&YR.01="SSDI SPECIAL CONDITION AMOUNT (DCF) &YR.01"
T2CDNAMT&YR.02="SSDI SPECIAL CONDITION AMOUNT (DCF) &YR.02"
T2CDNAMT&YR.03="SSDI SPECIAL CONDITION AMOUNT (DCF) &YR.03"
T2CDNAMT&YR.04="SSDI SPECIAL CONDITION AMOUNT (DCF) &YR.04"
T2CDNAMT&YR.05="SSDI SPECIAL CONDITION AMOUNT (DCF) &YR.05"
T2CDNAMT&YR.06="SSDI SPECIAL CONDITION AMOUNT (DCF) &YR.06"
T2CDNAMT&YR.07="SSDI SPECIAL CONDITION AMOUNT (DCF) &YR.07"
T2CDNAMT&YR.08="SSDI SPECIAL CONDITION AMOUNT (DCF) &YR.08"
T2CDNAMT&YR.09="SSDI SPECIAL CONDITION AMOUNT (DCF) &YR.09"
T2CDNAMT&YR.10="SSDI SPECIAL CONDITION AMOUNT (DCF) &YR.10"
T2CDNAMT&YR.11="SSDI SPECIAL CONDITION AMOUNT (DCF) &YR.11"
T2CDNAMT&YR.12="SSDI SPECIAL CONDITION AMOUNT (DCF) &YR.12"
T2EXPAMT&YR.01="SSDI WORK EXPENSE AMOUNT (DCF) &YR.01"
T2EXPAMT&YR.02="SSDI WORK EXPENSE AMOUNT (DCF) &YR.02"
T2EXPAMT&YR.03="SSDI WORK EXPENSE AMOUNT (DCF) &YR.03"
T2EXPAMT&YR.04="SSDI WORK EXPENSE AMOUNT (DCF) &YR.04"
T2EXPAMT&YR.05="SSDI WORK EXPENSE AMOUNT (DCF) &YR.05"
T2EXPAMT&YR.06="SSDI WORK EXPENSE AMOUNT (DCF) &YR.06"
T2EXPAMT&YR.07="SSDI WORK EXPENSE AMOUNT (DCF) &YR.07"
T2EXPAMT&YR.08="SSDI WORK EXPENSE AMOUNT (DCF) &YR.08"
T2EXPAMT&YR.09="SSDI WORK EXPENSE AMOUNT (DCF) &YR.09"
T2EXPAMT&YR.10="SSDI WORK EXPENSE AMOUNT (DCF) &YR.10"
T2EXPAMT&YR.11="SSDI WORK EXPENSE AMOUNT (DCF) &YR.11"
T2EXPAMT&YR.12="SSDI WORK EXPENSE AMOUNT (DCF) &YR.12"
T2FRAUDVER&YR.01="SSDI FRAUD VERIFIED SWITCH (DCF) &YR.01"
T2FRAUDVER&YR.02="SSDI FRAUD VERIFIED SWITCH (DCF) &YR.02"
T2FRAUDVER&YR.03="SSDI FRAUD VERIFIED SWITCH (DCF) &YR.03"
T2FRAUDVER&YR.04="SSDI FRAUD VERIFIED SWITCH (DCF) &YR.04"
T2FRAUDVER&YR.05="SSDI FRAUD VERIFIED SWITCH (DCF) &YR.05"
T2FRAUDVER&YR.06="SSDI FRAUD VERIFIED SWITCH (DCF) &YR.06"
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Appendix A.136
JCL/SAS Code: LABELS

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T2FRAUDVER&YR.07="SSDI FRAUD VERIFIED SWITCH (DCF) &YR.07"
T2FRAUDVER&YR.08="SSDI FRAUD VERIFIED SWITCH (DCF) &YR.08"
T2FRAUDVER&YR.09="SSDI FRAUD VERIFIED SWITCH (DCF) &YR.09"
T2FRAUDVER&YR.10="SSDI FRAUD VERIFIED SWITCH (DCF) &YR.10"
T2FRAUDVER&YR.11="SSDI FRAUD VERIFIED SWITCH (DCF) &YR.11"
T2FRAUDVER&YR.12="SSDI FRAUD VERIFIED SWITCH (DCF) &YR.12"
T2GRSAMT&YR.01="SSDI EARNINGS GROSS AMOUNT (DCF) &YR.01"
T2GRSAMT&YR.02="SSDI EARNINGS GROSS AMOUNT (DCF) &YR.02"
T2GRSAMT&YR.03="SSDI EARNINGS GROSS AMOUNT (DCF) &YR.03"
T2GRSAMT&YR.04="SSDI EARNINGS GROSS AMOUNT (DCF) &YR.04"
T2GRSAMT&YR.05="SSDI EARNINGS GROSS AMOUNT (DCF) &YR.05"
T2GRSAMT&YR.06="SSDI EARNINGS GROSS AMOUNT (DCF) &YR.06"
T2GRSAMT&YR.07="SSDI EARNINGS GROSS AMOUNT (DCF) &YR.07"
T2GRSAMT&YR.08="SSDI EARNINGS GROSS AMOUNT (DCF) &YR.08"
T2GRSAMT&YR.09="SSDI EARNINGS GROSS AMOUNT (DCF) &YR.09"
T2GRSAMT&YR.10="SSDI EARNINGS GROSS AMOUNT (DCF) &YR.10"
T2GRSAMT&YR.11="SSDI EARNINGS GROSS AMOUNT (DCF) &YR.11"
T2GRSAMT&YR.12="SSDI EARNINGS GROSS AMOUNT (DCF) &YR.12"
T2NETAMT&YR.01="SSDI SELF-EMP NET INCOME AMOUNT (DCF) &YR.01"
T2NETAMT&YR.02="SSDI SELF-EMP NET INCOME AMOUNT (DCF) &YR.02"
T2NETAMT&YR.03="SSDI SELF-EMP NET INCOME AMOUNT (DCF) &YR.03"
T2NETAMT&YR.04="SSDI SELF-EMP NET INCOME AMOUNT (DCF) &YR.04"
T2NETAMT&YR.05="SSDI SELF-EMP NET INCOME AMOUNT (DCF) &YR.05"
T2NETAMT&YR.06="SSDI SELF-EMP NET INCOME AMOUNT (DCF) &YR.06"
T2NETAMT&YR.07="SSDI SELF-EMP NET INCOME AMOUNT (DCF) &YR.07"
T2NETAMT&YR.08="SSDI SELF-EMP NET INCOME AMOUNT (DCF) &YR.08"
T2NETAMT&YR.09="SSDI SELF-EMP NET INCOME AMOUNT (DCF) &YR.09"
T2NETAMT&YR.10="SSDI SELF-EMP NET INCOME AMOUNT (DCF) &YR.10"
T2NETAMT&YR.11="SSDI SELF-EMP NET INCOME AMOUNT (DCF) &YR.11"
T2NETAMT&YR.12="SSDI SELF-EMP NET INCOME AMOUNT (DCF) &YR.12"
T2SBDYAMT&YR.01="SSDI EARNINGS SUBSIDY AMOUNT (DCF) &YR.01"
T2SBDYAMT&YR.02="SSDI EARNINGS SUBSIDY AMOUNT (DCF) &YR.02"
T2SBDYAMT&YR.03="SSDI EARNINGS SUBSIDY AMOUNT (DCF) &YR.03"
T2SBDYAMT&YR.04="SSDI EARNINGS SUBSIDY AMOUNT (DCF) &YR.04"
T2SBDYAMT&YR.05="SSDI EARNINGS SUBSIDY AMOUNT (DCF) &YR.05"
T2SBDYAMT&YR.06="SSDI EARNINGS SUBSIDY AMOUNT (DCF) &YR.06"
T2SBDYAMT&YR.07="SSDI EARNINGS SUBSIDY AMOUNT (DCF) &YR.07"
T2SBDYAMT&YR.08="SSDI EARNINGS SUBSIDY AMOUNT (DCF) &YR.08"
T2SBDYAMT&YR.09="SSDI EARNINGS SUBSIDY AMOUNT (DCF) &YR.09"
T2SBDYAMT&YR.10="SSDI EARNINGS SUBSIDY AMOUNT (DCF) &YR.10"
T2SBDYAMT&YR.11="SSDI EARNINGS SUBSIDY AMOUNT (DCF) &YR.11"
T2SBDYAMT&YR.12="SSDI EARNINGS SUBSIDY AMOUNT (DCF) &YR.12"
T2SEHRS&YR.01="SSDI SELF-EMP HOURS (DCF) &YR.01"
T2SEHRS&YR.02="SSDI SELF-EMP HOURS (DCF) &YR.02"
T2SEHRS&YR.03="SSDI SELF-EMP HOURS (DCF) &YR.03"
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Appendix A.136
JCL/SAS Code: LABELS

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T2SEHRS&YR.04="SSDI SELF-EMP HOURS (DCF) &YR.04"
T2SEHRS&YR.05="SSDI SELF-EMP HOURS (DCF) &YR.05"
T2SEHRS&YR.06="SSDI SELF-EMP HOURS (DCF) &YR.06"
T2SEHRS&YR.07="SSDI SELF-EMP HOURS (DCF) &YR.07"
T2SEHRS&YR.08="SSDI SELF-EMP HOURS (DCF) &YR.08"
T2SEHRS&YR.09="SSDI SELF-EMP HOURS (DCF) &YR.09"
T2SEHRS&YR.10="SSDI SELF-EMP HOURS (DCF) &YR.10"
T2SEHRS&YR.11="SSDI SELF-EMP HOURS (DCF) &YR.11"
T2SEHRS&YR.12="SSDI SELF-EMP HOURS (DCF) &YR.12"
T2SEVERIND&YR.01="SSDI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.01"
T2SEVERIND&YR.02="SSDI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.02"
T2SEVERIND&YR.03="SSDI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.03"
T2SEVERIND&YR.04="SSDI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.04"
T2SEVERIND&YR.05="SSDI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.05"
T2SEVERIND&YR.06="SSDI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.06"
T2SEVERIND&YR.07="SSDI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.07"
T2SEVERIND&YR.08="SSDI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.08"
T2SEVERIND&YR.09="SSDI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.09"
T2SEVERIND&YR.10="SSDI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.10"
T2SEVERIND&YR.11="SSDI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.11"
T2SEVERIND&YR.12="SSDI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.12"
T2UBEAMT&YR.01="SSDI SELF-EMP UNPAID BUSINESS EXP AMT (DCF) &YR.01"
T2UBEAMT&YR.02="SSDI SELF-EMP UNPAID BUSINESS EXP AMT (DCF) &YR.02"
T2UBEAMT&YR.03="SSDI SELF-EMP UNPAID BUSINESS EXP AMT (DCF) &YR.03"
T2UBEAMT&YR.04="SSDI SELF-EMP UNPAID BUSINESS EXP AMT (DCF) &YR.04"
T2UBEAMT&YR.05="SSDI SELF-EMP UNPAID BUSINESS EXP AMT (DCF) &YR.05"
T2UBEAMT&YR.06="SSDI SELF-EMP UNPAID BUSINESS EXP AMT (DCF) &YR.06"
T2UBEAMT&YR.07="SSDI SELF-EMP UNPAID BUSINESS EXP AMT (DCF) &YR.07"
T2UBEAMT&YR.08="SSDI SELF-EMP UNPAID BUSINESS EXP AMT (DCF) &YR.08"
T2UBEAMT&YR.09="SSDI SELF-EMP UNPAID BUSINESS EXP AMT (DCF) &YR.09"
T2UBEAMT&YR.10="SSDI SELF-EMP UNPAID BUSINESS EXP AMT (DCF) &YR.10"
T2UBEAMT&YR.11="SSDI SELF-EMP UNPAID BUSINESS EXP AMT (DCF) &YR.11"
T2UBEAMT&YR.12="SSDI SELF-EMP UNPAID BUSINESS EXP AMT (DCF) &YR.12"
T2VERIND&YR.01="SSDI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.01"
T2VERIND&YR.02="SSDI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.02"
T2VERIND&YR.03="SSDI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.03"
T2VERIND&YR.04="SSDI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.04"
T2VERIND&YR.05="SSDI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.05"
T2VERIND&YR.06="SSDI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.06"
T2VERIND&YR.07="SSDI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.07"
T2VERIND&YR.08="SSDI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.08"
T2VERIND&YR.09="SSDI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.09"
T2VERIND&YR.10="SSDI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.10"
T2VERIND&YR.11="SSDI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.11"
T2VERIND&YR.12="SSDI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.12"
```

Appendix A.136
JCL/SAS Code: LABELS

```
UINC&YR.01="SSI COUNTABLE UNEARNED INCOME &YR.01"
UINC&YR.02="SSI COUNTABLE UNEARNED INCOME &YR.02"
UINC&YR.03="SSI COUNTABLE UNEARNED INCOME &YR.03"
UINC&YR.04="SSI COUNTABLE UNEARNED INCOME &YR.04"
UINC&YR.05="SSI COUNTABLE UNEARNED INCOME &YR.05"
UINC&YR.06="SSI COUNTABLE UNEARNED INCOME &YR.06"
UINC&YR.07="SSI COUNTABLE UNEARNED INCOME &YR.07"
UINC&YR.08="SSI COUNTABLE UNEARNED INCOME &YR.08"
UINC&YR.09="SSI COUNTABLE UNEARNED INCOME &YR.09"
UINC&YR.10="SSI COUNTABLE UNEARNED INCOME &YR.10"
UINC&YR.11="SSI COUNTABLE UNEARNED INCOME &YR.11"
UINC&YR.12="SSI COUNTABLE UNEARNED INCOME &YR.12"
WIC&YR.01="SSDI WORK INDICATION CODE &YR.01"
WIC&YR.02="SSDI WORK INDICATION CODE &YR.02"
WIC&YR.03="SSDI WORK INDICATION CODE &YR.03"
WIC&YR.04="SSDI WORK INDICATION CODE &YR.04"
WIC&YR.05="SSDI WORK INDICATION CODE &YR.05"
WIC&YR.06="SSDI WORK INDICATION CODE &YR.06"
WIC&YR.07="SSDI WORK INDICATION CODE &YR.07"
WIC&YR.08="SSDI WORK INDICATION CODE &YR.08"
WIC&YR.09="SSDI WORK INDICATION CODE &YR.09"
WIC&YR.10="SSDI WORK INDICATION CODE &YR.10"
WIC&YR.11="SSDI WORK INDICATION CODE &YR.11"
WIC&YR.12="SSDI WORK INDICATION CODE &YR.12"
ZIP_DI&YR.01="SSDI ZIP CODE &YR.01"
ZIP_DI&YR.02="SSDI ZIP CODE &YR.02"
ZIP_DI&YR.03="SSDI ZIP CODE &YR.03"
ZIP_DI&YR.04="SSDI ZIP CODE &YR.04"
ZIP_DI&YR.05="SSDI ZIP CODE &YR.05"
ZIP_DI&YR.06="SSDI ZIP CODE &YR.06"
ZIP_DI&YR.07="SSDI ZIP CODE &YR.07"
ZIP_DI&YR.08="SSDI ZIP CODE &YR.08"
ZIP_DI&YR.09="SSDI ZIP CODE &YR.09"
ZIP_DI&YR.10="SSDI ZIP CODE &YR.10"
ZIP_DI&YR.11="SSDI ZIP CODE &YR.11"
ZIP_DI&YR.12="SSDI ZIP CODE &YR.12"
ZIP_SSI&YR.01="SSI ZIP CODE &YR.01"
ZIP_SSI&YR.02="SSI ZIP CODE &YR.02"
ZIP_SSI&YR.03="SSI ZIP CODE &YR.03"
ZIP_SSI&YR.04="SSI ZIP CODE &YR.04"
ZIP_SSI&YR.05="SSI ZIP CODE &YR.05"
ZIP_SSI&YR.06="SSI ZIP CODE &YR.06"
ZIP_SSI&YR.07="SSI ZIP CODE &YR.07"
ZIP_SSI&YR.08="SSI ZIP CODE &YR.08"
ZIP_SSI&YR.09="SSI ZIP CODE &YR.09"
```

Appendix A.136
JCL/SAS Code: LABELS

```
ZIP_SSI&YR.10="SSI ZIP CODE &YR.10"
ZIP_SSI&YR.11="SSI ZIP CODE &YR.11"
ZIP_SSI&YR.12="SSI ZIP CODE &YR.12"
;
```

Appendix A.137
JCL/SAS Code: COPY1994

```
//#6502C94 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(COPY1994)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P1994C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y1994E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y1994E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY1994 COMPLETE
```

Appendix A.138
JCL/SAS Code: COPY1995

```
//#6502C94 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(COPY1995)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P1995C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y1995E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y1995E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY1995 COMPLETE
```

Appendix A.139
JCL/SAS Code: COPY1996

```
//#6502C96 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(COPY1996)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P1996C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y1996E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y1996E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY1996 COMPLETE
```

Appendix A.140
JCL/SAS Code: COPY1997

```
//#6502C97 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(COPY1997)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P1997C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y1997E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y1997E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY1997 COMPLETE
```

Appendix A.141
JCL/SAS Code: COPY1998

```
//#6502C97 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(COPY1998)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P1998C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y1998E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y1998E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY1998 COMPLETE
```

Appendix A.142
JCL/SAS Code: COPY1999

```
//#6502C96 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(COPY1999)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P1999C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y1999E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y1999E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY1999 COMPLETE
```

Appendix A.143
JCL/SAS Code: COPY2000

```
//#6502C00 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(COPY2000)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P2000C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2000E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2000E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY2000 COMPLETE
```

Appendix A.144
JCL/SAS Code: COPY2001

```
//#6502C00 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(COPY2001)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P2001C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2001E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2001E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY2001 COMPLETE
```

Appendix A.145
JCL/SAS Code: COPY2002

```
//#6502C02 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(COPY2002)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P2002C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2002E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2002E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY2002 COMPLETE
```

Appendix A.146
JCL/SAS Code: COPY2003

```
//#6502C03 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(COPY2003)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P2003C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2003E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2003E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY2003 COMPLETE
```

Appendix A.147
JCL/SAS Code: COPY2004

```
//#6502C03 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF17.ANN.PRDLIB(COPY2004)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P2004C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2004E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2004E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY2004 COMPLETE
```

Appendix A.148
JCL/SAS Code: COPY2005

```
//#6502C02 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(COPY2005)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P2005C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2005E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2005E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY2005 COMPLETE
```

Appendix A.149
JCL/SAS Code: COPY2006

```
//#6502C06 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(COPY2006)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P2006C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2006E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2006E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY2006 COMPLETE
```

Appendix A.150
JCL/SAS Code: COPY2007

```
//#6502C06 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(COPY2007)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P2007C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2007E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2007E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY2007 COMPLETE
```

Appendix A.151
JCL/SAS Code: COPY2008

```
//#6502C08 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(COPY2008)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P2008C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2008E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2008E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY2008 COMPLETE
```

Appendix A.152
JCL/SAS Code: COPY2009

```
//#6502C09 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(COPY2009)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P2009C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2009E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2009E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY2009 COMPLETE
```

Appendix A.153
JCL/SAS Code: COPY2010

```
//#6502C09 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(COPY2010)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P2010C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2010E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2010E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY2010 COMPLETE
```

Appendix A.154
JCL/SAS Code: COPY2011

```
//#6502C08 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(COPY2011)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P2011C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2011E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2011E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY2011 COMPLETE
```

Appendix A.155
JCL/SAS Code: COPY2012

```
//#6502C12 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(COPY2012)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P2012C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2012E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2012E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY2012 COMPLETE
```

Appendix A.156
JCL/SAS Code: COPY2013

```
//#6502C12 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(COPY2013)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P2013C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2013E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2013E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY2013 COMPLETE
```

Appendix A.157
JCL/SAS Code: COPY2014

```
//#6502C14 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(COPY2014)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P2014C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2014E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2014E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY2014 COMPLETE
```

Appendix A.158
JCL/SAS Code: COPY2015

```
//#6502C15 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(COPY2015)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P2015C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2015E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2015E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY2015 COMPLETE
```

Appendix A.159
JCL/SAS Code: COPY2016

```
//#6502C15 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ANN.PRDLIB(COPY2016)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P2016C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2016E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2016E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY2016 COMPLETE
```

Appendix A.160
JCL/SAS Code: COPY2017

```
//#6502C14 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF17.ANN.PRDLIB(COPY2017)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P2017C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2017E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2017E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY2016 COMPLETE
```

Appendix A.161
JCL/SAS Code: COPY2018

```
//#6502C14 JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF17.ANN.PRDLIB(COPY2017)
//* DESCRIPTION: COPY ENROLLED ANNUALS FILES
//*            NOTE - NO LONGER COPYING NONENROLLED AS OF DAF17
//*****************************************************************
//*
//* COPYING FILES
//* FULL ENROLLED FINAL TO FINAL COPY
//P2017C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2018E,DISP=SHR,
//         UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2018E,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPY2016 COMPLETE
```

Appendix A.162
JCL/SAS Code: STWDI

```
//$4671STD  JOB (12510000,T715,,SAS,,ITC9FL),DAWN-PHELPS,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: DAF18 CONSTRUCTION 50214.220
//*
//* PROGRAM: OPDR.TG.PRD.ETTW.$4671.DAF18.SSRF.PRDLIB(STWDI)
//*
//* PURPOSE: TO CREATE SSDI MONTHLY STW INDICATOR
//*
//* PROGRAMMER: DAWN PHELPS
//* MPR PHONE 202 554-7556
//* E-MAIL DPHELPS@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//STWDI   EXEC SAS9,
//       WORK='100000,50000'
//*
//DEMO    DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MBR     DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.MBRREST.SA.V1,DISP=SHR
//DCF     DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.T2WKDETN.SA.V1,DISP=SHR
//TEMP1   DD DSN=&&TEMP,
//       DISP=(NEW,DELETE,DELETE),
//       SPACE=(CYL,(3000,3000),RLSE),VOL=(,,,10)
//TEMP2   DD DSN=&&TEMP,
//       DISP=(NEW,DELETE,DELETE),
//       SPACE=(CYL,(3000,3000),RLSE),VOL=(,,,10)
//STWDI   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.STWDI.SA.V1,
//       DISP=(MOD,CATLG,DELETE),
//       SPACE=(CYL,(3000,3000),RLSE),VOL=(,,,10)
//STWDIFQ DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.STWDIFQ.SA.V1,
//         DISP=(MOD,CATLG,DELETE),
//         SPACE=(CYL,(3000,3000),RLSE),VOL=(,,,10)
//*
//SYSIN   DD *

OPTIONS NOCENTER LS=132 PS=60 COMPRESS=BINARY MACROGEN MPRINT
OBS=MAX;

* CHANGE ENDYR AND ENDMN FOR EACH RUN;
%LET BEGYR=1994;
%LET ENDYR=2018; * CHANGE AS NEEDED;
%LET ENDMN=12;   * CHANGE AS NEEDED;

%MACRO START;
```

Appendix A.162
JCL/SAS Code: STWDI

```
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

DATA TEMP1.STWDI(KEEP=SSN CAN BIC STW: LAF: CDR: RFST:)
    MATCHPRIM  (KEEP=SSN CAN STW:
                SUSFLAG TERMFLAG: LAF: CDR: RFST:)
    MATCHSEC   (KEEP=SSN CAN SUSFLAG TERMFLAG: STW: LAF: CDR: RFST:
            RENAME=(SUSFLAG=SSUSFLAG TERMFLAG=STERMFLAG))
    ;
   MERGE DEMO.DMSTW(IN=DEMO
               KEEP=SSN CAN DOBBEST DODBEST TWPCMPLMNTH1
                  FRADATE)
      MBR.MBR(IN=MBR KEEP=SSN BIC RFD: WIC: CDR: RFST: LAF:
                  DROP=LAF)
      DCF.T2WKDETN(IN=E KEEP=COSSN TWPDATA: RENAME=(COSSN=SSN))
      ;
   BY SSN;

   IF DEMO AND MBR;

   * INPUT ARRAYS;
   ARRAY LAF     (*) %DO MM=1 %TO &TOTMOS.; LAF&&YY&MM.     %END;;
   ARRAY WIC     (*) %DO MM=1 %TO &TOTMOS.; WIC&&YY&MM.     %END;;
   ARRAY RFD     (*) %DO MM=1 %TO &TOTMOS.; RFD&&YY&MM.     %END;;
   ARRAY CDR     (*) %DO MM=1 %TO &TOTMOS.; CDR&&YY&MM.     %END;;
   ARRAY RFST    (*) %DO MM=1 %TO &TOTMOS.; RFST&&YY&MM.    %END;;
   ARRAY TWPDATA (*) %DO MM=1 %TO &TOTMOS.; TWPDATA&&YY&MM. %END;;

   * OUTPUT ARRAYS;
   ARRAY STWDI   (*) %DO MM=1 %TO &TOTMOS.; STWDI&&YY&MM    %END;;
   ARRAY PROCDATE(*) %DO MM=1 %TO &TOTMOS.; PROCDATE&&YY&MM %END;;

   * FIND THE MONTH FLAGGED BY TWPCMPLMNTH1 TO BEGIN PROCESSING.
     FLAG THE DEATH OR RETIREMENT INDEX TO END PROCESSING;
   LENGTH STWNAME $9;
   STWNAME=' ';
   DO I=1 TO DIM(STWDI);
     * CONSTRUCT DATE FOR THE ARRAY ELEMENT;
     STWNAME=VNAME(STWDI(I));
     PROCDATE(I)=MDY(SUBSTR(STWNAME,8,2),1,SUBSTR(STWNAME,6,2));
   END;

   * DETERMINE EARILEST TWP COMPLETION DATE;
   DO I=1 TO DIM(TWPDATA) UNTIL(TWPDT NE .);
      IF TWPDATA(I)='9'
```

Appendix A.162
JCL/SAS Code: STWDI

```
      THEN TWPDT=MDY(SUBSTR(VNAME(TWPDATA(I)),10,2)
                ,1
                ,SUBSTR(VNAME(TWPDATA(I)),8,2));
END;
TWPDT=MAX('01JAN1994'D,MIN(TWPDT,TWPCMPLMNTH1));

FOUNDWORK=0;
* SET THE BEGINING MONTH FOR PROCESSING
  IF TWP COMPLETION BEFORE JAN 1994 THEN SET FOUNDWORK TO 1
  OTHERWISE LOOP THROUGH MONTHS TO FIND THE MONTH OF TWP COMPLETION
  OR IF NO TWP COMPLETION THEN THE FIRST SUSPENSION TRIPLET;
IF TWPDT<=PROCDATE(1) AND TWPDT NE . THEN FOUNDWORK=1;
ELSE DO I=1 TO DIM(PROCDATE) UNTIL (FOUNDWORK>0);
   IF TWPDT=. THEN DO;
      IF RFD(I)='7' AND
      (WIC(I) IN ('2','7') OR RFST(I) IN ('EPESGA' 'DIBWRK'))
       THEN FOUNDWORK=I;
   END;
   ELSE IF TWPDT=PROCDATE(I) THEN FOUNDWORK=I;
END; * END SET BEGINNING MONTH FOR PROCESSING;

STOPIND=0;
* SET THE END MONTH FOR PROCESSING;
DO I=1 TO DIM(PROCDATE) UNTIL (STOPIND>0);
    * BUILD INDICATORS ONLY UP TO RETIREMENT DATE OR DEATH DATE
      MISSINGS BEGIN IN THE MONTH FOLLOWING THOSE EVENTS;
    IF (PROCDATE(I)>=INTNX('MONTHS',FRADATE,0,'BEG')
       AND FRADATE>.Z) OR
      (PROCDATE(I)>=INTNX('MONTHS',DODBEST,0,'BEG')
       AND DODBEST>.Z) THEN STOPIND=I;
END;

* WHERE NO WORK DEATH OR RETIREMENT LIMITS PROCESSING SET THE
  STOP INDIEX TO THE LAST MONTH IN THE EVALUATION;
IF STOPIND=0 THEN STOPIND=&TOTMOS.;

* INITIALIZE THE STW VARIABLES;
DO I=1 TO STOPIND;
    IF LAF(I)=' ' THEN STWDI(I)=.;
    ELSE IF SUBSTR(LAF(I),1,1) IN ('C' 'E') THEN STWDI(I)=0;
    ELSE IF SUBSTR(LAF(I),1,1)='T' THEN STWDI(I)=9;
    ELSE STWDI(I)=8;
END;

IF FOUNDWORK>0 THEN DO I=FOUNDWORK TO STOPIND;
```

Appendix A.162
JCL/SAS Code: STWDI

```
    * WORK SUSPENSIONS;
    IF RFD(I)='7' AND
      (WIC(I) IN ('2','7') OR RFST(I) IN ('EPESGA' 'DIBWRK'))
    THEN DO;
       STWDI(I)=1;
       SUSFLAG=1;
    END;

    * WORK TERMINATIONS;
    ELSE IF RFD(I)='T' AND WIC(I) IN ('8','6')
        AND (CDR(I)='E' OR TWPDATA(I)='S')
    THEN DO;
       STWDI(I)=2;
       TERMFLAG=1;
    END;

END; * END FOUNDWORK LOOP;
DROP PROCDATE:;

* RECODE TERMINATIONS AFTER A SUSPENSION DUE TO WORK (STWDI=1) AS A
  TERMINATION DUE TO WORK (STWDI=2) PROVIDED THAT THE TERMINATION
  WAS NOT DUE TO A MEDICAL RECOVREY (CDRyymm ne 'M').  THIS MAINLY
  EFFECTS BENES WHO COMPLETED A TWP AND ENTERED AN EPE;
DO I=2 TO STOPIND;
    IF STWDI(I)=9 AND STWDI(I-1) IN (1,2)
    AND SUBSTR(LAF(I),1,1)='T'
    AND CDR(I) NE 'M'
    THEN DO;
       STWDI(I)=2;
    END;
END;

* ONCE TERMINATION FOR WORK ALWAYS TERMINATED FOR WORK UNTIL BACK
  IN CURRENT PAY, FRA, OR DEAD;
DO I=2 TO STOPIND;
    IF STWDI(I) NOT IN (0,.) AND STWDI(I-1)=2 THEN STWDI(I)=2;
END;

* OUTPUT 3 FILES
  1. FLAGGED PRIMARIES
  2. FLAGGED DACS
  3. UNFLAGGED CASES
  WE DO THIS BECAUSE WE NEED TO DETERMINE WHETHER WORK DATA ON
  A DAC RECORD BELONGS TO THE PRIMARY AND NOT THE DAC;
```

Appendix A.162
JCL/SAS Code: STWDI

```
    IF SUSFLAG=1 OR TERMFLAG=1 THEN DO;
       IF SUBSTR(BIC,1,1)='C' THEN OUTPUT MATCHSEC; * DACS;
       ELSE OUTPUT MATCHPRIM; * PRIMARIES;
    END;
    ELSE OUTPUT TEMP1.STWDI; * NO WORK INDICATION ON THESE RECORDS;
RUN;

PROC SORT DATA=MATCHPRIM;
    BY CAN;
RUN;

PROC SORT DATA=MATCHSEC;
    BY CAN;
RUN;

DATA MATCHSEC (KEEP=SSN STW: RFST:);
    MERGE MATCHPRIM (IN=P KEEP=SSN CAN SUSFLAG TERMFLAG
                 WHERE=(CAN NE ' '))
         MATCHSEC  (IN=S)
         ;
    BY CAN;

    * KEEP ONLY DAC CASES;
    IF S;

    ARRAY LAF   (*) %DO MM=1 %TO &TOTMOS.; LAF&&YY&MM %END;;
    ARRAY STWDI {*} %DO MM=1 %TO &TOTMOS.; STWDI&&YY&MM %END;;

    * IF DAC HAS A PRIMARY WHO HAS BEEN FLAGGED - RESET INDICATOR
      TO 9 FOR THE DAC BECAUSE THE WORK INDICATION MOST LIKELY
      BELONGS TO THE PRIMARY;
    IF P THEN DO;
       IF SUSFLAG=1 AND SSUSFLAG=1 THEN DO I=1 TO DIM(STWDI);
          IF STWDI(I)=1 THEN DO;
             IF SUBSTR(LAF(I),1,1)='T' THEN STWDI(I)=9;
             ELSE STWDI(I)=8;
          END;
       END;
       IF TERMFLAG=1 AND STERMFLAG=1 THEN DO I=1 TO DIM(STWDI);
          IF STWDI(I)=2 THEN DO;
             IF SUBSTR(LAF(I),1,1)='T' THEN STWDI(I)=9;
             ELSE STWDI(I)=8;
          END;
       END;
```

Appendix A.162
JCL/SAS Code: STWDI

```
    END; * END IF P LOOP;

RUN;

* PUT THE PIECES BACK TOGETHER;
PROC SORT DATA=MATCHPRIM;
  BY SSN;
RUN;

PROC SORT DATA=MATCHSEC;
  BY SSN;
RUN;

DATA TEMP2.STWDI  (KEEP=SSN STW: RFST:);
 SET TEMP1.STWDI
    MATCHPRIM
    MATCHSEC
    ;
 BY SSN;

RUN;

* DEDUP THE FEW DUPLICATES BECAUSE OF BAD BOANS;
PROC SORT DATA=TEMP2.STWDI OUT=STWDI.STWDI NODUPKEY;
  BY SSN;
RUN;

PROC FREQ DATA=STWDI.STWDI;
  %DO MM=1 %TO &TOTMOS.;
     TABLES STWDI&&YY&MM / MISSING OUT=STWDIFQ.STWDIFREQ&&YY&MM;
  %END;
RUN;

%MEND;
%START;
/*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<DPHELPS@MATHEMATICA-MPR.COM>
```

Appendix A.162
JCL/SAS Code: STWDI

```
RCPT TO:<DPHELPS@MATHEMATICA-MPR.COM>
DATA
FROM:   <DPHELPS@MATHEMATICA-MPR.COM>
TO:     <DPHELPS@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 STWDI COMPLETE
```

Appendix A.163
JCL/SAS Code: STWSSI

```
//$4671STS  JOB (12510000,T715,,SAS,,ITC9FL),DAWN-PHELPS,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: DAF17 CONSTRUCTION 50214
//*
//* PROGRAM: OPDR.TG.PRD.ETTW.$4671.DAF17.SCWF.PRDLIB(STWSSI)
//*
//* PURPOSE: TO CREATE SSI MONTHLY STW INDICATOR
//*
//* PROGRAMMER:
//* DAWN PHELPS
//* MPR PHONE 202 264-3460
//* SSA PHONE 202 358-6316
//* E-MAIL DPHELPS@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='120000,60000'
//*
//DEMO    DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//SSR     DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSIELIG.SA.V1,DISP=SHR
//SCWF    DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.STWSSI.SA.V1,
//         DISP=(MOD,CATLG,KEEP),UNIT=TSILO
//SYSIN   DD *

OPTIONS NOCENTER COMPRESS=BINARY MACROGEN MPRINT OBS=MAX;

%LET BEGYR=1994;
%LET ENDYR=2018; /* CHANGE AS NEEDED */
%LET ENDMN=12;   /* CHANGE AS NEEDED */

%MACRO START;

%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

DATA SCWF.STWSSI /*(KEEP=SSN STWSSI:)*/;
 MERGE DEMO.DMSTW(IN=DMG KEEP=SSN DOBBEST DODBEST FRADATE)
     SSR.SSIELIG(IN=SSR KEEP=SSN PSTA: EICM: CURCOMP: UINC: FCI: BMF:
          DROP=FCI BMF)
     ;
 BY SSN;
 IF SSR AND DMG;

 * KEEP ONLY BENES WHO ARE 18 OR OLDER ON THE LAST DAY OF THE DAF YEAR
```

Appendix A.163
JCL/SAS Code: STWSSI

```
  STWS ARE ONLY CONSTRUCTED FOR ADULT BENES;
IF YRDIF(DOBBEST,"31DEC&ENDYR."D,'AGE')>=18;

* CREATE SSI STW INDICATORS;

* INPUT ARRAYS;
ARRAY PSTA(*) %DO MM=1 %TO &TOTMOS.; PSTA&&YY&MM %END;;
ARRAY EICM(*) %DO MM=1 %TO &TOTMOS.; EICM&&YY&MM %END;;
ARRAY UINC(*) %DO MM=1 %TO &TOTMOS.; UINC&&YY&MM %END;;
ARRAY CURCOMP(*) $ %DO MM=1 %TO &TOTMOS.; CURCOMP&&YY&MM %END;;
ARRAY FCI(*) %DO MM=1 %TO &TOTMOS.; FCI&&YY&MM %END;;
ARRAY BMF(*) %DO MM=1 %TO &TOTMOS.; BMF&&YY&MM %END;;

* FEDERAL BENEFIT RATES ARRAYS FOR INDIVIDUALS AND COUPLES
  UPDATE FOR COMING YEAR. FIND TABLE AT
  http://www.ssa.gov/oact/cola/SSIamts.html;
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(FBRIN)";
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(FBRCP)";

* OUTPUT ARRAYS;
ARRAY FBR(*)  %DO MM=1 %TO &TOTMOS.; FBR&&YY&MM %END;;

* THE STWSSI ARRAY HAS A LOWER BOUND OF 0 SO THAT WHEN LOOKING BACK
  AT THE PREVIOUS MONTH DURING THE STWSSI LOOP, SPECIAL CODING IS NOT
  NECASSARY TO HANDLE THE FIRST MONTH (JAN 1994).  SO AN INDEX VALUE OF
  0 WOULD REFER TO THE DUMMYSTWSSI ARRAY ELEMENT AND AN INDEX VALUE OF
  1 WOULD REFER TO STWSSI9401;
ARRAY STWSSI(0:&TOTMOS.) DUMMYSTWSSI
        %DO MM=1 %TO &TOTMOS.; STWSSI&&YY&MM %END;;

ARRAY USED_UINC(*) %DO MM=1 %TO &TOTMOS.; USED_UINC&&YY&MM %END;;
ARRAY USED_TCNEI(*) %DO MM=1 %TO &TOTMOS.; USED_TCNEI&&YY&MM %END;;

* SET VARIABLES TO CONTROL THE LOOP SETTING THE STW VARIABLE:
  POPULATE STW FROM THE BEGINNING OF THE DAF DATA (JAN 1994) OR BENES
  18TH BIRTHDAY WHICHEVER COMES LATER UNTIL BENE DIES, ATTAINS FRA, OR
  THE END OF OUR DAF YEAR WICHEVER COMES FIRST;
STARTLOOP=INTCK('MONTHS','01JAN1994'D,
            MAX('01JAN1994'D,
               INTNX('YEARS',DOBBEST,18,'SAMEDAY')))+1;
STOPLOOP=INTCK('MONTHS','01JAN1994'D,
           MIN(DODBEST,FRADATE,"31DEC&ENDYR."D))+1;

DO I=STARTLOOP TO STOPLOOP;
```

Appendix A.163
JCL/SAS Code: STWSSI

```
* SET YEAR BEING PROCESSED
  CONVERT RELATIVE MONTHS (REPRESENTED BY I) TO A YEAR VALUE BY
  DIVIDING THE RELATIVE MONTHS BY 12 AND APPLY THE CEIL FUNCTION TO
  RETURN THE NEXT LARGEST INTEGER OR EQUAL. SO AN INDEX VALUE OF 1
  THROUGH 12 WOULD REFER TO YEAR 1994, 13 THROUGH 24 TO YEAR 1995 AND
  SO ON;
LOOPYR=CEIL(I/12)+1993;

*FBR FOR COUPLE IS MAXIMUM SSI COUPLE PAYMENT DIVIDED BY 2.
 FBR FOR INDIVIDUAL IS MAXIMUM SSI INDIVIDUAL PAYMENT;
IF CURCOMP(I)='6' THEN FBR(I)=FBRCP(LOOPYR)/2;
ELSE FBR(I)=FBRIN(LOOPYR);

* IN CURRENT PAY STW=0;
IF PSTA(I)='C01' THEN STWSSI(I)=0;

* ONCE TERMINATED FOR WORK ALWAYS TERMINATED FOR WORK UNTIL BACK IN
  CURRENT PAY, FRA, OR DEAD. (THE FIRST TIME THROUGH THIS LOOP THERE
  WILL BE NO VALUE IN THE PREVIOUS MONTH (I-1) SO THIS BLOCK OF CODE
  WILL NOT EXECUTE);
ELSE IF STWSSI(I-1)=2 THEN DO;
   * WHEN THERE IS A STATUS CODE THEN STWSSI=2;
   IF PSTA(I) NE '' THEN STWSSI(I)=2;

   * IF NO STATUS CODE THEN STWSSI=3;
   ELSE STWSSI(I)=3;
END;
ELSE IF STWSSI(I-1)=3 THEN STWSSI(I)=3;

* SUSPENDED FOR EXCESS INCOME (N01) THEN CHECK INCOME;
ELSE IF PSTA(I)='N01' THEN DO;

   * WHEN EARNED INCOME IS GREATER THAN ZERO OR THE PREVIOUS MONTH
     WAS AN STW SUSPENSE MONTH THEN CHECK NON-EARNED INCOME;
   IF EICM(I)>0 OR STWSSI(I-1)=1 THEN DO;

      * WHEN NON-EARNED INCOME IS BELOW FBR STW=1
        NON-EARNED INCOME IS ANY INCOME THAT IS NOT FROM WAGES
        (E.G. INTEREST, LOTTERY WINNINGS, VA BENEFITS, ETC.)
        TO DETERMINE NON-EARNED INCOME TAKE THE FEDERAL COUNTABLE
        INCOME FOR THIS MONTH AND SUBTRACT THE COUNTABLE EARNED
        INCOME FROM THIS MONTH.  IF A BENE IS IN N01 STATUS THEN IT
        IS THE INCOME FROM THAT SAME MONTH THAT CAUSED THE NON PAY
        STATUS;
      IF FCI(I)=. THEN DO;
```

Appendix A.163
JCL/SAS Code: STWSSI

```
          IF UINC(I)<FBR(I) THEN STWSSI(I)=1;
          ELSE STWSSI(I)=4;
          USED_UINC(I)=1;
        END;
        ELSE DO;
          IF SUM(FCI(I),EICM(I)*-1)<FBR(I) THEN STWSSI(I)=1;
          ELSE STWSSI(I)=4;
          USED_TCNEI(I)=1;
        END;

        * WHEN NON-EARNED INCOME IS AT OR ABOVE FBR STW=4.  IF NON-
         EARNED INCOME WAS HIGH ENOUGH TO PRECLUDE A PAYMENT THEN
         THE EARNED INCOME WAS NOT RELAVENT TO THE SUSPENSE FOR
         EXCESS INCOME AND THEREFORE THE BENE IS NOT CONSIDERED
         SUSPENDED DUE TO WORK;
      END;
      * WHEN SUSPENDED FOR EXCESS INCOME BUT HAVING NO EARNED INCOME
       AND NOT HAVING BEEN SUSPENDED FOR WORK IN THE PREVIOUS MONTH
       THE BENE IS SUSPENDED FOR REASONS OTHER THAN WORK;
      ELSE STWSSI(I)=8;
    END; * END N01 LOOP;

    * WHEN PREVIOUS MONTH IS SUSPENDED FOR WORK AND CURRENT MONTH
     SUSPENDED FOR NON-EXCLUDEABLE RESOURCES OR FAILURE TO FILE FOR
     OTHER BENEFITS CHECK AND EARNED INCOME IS GREATER THAN 0 THEN
     CHECK UNEARNED INCOME;
    ELSE IF PSTA(I) IN ('N04','N06') AND STWSSI(I-1)=1
       AND EICM(I)>0 THEN DO;

      * WHEN NON-EARNED INCOME IS BELOW FBR STW=1
       NON-EARNED INCOME IS ANY INCOME THAT IS NOT FROM WAGES
       (E.G. INTEREST, LOTTERY WINNINGS, VA BENEFITS, ETC.)
       TO DETERMINE NON-EARNED INCOME TAKE THE FEDERAL COUNTABLE
       INCOME FOR THIS MONTH AND SUBTRACT THE COUNTABLE EARNED
       INCOME FROM THIS MONTH.  IF A BENE IS IN N01 STATUS THEN IT
       IS THE INCOME FROM THAT SAME MONTH THAT CAUSED THE NON PAY
       STATUS;
      IF FCI(I)=. THEN DO;
        IF UINC(I)<FBR(I) THEN STWSSI(I)=1;
        ELSE STWSSI(I)=4;
        USED_UINC(I)=1;
      END;
      ELSE DO;
        IF SUM(FCI(I),EICM(I)*-1)<FBR(I) THEN STWSSI(I)=1;
        ELSE STWSSI(I)=4;
```

Appendix A.163
JCL/SAS Code: STWSSI

```
          USED_TCNEI(I)=1;
        END;

        * WHEN NON-EARNED INCOME IS AT OR ABOVE FBR STW=4.  IF NON-
          EARNED INCOME WAS HIGH ENOUGH TO PRECLUDE A PAYMENT THEN
          THE EARNED INCOME WAS NOT RELAVENT TO THE SUSPENSE FOR
          EXCESS INCOME AND THEREFORE THE BENE IS NOT CONSIDERED
          SUSPENDED DUE TO WORK;

    END; * END N04/N06 LOOP;

    * WHEN TERMINATED FOR SOMETHING OTHER THAN DEATH AND PREVIOUS
      MONTH IS SUSPENDED OR TERMINATED FOR WORK THEN SUSPENDED FOR WORK;
    ELSE IF SUBSTR(PSTA(I),1,1)='T' AND PSTA(I) NE 'T01'
        AND STWSSI(I-1) IN (1,2) THEN STWSSI(I)=2;

    * IF NONE OF THE ABOVE CONDITIONS ARE MET AND THERE IS A VALUE IN
      PSTA THEN SUSPENDED OR TERMINATION FOR SOMETHING OTHER THAN WORK;
    ELSE IF SUBSTR(PSTA(I),1,1)='T' THEN STWSSI(I)=9;
    ELSE IF PSTA(I) NE '' THEN STWSSI(I)=8;

    * IF PSTA IS BLANK THEN IT WILL REMAIN MISSING;

  END; * END MONTHLY LOOP;

  LABEL
  %DO MM=1 %TO &TOTMOS.;
  STWSSI&&YY&MM = "&&YY&MM SSI LEFT DUE TO WORK INDICATOR"
  %END;
   ;
  RUN;

  %MEND;
  %START;
  ENDSAS;
  //*****************************************************
  //* SENDING EMAIL FROM HOST USING IEBGENER
  //*****************************************************
  //SENDNOTE EXEC PGM=IEBGENER
  //SYSIN    DD DUMMY
  //SYSPRINT DD SYSOUT=*
  //SYSUT2   DD SYSOUT=(B,SMTP)
  //SYSUT1   DD *
  HELO MVSHOST
  MAIL FROM:<DFERRAGAMO@MATHEMATICA-MPR.COM>
```

Appendix A.163
JCL/SAS Code: STWSSI

```
RCPT TO:<DFERRAGAMO@MATHEMATICA-MPR.COM>
DATA
FROM:   <DFERRAGAMO@MATHEMATICA-MPR.COM>
TO:     <DFERRAGAMO@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 STWSSI IS COMPLETE
```

Appendix A.164
JCL/SAS Code: STWCM

```
//$4671STW  JOB (12510000,T715,,SAS,,ITC9FL),DAWN-PHELPS,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: DAF17 CONSTRUCTION 50214.220
//*
//* PROGRAM: OPDR.TG.PRD.ETTW.$4671.DAF17.STW.PRDLIB(STWCM)
//*
//* PURPOSE: TO CREATE MONTHLY COMBINED STW INDICATOR
//*
//* PROGRAMMER:
//* DAWN PHELPS
//* MPR PHONE 202 554-7556
//* E-MAIL DPHELPS@MATHEMATICA-MPR.COM
//*****************************************************************
//JS010   EXEC SAS9,
//       WORK='120000,60000'
//*
//TEMP1   DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(1000,100),RLSE),VOL=(,,,8)
//STWSSI  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.STWSSI.SA.V1,DISP=SHR
//STWDI   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.STWDI.SA.V1,DISP=SHR
//DEMO    DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//STWCM   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.STWCM.SA.V1,
//         DISP=(MOD,CATLG,DELETE),UNIT=TSILO
//STWCMFQ DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.STWCMFQ.SA.V1,
//         DISP=(MOD,CATLG,DELETE),
//         SPACE=(CYL,(3000,3000),RLSE),VOL=(,,,10)
//SYSIN   DD *
OPTIONS NOCENTER COMPRESS=BINARY OBS=MAX MACROGEN MPRINT;

%LET BEGYR=1994;
%LET ENDYR=2018;  /* CHANGE AS NEEDED */
%LET ENDMN=12;    /* CHANGE AS NEEDED */

%MACRO START;

%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

DATA STWCM.STWCM(KEEP=SSN STWSSI: STWDI: STWCM:);
   MERGE STWSSI.STWSSI(KEEP=SSN STWSSI:)
       STWDI.STWDI(KEEP=SSN STWDI: RFST:)
       DEMO.DMSTW(IN=DEMO KEEP=SSN FRADATE DODBEST)
       ;
```

Appendix A.164
JCL/SAS Code: STWCM

```
BY SSN;
IF DEMO;

* INPUT ARRAYS;
ARRAY STWDI  (*) %DO MM=1 %TO &TOTMOS.; STWDI&&YY&MM %END;;
ARRAY STWSSI (*) %DO MM=1 %TO &TOTMOS.; STWSSI&&YY&MM %END;;
ARRAY RFST   (*) %DO MM=1 %TO &TOTMOS.; RFST&&YY&MM %END;;

* OUTPUT ARRAYS;
ARRAY STWCM  (*) %DO MM=1 %TO &TOTMOS.; STWCM&&YY&MM %END;;

DO I=1 TO &TOTMOS.;

   * SET INITIAL VALUE OF STWCM TO THE LOWER OF STWSSI AND STWSSI;
   STWCM(I)=MIN(STWDI(I),STWSSI(I));

   * RESET STWCM;
   SELECT(STWCM(I));

      * WHEN STWCM IS 4
        4=UNEARNED INCOME HIGHER THAN FBR...................TO 8
        ;
      WHEN(4) STWCM(I)=8;
      * OTHERWISE DO NOT RESET;
      OTHERWISE;
   END; * END SELECT;

   * IF THE STWSSI INDICATED SUSPENSE OF TERMINATION FOR WORK
     BUT SSDI DATA INDICATED THE BENE WAS IN PRISON THEN SET
     THE STWCM TO THAT OF THE STWDI;
   IF STWSSI(I) IN (1,2,3,4) AND RFST(I)='PRISON' THEN
   STWCM(I)=STWDI(I);

END; * END MOTHLY LOOPING;

* STRING STWCM 3S AND 9S IN THE STW INDICATORS;

* CONSTRUCT A DATE THAT IS THE EARLIEST OF FRA, DOD OR END OF DAF
  YEAR THIS WILL ALLOW THE LOOP TO STOP STRINGING 3 WHEN A PERSON IS
  DEAD OR FRA;
STOPLOOP=INTCK('MONTH','01JAN1994'D
          ,MIN(FRADATE,DODBEST,"31DEC&ENDYR."D))+1;

* STARTING IN FEB 1994 (2ND MONTH OF THE DAF) IF THE CURRENT MONTH
  IS MISSING AND PREVIOUS MONTH IS 2 OR 3 (TERMINATED FOR WORK) THEN
```

Appendix A.164
JCL/SAS Code: STWCM

```
      SET CURRENT MONTH TO 3 ELSE IF PREVIOUS MONTH IS 9 THEN SET
      CURRENT MONTH TO 9;
    DO I=2 TO STOPLOOP;

       * STRING STWSSI;
       IF STWSSI(I)=. THEN DO;
          IF STWSSI(I-1) IN (2,3) THEN STWSSI(I)=3;
          ELSE IF STWSSI(I-1)=9 THEN STWSSI(I)=9;
       END;

       * STRING STWDI;
       IF STWDI(I)=. THEN DO;
          IF STWDI(I-1) IN (2,3) THEN STWDI(I)=3;
          ELSE IF STWDI(I-1)=9 THEN STWDI(I)=9;
       END;

       * STRING STWCOMB;
       IF STWCM(I)=. THEN DO;
          IF STWCM(I-1) IN (2,3) THEN STWCM(I)=3;
          ELSE IF STWCM(I-1)=9 THEN STWCM(I)=9;
       END;

    END;
RUN;

PROC CONTENTS DATA=STWCM.STWCM;
TITLE "CONTENTS OF STWCM";
RUN;

PROC FREQ DATA=STWCM.STWCM;
   %DO MM=1 %TO &TOTMOS.;
      TABLES STWCM&&YY&MM / MISSING OUT=STWCMFQ.STWCM&&YY&MM;
      TABLES STWDI&&YY&MM / MISSING OUT=STWCMFQ.STWDI&&YY&MM;
      TABLES STWSSI&&YY&MM / MISSING OUT=STWCMFQ.STWSSI&&YY&MM;
   %END;

RUN;

%MEND;
%START;
ENDSAS;
/*****************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*****************************************************
//SENDNOTE EXEC PGM=IEBGENER
```

Appendix A.164
JCL/SAS Code: STWCM

```
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<DPHELPS@MATHEMATICA-MPR.COM>
RCPT TO:<DPHELPS@MATHEMATICA-MPR.COM>
DATA
FROM:   <DPHELPS@MATHEMATICA-MPR.COM>
TO:     <DPHELPS@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 STWCM COMPLETE
```

Appendix A.165
JCL/SAS Code: BFWDI

```
//$4671BFD  JOB (12510000,T715,,SAS,,ITC9FL),DAWN-PHELPS,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: DAF18 CONSTRUCTION 50214
//*
//* PROGRAM: OPDR.TG.PRD.ETTW.$4671.DAF18.STW.PRDLIB(BFWDI)
//*
//* PURPOSE: CREATE MONTHLY BENEFITS FORGONE FOR WORK FOR SSDI
//*
//* PROGRAMMER:
//* DAWN PHELPS
//* MPR PHONE 202 264-3460
//* SSA PHONE 202 358-6316
//* E-MAIL DPHELPS@MATHEMATICA-MPR.COM
//*****************************************************************
//JS010   EXEC SAS9,
//       WORK='120000,60000'
//*
//STWCM DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.STWCM.SA.V1,DISP=SHR
//DEMO  DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//MBR   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.MBRREST.SA.V1,DISP=SHR
//BFWDI DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.BFWDI.SA.V1,
//        DISP=(MOD,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//SYSIN   DD *
OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN OBS=MAX;

  /* STEP TO ASSIGN MACRO VARIABLES TO HANDLE TIME SERIES DATA */
%LET BEGYR=1994;
%LET ENDYR=2018; /* CHANGE AS NEEDED */

%MACRO START;
DATA BFWDI.BFWDI(KEEP=SSN BFW:);
 MERGE STWCM.STWCM(IN=INSTWCM KEEP=SSN STW:)
      DEMO.DMSTW(KEEP=SSN DOBBEST DODBEST FRADATE)
      MBR.MBR(KEEP=SSN LAF: DUED: DUEO: DROP=LAF)
      ;
 BY SSN;
 IF INSTWCM;

 * SET COLA VALUES
  HTTPS://WWW.SSA.GOV/NEWS/COLA/;
 %INCLUDE 'OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(COLA)';
```

Appendix A.165
JCL/SAS Code: BFWDI

```
* INPUT ARRAYS;
ARRAY STWDI (&BEGYR.:&ENDYR.,1:12)  %DO YEAR=&BEGYR %TO &ENDYR;
                        %LET YR=%SUBSTR(&YEAR.,3,2);
                        STWDI&YR.01-STWDI&YR.12
                        %END;;
ARRAY LAF   (&BEGYR.:&ENDYR.,1:12)  %DO YEAR=&BEGYR %TO &ENDYR;
                        %LET YR=%SUBSTR(&YEAR.,3,2);
                        LAF&YR.01-LAF&YR.12
                        %END;;
ARRAY DUED  (&BEGYR.:&ENDYR.,1:12)  %DO YEAR=&BEGYR %TO &ENDYR;
                        %LET YR=%SUBSTR(&YEAR.,3,2);
                        DUED&YR.01-DUED&YR.12
                        %END;;
ARRAY DUEO  (&BEGYR.:&ENDYR.,1:12)  %DO YEAR=&BEGYR %TO &ENDYR;
                        %LET YR=%SUBSTR(&YEAR.,3,2);
                        DUEO&YR.01-DUEO&YR.12
                        %END;;

* OUTPUT ARRAYS;
ARRAY BFWDI (&BEGYR.:&ENDYR.,1:12)  %DO YEAR=&BEGYR %TO &ENDYR;
                        %LET YR=%SUBSTR(&YEAR.,3,2);
                        BFWDI&YR.01-BFWDI&YR.12
                        %END;;
ARRAY BFWDI_PRIM (&BEGYR.:&ENDYR.,1:12)  %DO YEAR=&BEGYR %TO &ENDYR;
                        %LET YR=%SUBSTR(&YEAR.,3,2);
                        BFWDI_PRIM&YR.01-BFWDI_PRIM&YR.12
                        %END;;
ARRAY BFWDI_DEPEND (&BEGYR.:&ENDYR.,1:12)
                       %DO YEAR=&BEGYR %TO &ENDYR;
                       %LET YR=%SUBSTR(&YEAR.,3,2);
                       BFWDI_DEPEND&YR.01-BFWDI_DEPEND&YR.12
                       %END;;


* SET DATE TO STOP CALCULATING: END OF DAF YEAR, MONTH BENE TURNS FRA,
  OR MONTH BENE DIES;
STOPLOOP=MIN("31DEC&ENDYR."D,DODBEST,FRADATE);

* CALCULATE BFWDI
  BFWDI FOR BENES IN STW IS THE BENEFIT AMOUNT DUE FROM THE MOST
  RECENT PREVIOUS CURRENT PAY MONTH;
DO YR=1994 TO YEAR(STOPLOOP);

  * WHEN STARTING A NEW YEAR ADJUST THE PREVIOUS DI PYAMENTS BY THE
    COLA FOR THIS YEAR;
```

Appendix A.165
JCL/SAS Code: BFWDI

```
    PREVDUED=PREVDUED*(1+COLA(YR));
    PREVDUEO=PREVDUEO*(1+COLA(YR));

    DO MO=1 TO 12 WHILE(STOPLOOP>MDY(MO,1,YR));

      * CALCULATE DI BENEFITS FORGONE FOR WORK (BFFW);
      IF STWDI(YR,MO) IN (1,2,3) THEN DO;
        BFWDI_PRIM(YR,MO)=PREVDUED;
        BFWDI_DEPEND(YR,MO)=PREVDUEO;
        BFWDI(YR,MO)=SUM(PREVDUED,PREVDUEO);
      END;

      * IF BENE IS IN CURRENT PAY THEN SET THE PREVIOUS DI BENEFITS PAID
        TO THE CURRENT DI BENEFIT PAID AMOUNTS;
      IF SUBSTR(LAF(YR,MO),1,1) IN ('C','E') THEN DO;
        PREVDUED=DUED(YR,MO);
        PREVDUEO=DUEO(YR,MO);
      END;
    END; * END MONTH LOOP;
  END; * END YEAR LOOP;

RUN;

%MEND;
%START;

PROC CONTENTS DATA=BFWDI.BFWDI;
TITLE "CONTENTS OF BFW";
RUN;

PROC MEANS DATA=BFWDI.BFWDI;
VAR BFW:;
RUN;
/*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<DPHELPS@MATHEMATICA-MPR.COM>
RCPT TO:<DPHELPS@MATHEMATICA-MPR.COM>
DATA
```

Appendix A.165
JCL/SAS Code: BFWDI

FROM: <DPHELPS@MATHEMATICA-MPR.COM>
TO: <DPHELPS@MATHEMATICA-MPR.COM>
SUBJECT: BFWDI COMPLETE

Appendix A.166
JCL/SAS Code: BFWDEEM

```
//$4671STD  JOB (12510000,T715,,SAS,,ITC9FL),DAWN-PHELPS,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: DAF18 CONSTRUCTION 50214
//*
//* PROGRAM: OPDR.TG.PRD.ETTW.$4671.DAF18.STW.PRDLIB(BFWDEEM)
//*
//* PURPOSE: CALCULATE SCWF DEEMED (NONEARNED INCOME)
//*
//* PROGRAMMER:
//* DAWN PHELPS
//* MPR PHONE 202 554-7556
//* SSA PHONE 202 358-6316
//* E-MAIL DPHELPS@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='120000,60000'
//*
//STW    DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.STWCM.SA.V1,DISP=SHR
//SSR    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSIELIG.SA.V1,DISP=SHR
//DEMO    DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.DMSTW.SA.V1,DISP=SHR
//DEEM   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.BFWDEEM.SA.V1,
//         DISP=(MOD,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN   DD *

OPTIONS NOCENTER COMPRESS=BINARY MPRINT OBS=MAX;

%LET BEGYR=1994;
%LET ENDYR=2018;  /* CHANGE AS NEEDED */
%LET ENDMN=12;    /* CHANGE AS NEEDED */

%MACRO START;

%INCLUDE "OPDR.TG.PRD.ETTW.$4671.DAF17.UTILITY.PRDLIB(YYMMMACR)";

%LET TOTMOS2=%EVAL(&TOTMOS.+12);

DATA DEEM.BFWDEEM;
 MERGE STW.STWCM(IN=INSTWCM KEEP=SSN STW:)
     SSR.SSIELIG(KEEP=SSN UINC: FAMT: EICM: LIVF: CURCOMP:
              FCI: BMF: DROP=BMF FCI)
     DEMO.DMSTW(KEEP=SSN DODBEST FRADATE)
```

Appendix A.166
JCL/SAS Code: BFWDEEM

```
      ;
BY SSN;
IF INSTWCM;

* INPUT ARRAYS;
ARRAY STWSSI (-11:&TOTMOS2.) DUMMY1-DUMMY12
          %DO MM=1 %TO &TOTMOS.; STWSSI&&YY&MM %END;
          DUMMY13-DUMMY24
          ;
ARRAY UINC (*) %DO MM=1 %TO &TOTMOS.; UINC&&YY&MM %END;;
ARRAY EICM (*) %DO MM=1 %TO &TOTMOS.; EICM&&YY&MM %END;;
ARRAY FCI(*) %DO MM=1 %TO &TOTMOS.; FCI&&YY&MM %END;;
ARRAY BMF(*) %DO MM=1 %TO &TOTMOS.; BMF&&YY&MM %END;;

ARRAY NONEARN (-11:&TOTMOS2.) DUMMY1-DUMMY12
          %DO MM=1 %TO &TOTMOS.; NONEARN&&YY&MM %END;
          DUMMY13-DUMMY24
          ;
ARRAY NECALC (-11:&TOTMOS2.) DUMMY1-DUMMY12
          %DO MM=1 %TO &TOTMOS.; NECALC&&YY&MM %END;
          DUMMY13-DUMMY24
          ;
ARRAY DENOMA  (*) %DO MM=1 %TO &TOTMOS.; DENOM&&YY&MM %END;;

* CACLUATE NON-EARNED INCOME: FEDERAL COUNTABLE EARNING IN THE CURRENT
  MONTH LESS THE COUNTABLE EARNED INCOME FROM THE BUDGET MONTH LESS THE
  COUNTABLE UNEARNED INCOME FROM THE BUDGET MONTH;
DO I=3 TO &TOTMOS.;
   IF BMF(I) NE . THEN DO;
     IF NECALC(I-BMF(I)) NE 1 AND STWSSI(I-BMF(I)) NE . THEN DO;
        NONEARN(I-BMF(I))=
        SUM(FLOOR(FCI(I)),SUM(EICM(I-BMF(I)),UINC(I-BMF(I)))*-1);
        IF .<NONEARN(I-BMF(I))<=1 THEN NONEARN(I-BMF(I))=0;
        NECALC(I-BMF(I))=1;
     END;
   END;
END;
DO I=1 TO &TOTMOS.;
   IF NECALC(I) NE 1 THEN DO;
      TEMPNE=0;
      DENOM=0;
      DO J=I-1 TO I-12 BY -1 UNTIL(DENOM=2);
         IF STWSSI(J)=0 AND NECALC(J)=1 THEN DO;
            TEMPNE=SUM(TEMPNE,NONEARN(J));
            DENOM=SUM(DENOM,1);
```

Appendix A.166
JCL/SAS Code: BFWDEEM

```
            END;
         END;
         DO J=I+1 TO I+12 UNTIL(DENOM=4);
            IF STWSSI(J)=0 AND NECALC(J)=1 THEN DO;
               TEMPNE=SUM(TEMPNE,NONEARN(J));
               DENOM=SUM(DENOM,1);
            END;
         END;
         NONEARN(I)=TEMPNE/DENOM;
         DENOMA(I)=DENOM;
      END;
   END;

   RUN;

   PROC CONTENTS DATA=DEEM.BFWDEEM;
   RUN;

   %MEND;
   %START;
   //**************************************************
   //* SENDING EMAIL FROM HOST USING IEBGENER
   //**************************************************
   //SENDNOTE EXEC PGM=IEBGENER
   //SYSIN    DD DUMMY
   //SYSPRINT DD SYSOUT=*
   //SYSUT2   DD SYSOUT=(B,SMTP)
   //SYSUT1   DD *
   HELO MVSHOST
   MAIL FROM:<DFERRAGAMO@MATHEMATICA-MPR.COM>
   RCPT TO:<DFERRAGAMO@MATHEMATICA-MPR.COM>
   DATA
   FROM:   <DFERRAGAMO@MATHEMATICA-MPR.COM>
   TO:     <DFERRAGAMO@MATHEMATICA-MPR.COM>
   SUBJECT: SCWFDEEM COMPLETE
```

Appendix A.167
JCL/SAS Code: BFWSSICM

```
//$4671STD  JOB (12510000,T715,,SAS,,ITC9FL),DAWN-PHELPS,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: DAF18 CONSTRUCTION 50214.420
//*
//* PROGRAM: OPDR.TG.PRD.ETTW.$4671.DAF18.STW.PRDLIB(BFWSSICM)
//*
//* PURPOSE: CALCULATE SCWF BFWSSI
//*
//* PROGRAMMER:
//* DAWN PHELPS
//* MPR PHONE 202 554-7556
//* SSA PHONE 202 358-6316
//* E-MAIL DPHELPS@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='120000,60000'
//*
//*TEMP   DD DSN=&&TEMPX,
//*         DISP=(NEW,DELETE,DELETE),
//*         UNIT=TSILO,VOL=(,,,10)
//DEEM   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.BFWDEEM.SA.V1,DISP=SHR
//BFWDI  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.BFWDI.SA.V1,DISP=SHR
//BFW    DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.BFWSSICM.SA.V1,
//         DISP=(MOD,CATLG,DELETE),
//         UNIT=TSILO
//SYSIN   DD *
OPTIONS NOCENTER COMPRESS=BINARY MPRINT OBS=MAX;

%LET BEGYR=1994;
%LET ENDYR=2018;  /* CHANGE AS NEEDED */
%LET ENDMN=12;    /* CHANGE AS NEEDED */

%MACRO START;

%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

%LET TOTMOS2=%EVAL(&TOTMOS.+12);

DATA BFW.BFWSSICM;
 MERGE DEEM.BFWDEEM(IN=INSTWCM)
      BFWDI.BFWDI(KEEP=SSN BFWDI:)
      ;
```

Appendix A.167
JCL/SAS Code: BFWSSICM

```
 BY SSN;
 IF INSTWCM;

* FEDERAL BENEFIT RATES ARRAYS FOR INDIVIDUALS AND COUPLES
  TABLE AT: HTTP://WWW.SOCIALSECURITY.GOV/OACT/COLA/SSIAMTS.HTML;

* SET SSI INDIVIDUAL AND COUPLE FBR MAX VALUES;
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(FBRIN)";
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(FBRCP)";

* SET COLA VALUES;
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(COLA)";

* INPUT ARRAYS;
ARRAY STWSSI (*) %DO MM=1 %TO &TOTMOS.; STWSSI&&YY&MM %END;;
ARRAY UINC (*) %DO MM=1 %TO &TOTMOS.; UINC&&YY&MM %END;;
ARRAY FAMT (*) %DO MM=1 %TO &TOTMOS.; FAMT&&YY&MM %END;;
ARRAY CURCOMP(*) $ %DO MM=1 %TO &TOTMOS.; CURCOMP&&YY&MM %END;;
ARRAY LIVF(*) $ %DO MM=1 %TO &TOTMOS.; LIVF&&YY&MM %END;;
ARRAY EICM (*) %DO MM=1 %TO &TOTMOS.; EICM&&YY&MM %END;;
ARRAY FCI(*) %DO MM=1 %TO &TOTMOS.; FCI&&YY&MM %END;;
ARRAY BMF(*) %DO MM=1 %TO &TOTMOS.; BMF&&YY&MM %END;;
ARRAY CFBMF(*) %DO MM=1 %TO &TOTMOS.; CFBMF&&YY&MM %END;;
ARRAY NONEARN (*) %DO MM=1 %TO &TOTMOS.; NONEARN&&YY&MM %END;;
ARRAY BFWDI (*) %DO MM=1 %TO &TOTMOS.; BFWDI&&YY&MM %END;;

* OUTPUT ARRAYS;
ARRAY BFWSSI (*) %DO MM=1 %TO &TOTMOS.;
                      BFWSSI&&YY&MM
                     %END;;
ARRAY BFWCM (*) %DO MM=1 %TO &TOTMOS.;
                      BFWCM&&YY&MM
                     %END;;
ARRAY FBR (*) %DO MM=1 %TO &TOTMOS.; FBR&&YY&MM %END;;

* CACULATE BFW;
* SET DATE TO STOP CALCULATING: END OF DAF YEAR, MONTH BENE TURNS FRA,
  OR MONTH BENE DIES;
STOPLOOP=INTCK('MONTHS','01JAN1994'D,
          MIN(DODBEST,FRADATE,"31DEC&ENDYR."D))+1;

* CALCULATE SSI BENEFITS FOREGONE FOR BENES RECEIVING BENEFITS;

* STRING INCOME AND ADJUST THE PREVIOUS YEARS INCOME;
DO I=2 TO DIM(STWSSI);
```

Appendix A.167
JCL/SAS Code: BFWSSICM

```
 * SET YEAR BEING PROCESSED.  I REPRESENTS THE MONTH OF THE DAF
  (MONTH 1 IS JAN 1994, MONTH 2 IS FEB 1994, MONTH 25 JAN 1996, ETC.)
  TO DETERMINE THE YEAR THE CEIL FUNCTION IS APPLIED TO THE RESULTS
  OF I DIVIDED BY 12 (CEIL RETURNS THE SMALLEST INTEGER THAT IS
  GREATER THAN OR EQUAL TO THE ARGUMENT) THEN 1993 IS ADDED. SOMONTH
  13 WOULD BE CEIL(13/12)=2+1993 OR 1995, MONTH 13 FALLS IN 1995;
 LOOPYR=CEIL(I/12)+1993;

 * CALCULATE THE COUNTERFACTUAL BUDGET MONTH FACTOR (BMF);
  CFBMF(I)=BMF(I);
  IF STWSSI(I) IN (1,2,3) THEN DO;
     IF CFBMF(I-1)=. THEN CFBMF(I)=0;
     ELSE CFBMF(I)=MIN(2,CFBMF(I-1)+1);
  END;

* IF CURRENT MONTH STW IS 2 OR 3 THEN SET THE INCOME THIS MONTH TO
  THAT OF THE PREVIOUS MONTH;
 IF STWSSI(I) IN (2,3)  THEN DO;

  * IF THIS MONTH IS JAN THEN ADJUST THE INCOME FROM THE PREVIOUS
  MONTH BY COLA AND SET THIS MONTH TO THAT ADJUST AMOUNT;
  IF (I-1)/12 = INT((I-1)/12) THEN DO;
    UINC(I)   =UINC(I-1)*(1+COLA(LOOPYR));
    EICM(I)   =EICM(I-1)*(1+COLA(LOOPYR));
    NONEARN(I)=NONEARN(I-1)*(1+COLA(LOOPYR));
    FCI(I)    =FCI(I-1)*(1+COLA(LOOPYR));
  END;

  * IF THIS MONTH IS NOT JAN THEN SET THE INCOME FOR THIS MONTH TO
    THAT OF THE PREVIOUS MONTH;
  ELSE DO;
    UINC(I)   =UINC(I-1);
    EICM(I)   =EICM(I-1);
    FCI(I)    =FCI(I-1);
    NONEARN(I)=NONEARN(I-1);
  END;

 END; * END STW IN 2 OR 3 LOOP;
END; * END STRINGING INCOME LOOP;

* CREATE BFWS.  THE LOOP STARTS IN MAR 1994 BECAUSE A 2 MONTH LOOK BACK
 PERIOD IS REQUIRED.  THIS RESULTS IN HAVING NO BFWSSI VALUES IN JAN &
 FEB 1994.;
DO I=3 TO STOPLOOP;
```

Appendix A.167
JCL/SAS Code: BFWSSICM

```
* SET YEAR BEING PROCESSED IN THIS EXECUTION OF THE LOOP;
LOOPYR=CEIL(I/12)+1993;

* FBR FOR COUPLE IS MAXIMUM SSI COUPLE PAYMENT DIVIDED BY 2
  FBR FOR INDIVIDUAL IS MAXIMUM SSI INDIVIDUAL PAYMENT;
IF CURCOMP(I)='6' THEN FBR(I)=FBRCP(LOOPYR)/2;
ELSE FBR(I)=FBRIN(LOOPYR);

* BFW IS CACLUATED ONLY IN MONTHS WERE THE STW IS 0, 1, 2, OR 3.
  HOWEVER IF THERE IS NOT EARNED INCOME ONE MONTH PRIOR THEN EITHER
  THERE WAS NONRECURRING EARNED INCOME IN THE BM THAT DOES NOT AFFECT
  THE CURRENT MONTH, OR THERE WAS NO EARNED INCOME IN THE BM. IN
  EITHER CASE, THE BFWSSI VALUE IS 0. IF THERE WAS INCOME IN THE MONTH
  PRIOR THEN THE EICM FROM THE BM-1 IS THE BFWSSI VALUE;
IF STWSSI(I) IN (4,8,9,.) THEN BFWSSI(I)=0;
ELSE IF STWSSI(I)=0 AND UINC(I)>=FBR(I) THEN DO;
   BFWSSI(I)=0;
   STSUPONLY=1;
END;

* CREATE BFWS FOR BENES IN CURRENT PAY;
ELSE IF STWSSI(I)=0 THEN DO;
   IF BMF(I)=. THEN BFWSSI(I)=.B;
   ELSE BFWSSI(I)=EICM(I-BMF(I));
END;

* CREATE BFW SSI FOR BENES WHO ARE SUSPENDED OR TERMINATED
  FOR WORK (STWSSI(I)=1/2/3) ;
ELSE BFWSSI(I)=SUM(FBR(I),UINC(I-CFBMF(I))*-1,NONEARN(I-CFBMF(I))*-1);

END; * END CREATE BFW LOOP;

* BFWSSI LOGICALLY CANNOT BE LESS THAN 0, GREATER THAN FBR, OR WHEN OFF
  THE ROLLS FOR WORK CANNOT BE 0. IF THE ALGORITHM HAS RESULTED IN
  THESE CASES THEN SET THE BFWSSI TO A SPECIAL MISSING;
DO I=3 TO DIM(BFWSSI);
IF BFWSSI(I)<0 OR BFWSSI(I)>FBR(I) OR
   (STWSSI(I) IN (1,2,3) AND BFWSSI(I)=0)
THEN BFWSSI(I)=.M;

* WHEN A BENE IS LIVING IN A MEDICAL FACILITY AND MEDICAID PAYS MORE
THAN 50 PERCENT OF EXPENSES (LIVF=D) THEN THE MAX SSI BENEFIT IS $30
SO THE BFWSSI CAN BE NO HIGHER THAN THAT;
IF LIVF(I)='D' THEN DO;
   IF BFWSSI(I) NE . THEN BFWSSI(I)=MIN(30,BFWSSI(I));
```

Appendix A.167
JCL/SAS Code: BFWSSICM

```
 END;
END;

* CALCULATE COMBINED BFW;
DO I=1 TO &TOTMOS.;
  BFWCM(I)=SUM(BFWDI(I),BFWSSI(I));
END;

RUN;

PROC CONTENTS DATA=BFW.BFWSSICM;
RUN;

%MEND;
%START;
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<DFERRAGAMO@MATHEMATICA-MPR.COM>
RCPT TO:<DFERRAGAMO@MATHEMATICA-MPR.COM>
DATA
FROM:   <DFERRAGAMO@MATHEMATICA-MPR.COM>
TO:     <DFERRAGAMO@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 BFWSSI COMPLETE
```

Appendix A.168
JCL/SAS Code: SPBFW

```
//#6502SPB JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//*
//*     *-------------------------------------------------*
//*     ¦  THE MACRO SPLIT PROGRAM                        ¦
//*     *-------------------------------------------------*
//*
//*
//* CREATED BY:  SERGE LUKASHANETS, 5/26/2016
//* MODIFIED BY: ALEX BRYCE  12/09/2019
//* E-MAIL:     ABRYCE@MATHEMATICA-MPR.COM
//*           ALEX.BRYCE@SSA.GOV
//*****************************************************************
//  SET REG='64M'
//*
//JS010  EXEC SAS9,
//      WORK='200000,100000', F10
//      REGION=&REG,
//      PARM='MEMSIZE=&REG'
//*
//***DATA FOR SPLIT
//IN1     DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.BFWSSICM.SA.V1,DISP=SHR
//***OUT YEARLY FILES
//OUT94  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW1994.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT95  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW1995.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT96  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW1996.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT97  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW1997.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT98  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW1998.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT99  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW1999.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT00  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW2000.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
```

Appendix A.168
JCL/SAS Code: SPBFW

```
//        UNIT=TSILO,VOL=(,,,10)
//OUT01  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW2001.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT02  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW2002.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT03  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW2003.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT04  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW2004.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT05  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW2005.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT06  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW2006.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT07  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW2007.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT08  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW2008.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT09  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW2009.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT10  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW2010.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT11  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW2011.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT12  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW2012.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT13  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW2013.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT14  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW2014.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT15  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW2015.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
```

Appendix A.168
JCL/SAS Code: SPBFW

```
//        UNIT=TSILO,VOL=(,,,10)
//OUT16  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW2016.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT17  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW2017.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//OUT18  DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.BFW2018.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//SYSIN   DD *
OPTIONS NOCENTER COMPRESS=YES MPRINT OBS=MAX;

%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(MSPLIT)";

%OUTP(IN1.BFWSSICM,OUT,BFW,1994,2018,SSN);

PROC CONTENTS DATA=OUT94.BFW;RUN;
PROC CONTENTS DATA=OUT95.BFW;RUN;
PROC CONTENTS DATA=OUT96.BFW;RUN;
PROC CONTENTS DATA=OUT97.BFW;RUN;
PROC CONTENTS DATA=OUT98.BFW;RUN;
PROC CONTENTS DATA=OUT99.BFW;RUN;
PROC CONTENTS DATA=OUT00.BFW;RUN;
PROC CONTENTS DATA=OUT01.BFW;RUN;
PROC CONTENTS DATA=OUT02.BFW;RUN;
PROC CONTENTS DATA=OUT03.BFW;RUN;
PROC CONTENTS DATA=OUT04.BFW;RUN;
PROC CONTENTS DATA=OUT05.BFW;RUN;
PROC CONTENTS DATA=OUT06.BFW;RUN;
PROC CONTENTS DATA=OUT07.BFW;RUN;
PROC CONTENTS DATA=OUT08.BFW;RUN;
PROC CONTENTS DATA=OUT09.BFW;RUN;
PROC CONTENTS DATA=OUT10.BFW;RUN;
PROC CONTENTS DATA=OUT11.BFW;RUN;
PROC CONTENTS DATA=OUT12.BFW;RUN;
PROC CONTENTS DATA=OUT13.BFW;RUN;
PROC CONTENTS DATA=OUT14.BFW;RUN;
PROC CONTENTS DATA=OUT15.BFW;RUN;
PROC CONTENTS DATA=OUT16.BFW;RUN;
PROC CONTENTS DATA=OUT17.BFW;RUN;
PROC CONTENTS DATA=OUT18.BFW;RUN;
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
```

Appendix A.168
JCL/SAS Code: SPBFW

```
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: SPBFW COMPLETE
BFW SPLIT TO ANNUAL BFWS COMPLETE.
```

Appendix A.169
JCL/SAS Code: 1_import_new_payments

```
 /* ----------------------------------------------------------------------*/
/*   Name:        1_import_new_payments.sas                          */
/*   Date Created:  May 26 2011  Miriam Loewenberg                    */
/*   Modified:     6/11/2013 Xiao Barry for DAF12                     */
/*              5/19/2014 Patsy Lloyd for DAF13                     */
/*              5/14/2015 Miaomaio Shen for DAF14
/*                              7/05/2016 Serge Lukashanets for DAF15
/*                              7/30/2018 Brittany Colip for DAF17                 */
/*              8/06/2019 Serge Lukashanets for DAF18
/*   Purpose:      Produce a cleaned data file on EN level with:          */
/*              1) Compressed SSN and DUNS with no dashes              */
/*              2) Trim EN name                                */
/*              3) Drop the total records with a WHERE clause          */
/*              4) Correct the triggering event (MONTH_S)              */
/*  ----------------------------------------------------------------------*/
libname inlib  'M:\DAF18\TASK 15 Create Payments Component\Data\PII\InputData';
libname inter  'M:\DAF18\TASK 15 Create Payments Component\Data\PII\IntermediateData';
libname intero  'M:\DAF17\TASK 15 Create Payments Component\Data\PII\IntermediateData';


PROC IMPORT OUT= inlib.ENPAY
        DATAFILE= "M:\payment file with PII\EN Cumulative Report Jan 1 2018 present (8-2-19).xlsx"
        DBMS=xlsx REPLACE;
        GETNAMES=YES;
        DATAROW=2;
RUN;

ODS RTF FILE="M:\DAF18\TASK 15 Create Payments Component\Data\Contents\CONTENTS_ORIG.RTF";
TITLE "CONTENTS OF INPUT DATASET";
PROC CONTENTS DATA=inlib.ENPAY; RUN;
TITLE;
ODS RTF CLOSE;

PROC PRINT DATA=inlib.ENPAY (OBS=20);
RUN;

PROC FORMAT;
value $ m3n 'Jan'=1
         'Feb'=2
         'Mar'=3
         'Apr'=4
         'May'=5
         'Jun'=6
         'Jul'=7
```

Appendix A.169
JCL/SAS Code: 1_import_new_payments

```
            'Aug'=8
            'Sep'=9
            'Oct'=10
            'Nov'=11
            'Dec'=12
    ;
    run;


    DATA inter.ENPAY (DROP = SSN DUNS PAY_AMT
                RENAME = (COMPRESS_SSN = SSN
                        COMPRESS_DUNS = DUNS));
      LENGTH COMPRESS_SSN COMPRESS_DUNS $9;
      SET inlib.ENPAY (KEEP = Beneficiary_Name DUNS EN_Name Month_Yr Payment_Amount Pay_Date
                      Pay_Num Pay_Num_for_Sort Pay_Type SSN
                  RENAME=(EN_NAME=EN BENEFICIARY_NAME=BENE_NAME
                        PAY_DATE=DATE_PAYMENT Payment_Amount=Pay_Amt)
                  WHERE=(SSN NE ' ')); *Drop the total records;

      * Convert PAY_AMT to numeric ;
      AMOUNT=PAY_AMT;
      FORMAT AMOUNT DOLLAR21.2;

      * Compress the dashes in the SSN and DUNS ;
      COMPRESS_SSN  = LEFT(TRIM(COMPRESS(SSN,'-')));
      COMPRESS_DUNS = LEFT(TRIM(COMPRESS((PUT(DUNS,9.)),'-')));

      * Trim the EN name;
      EN = LEFT(TRIM(EN));

      * Variable MONTH_YR in DAF18 is provided as SAS date *;
      TRIGGER_DATE = Month_Yr;
    RUN;

    PROC PRINT DATA=inter.ENPAY (OBS=25);
    RUN;

    *combine to DAF17;

    data old;
    set intero.ENPAY;
    run;

    data new;
    set inter.ENPAY;
```

Appendix A.169
JCL/SAS Code: 1_import_new_payments

```
run;

data both;
length EN $40.;
set old (in=a rename=(month_yr=month_yr_old))
  new (in=b)
  ;
if a then flag=1;
if b then flag=2;

run;

proc means data=both min max;
var flag;
class pay_num;
run;

*check overlap;
proc sql;
create table both2 as select *,n(distinct flag) as flags
from both group by SSN,pay_num,trigger_date,date_payment;
quit;

proc freq data=both2;
tables flags*flag
/ list missing;
run;

data both3;
set both2;
if flags=2 & flag=1 then delete;
run;

*OUTPUT;

data inter.ENPAY_FIN;
set both3;
drop flag flags;
run;

ODS RTF FILE="M:\DAF18\TASK 15 Create Payments Component\Data\Contents\CONTENTS_VER.RTF";
TITLE "CONTENTS OF VERTICAL DATASET";
PROC CONTENTS DATA=inter.ENPAY_FIN OUT = inter.ENPAYVERCON ; RUN;
TITLE;
ODS RTF CLOSE;
```

Appendix A.170
JCL/SAS Code: 2_payment_person_record

```
/* ----------------------------------------------------------------------*/
/*   NAME:        PAYMENT.SAS                                    */
/*   DATE CREATED:  MAY 28 2011                                  */
/*   TASK       :  PROCESS EN PAYMENT DATA 6FOR MINITRF          */
/*   MODIFIED      JAN 18, 2012 JEREMY PAGE FOR TRF10            */
/*              August 22, 2012 XIAO BARRY FOR DAF11             */
/*              5/19/2014 PATSY LLOYD DAF13                      */
/*              5/14/2015 Miaomiao Shen for DAF14                */
/*                          7/5/2016 Serge Lukashanets for DAF15 */
/*              8/30/2017 Adele Rizzuto for DAF16                */
/*                          7/30/2018 Brittany Colip for DAF17   */
/*                          8/06/2019 Serge Lukashanets for DAF18
/*  ----------------------------------------------------------------------*/

libname inter  'M:\DAF18\TASK 15 Create Payments Component\Data\PII\IntermediateData';

libname out    'M:\DAF18\TASK 15 Create Payments Component\Data\PII\OutputData';

OPTIONS NOCENTER /*LS=max*/ MACROGEN MPRINT COMPRESS=BINARY
      PAGENO=1  LS=200 PS=80 FORMCHAR="|----|+|---+=|-/\<>*";
OPTIONS OBS=MAX;

%LET BEGYR=2002;
%LET ENDYR=2018; *Change the ENDYR for each DAF year;
%LET ENDMN=12;

%MACRO START;
/*INITIATE MONTH COUNTER, MOCNTER, TO 1*/
%LET MOCNTER=1;
/*LOOPING THROUGH EACH YEAR SPECIFIED ABOVE*/
%DO YEAR=&BEGYR. %TO &ENDYR.;
/*SETTING YR MACRO VAR TO LAST TWO DIGITS OF EACH YEAR*/
%LET YR=%SUBSTR(&YEAR.,3,2);

/*LOOP THROUGH MONTHS 1 TO 12 AND INCREMENT MONTH COUNTER*/
%DO M=1 %TO 12;
  %LET M=%SYSFUNC(PUTN(&M.,Z2.));
  %LET YY&MOCNTER=%EVAL(&YR)%EVAL(&M);
  %LET MOCNTER=%EVAL(&MOCNTER+1);
 %END;
%END;
/*SET TOTAL MONTHS, TOTMOS, EQUAL TO MOCNTER - 1 TO GET
TOTAL MONTHS IN TIME SERIES*/
%LET TOTMOS=%EVAL(&MOCNTER-1);
```

Appendix A.170
JCL/SAS Code: 2_payment_person_record

```
/*USED TO PRING MAPPING TO LOG - CHECK DURING CODE REVIEW*/
%DO MM=1 % TO &TOTMOS;
  %PUT &MM. MAPS TO YYMM, &&YY&MM.;
%END;
%PUT TOTAL MONTHS = &TOTMOS.;

DATA PAYMENT O_PAYMENT M_PAYMENT ;
  SET INTER.ENPAY_FIN (DROP=BENE_NAME);

/* PAYMENTS WITH A PAY_NUM OF O0 (O,zero) ARE RECONCILIATION PAYMENTS FOR      */
/* MISSED MILESTONE PAYMENTS. THEY ARE TRIGGERED BY THE PAYMENT OF THE FIRST   */
/* OUTCOME PAYYMENT SO THEREFORE ARE REFLECTED AS OUTCOME 0 PAYMENTS. WE       */
/* RECODE THEM TO M0 SO THEY WILL FALL UNDER MILESTONE PAYMENTS INSTEAD OF     */
/* OUTCOME.                                                                    */

IF PAY_NUM = "O0" THEN PAY_NUM = "M0"; * by Xiao Barry on Sep.13th 2012;

LENGTH PAYMENT_TYPE $1;
PAY_TYPE_FOR_SORT = SUBSTR(PAY_NUM_FOR_SORT,1,1);

IF PAY_TYPE_FOR_SORT = 'B' THEN PAY_TYPE_FOR_SORT = 'M';

*correction for DAF18 - pay type = B;
IF PAY_TYPE = 'B' THEN PAY_TYPE = 'M';

IF PAY_TYPE in ('MO' 'M') AND PAY_TYPE_FOR_SORT = 'M' THEN PAYMENT_TYPE = 'M';
ELSE IF PAY_TYPE_FOR_SORT = 'O' THEN PAYMENT_TYPE = 'O';

/* A FEW RECORDS HAVE PAYMENT DATE EARLIER THAN THE TRIGGERING
   MONTH. RECODE THE PAYMENT DATE TO THE MONTH DATE --
  THERE IS NO RECORDS WITH PAYMENT DATE EARLIER THAN TRIGGERING MONTH IN DAF14 */
IF DATE_PAYMENT LT TRIGGER_DATE THEN DO; DATE_PAYMENT = TRIGGER_DATE; FLAG_DATE=1; END;

IF      PAYMENT_TYPE = 'O' THEN OUTPUT O_PAYMENT;
ELSE IF PAYMENT_TYPE = 'M' THEN OUTPUT M_PAYMENT;

OUTPUT PAYMENT;
RUN;

PROC FREQ DATA=PAYMENT;
  TABLES PAY_TYPE*PAY_TYPE_FOR_SORT*PAYMENT_TYPE/LIST MISSING;
RUN;

/* SET ASIDE THE LIST OF EN'S FOR BENEFICIARIES TO MERGE ON LATER -
```

Appendix A.170
JCL/SAS Code: 2_payment_person_record

```
    THERE IS MORE THAN 1 EN PER BENEFICIARY
    WHERE SPLIT PAYMENTS ARE INDICATED THERE WILL BE GT 1 EN'S */

PROC SORT DATA=PAYMENT (KEEP=SSN EN DUNS) OUT=ENDATA NODUPKEY ;
  BY SSN DUNS;
RUN;

/* CRAETE MACRO VARIABLE INX */
PROC SQL;
  SELECT MAX(CT_EN) INTO :INX
  FROM (SELECT SSN,COUNT(SSN) AS CT_EN
       FROM ENDATA
       GROUP BY SSN);
QUIT;

/*PROCESS PAYMENTS DATA */
DATA ENDATA (KEEP=SSN EN_NAME: DUNS_ID:);
  SET ENDATA; BY SSN DUNS;

RETAIN
 %DO I = 1 %TO &INX;
   EN_NAME&I
   DUNS_ID&I
 %END;;

LENGTH
 %DO I = 1 %TO &INX;
   EN_NAME&I
 %END;
 $80;

LENGTH
 %DO I = 1 %TO &INX;
   DUNS_ID&I
 %END;
 $13;

ARRAY NAME (*) $ %DO I = 1 %TO &INX; EN_NAME&I %END;;
ARRAY NUMB (*) $ %DO I = 1 %TO &INX; DUNS_ID&I %END;;

IF FIRST.SSN THEN DO;
 %DO I = 1 %TO &INX;
   EN_NAME&I = ' ';
   DUNS_ID&I = ' ';
 %END;;
```

Appendix A.170
JCL/SAS Code: 2_payment_person_record

```
  REC = 1;
  NAME(REC) = EN;
  ***ADDING LEADING ZEROS TO DUNS_ID;
  *NUMB(REC) = PUT(DUNS,Z9.); /* IN 2014 DATA DUNS IS CHARACTER WITH LENGTH OF 9 */
END;

ELSE DO;
  REC + 1; /*IMPLICIT RETAIN */
  NAME(REC) = EN;
  ***ADDING LEADING ZEROS TO DUNS_ID;
  *NUMB(REC) = PUT(DUNS,Z9.); /* IN 2014 DATA DUNS IS CHARACTER WITH LENGTH OF 9 */
END;

IF LAST.SSN THEN OUTPUT;
RUN;

/*SORT DATA BY SSN AND TRIGGER_DATE */
PROC SORT DATA=O_PAYMENT; BY SSN TRIGGER_DATE; RUN;
PROC SORT DATA=M_PAYMENT; BY SSN TRIGGER_DATE; RUN;

/* THE FOLLOWING MACRO FIRST SUMS THE PAYMENT AMOUNTS FOR
   PAYMENTS TRIGGERED ON THE SAME DATE. THEN IT CREATES
   MONTHLY VARIABLES WHERE APPLICABLE AND OUTPUTS 1 RECORD
   FOR EACH BENEFICIARY */

%MACRO SUMPAY (TYPE);

/* RESOLVE ALL DUPLICATE RECORDS  */
DATA &TYPE._PAYMENT;
   SET &TYPE._PAYMENT; BY SSN TRIGGER_DATE;

RETAIN AMTPAID;
IF FIRST.TRIGGER_DATE AND LAST.TRIGGER_DATE THEN DO;
  AMTPAID = AMOUNT;
END;

  /* PROCESS REMAINING DUPLICATES */
ELSE DO;
  IF FIRST.TRIGGER_DATE THEN DO;
    AMTPAID = AMOUNT;
  END;
  /* SUM THE PAYMENTS ACROSS DUPLICATES (PAUL O'LEARY - AUG 2009) */
  ELSE DO;
    AMTPAID = SUM(AMTPAID,AMOUNT);
  END;
```

Appendix A.170
JCL/SAS Code: 2_payment_person_record

```
END;

IF LAST.TRIGGER_DATE THEN OUTPUT;

RUN;


PROC PRINT DATA=&TYPE._PAYMENT (OBS=25); VAR SSN
 TRIGGER_DATE PAY_NUM AMOUNT AMTPAID:;
 TITLE "AFTER FOR &TYPE DATA";
RUN;


DATA &TYPE._PAYMENT;
  SET &TYPE._PAYMENT;
  BY SSN;

/* PROCESS RECORDS TO RESOLVE PAYMENTS AND PRODUCE PERSON LEVEL DATA.
  - RANGE OF MONTHS 2002-2010 */

/* SET UP MONTHLY ARRAYS FOR PERSON LEVEL VARIABLES */

/*LENGTH %DO MM=1 %TO &TOTMOS; &TYPE._TRIGGERED&&YY&MM. %END; $10;*/
ARRAY PAYAMT{*}      %DO MM=1 %TO &TOTMOS; EN_&TYPE.PAYAMT&&YY&MM.  %END;;
ARRAY PAYDT{*}       %DO MM=1 %TO &TOTMOS; EN_&TYPE.PAYDT&&YY&MM.   %END;;
ARRAY PAYNUM{*}    $  %DO MM=1 %TO &TOTMOS; EN_&TYPE.PAYNUM&&YY&MM.  %END;;

/* SET UP ARRAYS FOR TEMPORARY VARIABLES */
ARRAY CYEAR (*) $ %DO MM=1 %TO &TOTMOS; C&&YY&MM. %END;;
ARRAY NYEAR (*)   %DO MM=1 %TO &TOTMOS; N&&YY&MM. %END;;

RETAIN %DO MM=1 %TO &TOTMOS; EN_&TYPE.PAYAMT&&YY&MM.
                    EN_&TYPE.PAYDT&&YY&MM.
                    EN_&TYPE.PAYNUM&&YY&MM.
%END;;

/* INITIALIZE THE MONTHLY VARIABLES */
IF FIRST.SSN THEN DO;
  DO I = 1 TO &TOTMOS;
    PAYAMT(I) =  . ;
    PAYDT(I)  =  . ;
    PAYNUM(I) = ' ';
  END;
END;
```

Appendix A.170
JCL/SAS Code: 2_payment_person_record

```
    /* THE FOLLOWING ROUTINE CREATES MONTHLY REFERENCE DATES FROM
       JAN 2002 TO DEC 2017   */
    J=1;
    Y=&BEGYR;

    DO I = 1 TO DIM(CYEAR); /* LOOP THROUGH ALL MONTH/YEAR REFERENCES */
      CYEAR(I) = PUT(Y,4.)||(PUT(J,Z2.));
      IF INT(I/12)=I/12 THEN DO; /*INCREMENT YEAR*/
        J=1;
        Y=Y+1;
      END;

      ELSE J=J+1; /*INCREMENT MONTH*/

      NYEAR(I)=INPUT(SUBSTR(CYEAR(I),1,4)||SUBSTR(CYEAR(I),5,2)||'01',YYMMDD10.);

      IF TRIGGER_DATE = NYEAR(I) THEN DO;
        PAYAMT(I)    = AMTPAID;
        PAYDT(I)     = DATE_PAYMENT;
        PAYNUM(I)    = PAY_NUM; *FOR BOTH TYPE, WE WANT TO RETAIN PHASE AND NUMBER OF THE MILESTONE
PAYMENTS;
      END;

    END;

    DROP PAY_TYPE PAY_NUM_FOR_SORT AMOUNT AMTPAID
        MONTH TRIGGER_DATE DATE_PAYMENT TRIGGERED_BY
        PAY_TYPE_FOR_SORT AMOUNT EN DUNS
        MONTH_YR YEAR PAY_NUM PAYMENT_TYPE  I J Y;
    DROP %DO MM = 1 %TO &TOTMOS; C&&YY&MM N&&YY&MM %END;;

    IF LAST.SSN THEN OUTPUT;

    RUN;

    %MEND SUMPAY;

    %SUMPAY (M);
    %SUMPAY (O);

     /* MERGE THE DATASETS AND THE EN INFORMATION AND OUTPUT FINAL FILE */

    DATA OUT.ENPAYMENTS ;

    RETAIN SSN EN_NAME: DUNS_ID:;
```

Appendix A.170
JCL/SAS Code: 2_payment_person_record

```
MERGE M_PAYMENT (IN=INM)
    O_PAYMENT (IN=INO)
    ENDATA;
  BY SSN;
  HAS_M_DATA = INM;
  HAS_O_DATA = INO;

RUN;

TITLE 'FINAL PERSON LEVEL EN PAYMENTS DATA';
TITLE2;
PROC FREQ; TABLES HAS_M_DATA*HAS_O_DATA/LIST MISSING; RUN;
PROC PRINT DATA=OUT.ENPAYMENTS (OBS=10) ;  TITLE2 'FINAL OUTPUT RECORDS';
RUN;

ODS RTF FILE="M:\DAF18\TASK 15 Create Payments Component\Data\Contents\CONTENTS_HOR.RTF";
TITLE "CONTENTS OF HORIZONTAL DATASET";
PROC CONTENTS DATA=OUT.ENPAYMENTS OUT = OUT.ENPAYCON ; RUN;
TITLE;
ODS RTF CLOSE;

%MEND START;
%START;

/* NOTE: REMOVED OLD CODE PAYMENT_TYPE_OLD NOT EXIT ANYMORE */
PROC FREQ DATA= PAYMENT;
TITLE "CHECK FREQUENCIES";
TABLES FLAG_DATE /*PAYMENT_TYPE_OLD*PAYMENT_TYPE*//LIST MISSING;
RUN;

PROC PRINT DATA=PAYMENT;
TITLE "SAMPLE PRINT OF THOSE WITH FLAG_DATE=1";
WHERE FLAG_DATE=1;
RUN;

ODS RTF FILE="M:\DAF18\TASK 15 Create Payments Component\Data\Contents\CONTENTS_INTER.RTF";
TITLE1 "CONTENTS OF INTERMEDIATE DATASETS";
TITLE2 "CONTENTS OF PAYMENT DATASET";
PROC CONTENTS DATA=PAYMENT;
RUN;

TITLE2 "CONTENTS OF O_PAYMENT DATASET";
PROC CONTENTS DATA=O_PAYMENT;
RUN;
```

Appendix A.170
JCL/SAS Code: 2_payment_person_record

```
TITLE2 "CONTENTS OF M_PAYMENT DATASET";
PROC CONTENTS DATA=M_PAYMENT;
RUN;
TITLE;
ODS RTF CLOSE;
```

Appendix A.171
JCL/SAS Code: ENPAY_UPLOAD

```
/*************************************************************************
** Purpose: Upload the ENPAY horizontal and vertical file to the mainframe
*         Upload their table contents to the mainframe
*************************************************************************/
options comamid=tcp; %let SY56=SY56.sspf.ssa.gov; %let tcpsec=_prompt_; options remote=sy56.spawner; run;

SIGNON ;
LIBNAME LOCAL1 'M:\DAF18\TASK 15 Create Payments Component\Data\PII\OutputData';
LIBNAME LOCAL2 'M:\DAF18\TASK 15 Create Payments Component\Data\PII\IntermediateData';
RSUBMIT;

LIBNAME ENPAY    'OPDR.TG.PRD.ETTW.#6266.DAF18I.ENPAY.SA.V1';
LIBNAME ENPAYVER 'OPDR.TG.PRD.ETTW.#6266.DAF18I.ENPAYVER.SA.V1';
OPTION COMPRESS=BINARY;

*****************************************************************;
/* Use the firstobs and obs control only if needed.  For example, if the first download */
/*  after the 499th record, then the code below will start downloading at the 500th     */
/*  observation and go until it completes or crashes.                                   */
*****************************************************************;
PROC UPLOAD DATA=LOCAL1.ENPAYMENTS OUT=ENPAY.ENPAY      (COMPRESS=BINARY);RUN;
PROC UPLOAD DATA=LOCAL2.ENPAY_FIN  OUT=ENPAYVER.ENPAYVER (COMPRESS=BINARY);RUN;

ENDRSUBMIT;
SIGNOFF;
```

Appendix A.172
JCL/SAS Code: FINPAYH

```
//#6266PHF  JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//* PROJECT: BUILDING THE TICKET RESEARCH FILE (06979)
//*
//* PROJECT
//* DIRECTOR:    LAURA KOSAR
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.#7429.DAF17.ENPAY.PRDLIB(FINPAYH)
//*
//*
//* DATE:       10/21/2018
//* CONTACT:    SLUKASHANETS@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//SAS       EXEC SAS9,
//         WORK='120000,60000'
//*
//COM    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,
//         DISP=SHR
//IPAYH  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18I.ENPAY.SA.V1,
//         DISP=SHR
//OPAYH  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.ENPAY,
//         DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//OPYHC  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.ENPAYCON.SA.V1,
//         DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//SYSIN  DD *

OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN  OBS=MAX;

%MACRO DOIT;

%LET DAFYY=18;

DATA OPAYH.ENPAY_FINAL;
  MERGE IPAYH.ENPAY (IN=ENPAY)
       COM.COMVARS
  ;
  BY SSN;
  IF ENPAY;

 DROP DUNS_ID:
```

Appendix A.172
JCL/SAS Code: FINPAYH

```
      EN_NAME:
    FLAG_DATE MONTH_YR_OLD
    ;
    LABEL HAS_M_DATA="EN MILESTONE PAYMENTS GENERATED FLAG"
         HAS_O_DATA="EN OUTCOME PAYMENTS GENERATED FLAG"
              SSN="SOCIAL SECURITY NUMBER"
         FRADATE = "FULL RETIREMENT DATE"
   SSI&DAFYY="SSI CURRENT PAY STATUS IN 20&DAFYY."
   SSDI&DAFYY="SSDI CURRENT PAY STATUS IN 20&DAFYY."
   SEX = "GENDER (FROM DEMO FILE)"
   SSIELIG_FIRST="SSI EARLIEST ELIGIBILITY DATE (CONSTRUCTED)"
      %DO YEAR=2002 %TO 20&DAFYY;
       %LET YY=%SUBSTR(&YEAR.,3,2);
       %DO MO=101 %TO 112;
        %LET MM=%SUBSTR(&MO,2,2);
         EN_MPAYDT&YY.&MM.="EN MILESTONE PAYMENT DATE &YY.&MM."
        EN_MPAYAMT&YY.&MM.="EN MILESTONE PAYMENT AMOUNT &YY.&MM."
        EN_MPAYNUM&YY.&MM.="EN MILESTONE PAYMENT NUMBER &YY.&MM."
         EN_OPAYDT&YY.&MM.="EN OUTCOME PAYMENT DATE &YY.&MM."
        EN_OPAYAMT&YY.&MM.="EN OUTCOME PAYMENT AMOUNT &YY.&MM."
        EN_OPAYNUM&YY.&MM.="EN OUTCOME PAYMENT NUMBER &YY.&MM."
       %END;
      %END;
    ;
    RENAME
          HAS_M_DATA=EN_MPAYFLAG
          HAS_O_DATA=EN_OPAYFLAG
      ;
  RUN;
  %MEND DOIT;
  %DOIT;

   PROC CONTENTS DATA=OPAYH.ENPAY_FINAL OUT=OPYHC.ENPAYCON;
   RUN;
```

Appendix A.173
JCL/SAS Code: COPYH

```
//#6266CPH  JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//*
//*     *-------------------------------------------*
//*     |  OPDR.TG.PRD.ETTW.#7429.ENPAY.PRDLIB(COPYH) |
//*     *-------------------------------------------*
//*
//*     1.  COPY HORIZONTAL PAYMENT FILE FROM TAPE TO TAPE
//*
//*****************************************************************
//STEPA   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.ENPAY,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18C.ENPAY,
//         DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//SYSIN  DD  DUMMY
```

Appendix A.174
JCL/SAS Code: FINPAYV

```
//#6266PVF  JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//* PROJECT: BUILDING THE TICKET RESEARCH FILE (06979)
//*
//* PROJECT
//* DIRECTOR:    LAURA KOSAR
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.#7429.DAF17.ENPAY.PRDLIB(FINPAYV)
//*
//*
//* DATE:       10/21/19
//* CONTACT:    SLUKASHANETS@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//SAS       EXEC SAS9,
//         WORK='120000,60000'
//*
//COM    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,
//         DISP=SHR
//IPAYV  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18I.ENPAYVER.SA.V1,
//         DISP=SHR
//OPAYV  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.ENPAYVER,
//         DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//OPYVC  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.ENPYVCN.SA.V1,
//         DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//TEMP1  DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(1000,100),RLSE)
//SYSIN  DD *

OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN  OBS=MAX;

%MACRO DOIT;

%LET DAFYY=18;

PROC SORT DATA = IPAYV.ENPAYVER OUT = TEMP1.ENPAYVER;
BY SSN;
RUN;

 DATA OPAYV.ENPAYVER_FINAL;
```

Appendix A.174
JCL/SAS Code: FINPAYV

```
    MERGE TEMP1.ENPAYVER(IN=ENPAYVER
                    RENAME=(PAY_TYPE=PYMT_TYPE
                         TRIGGER_DATE=MONTHDATE))
        COM.COMVARS
    ;
    BY SSN;
    IF ENPAYVER;

   DROP YEAR
       MONTH
       MONTH_YR MONTH_YR_OLD
       PAY_NUM_FOR_SORT
    ;
  LABEL SSN="SOCIAL SECURITY NUMBER"
      EN="EMPLOYMENT NETWORK NAME"
      DUNS="DUNS (DATA UNIVERSAL NUMBERING SYSTEM)"
      PYMT_TYPE="EN TICKET PAYMENT TYPE"
      PAY_NUM="EN TICKET PAYMENT NUMBER"
      BENE_NAME="BENEFICIARY'S NAME"
      MONTHDATE="EN TICKET PAYMENT TRIGGERING EVENT DATE"
      AMOUNT="EN TICKET PAYMENT AMOUNT"
      DATE_PAYMENT="EN TICKET PAYMENT MADE DATE"
      TRIGGERED_BY="EN TICKET PAYMENT TRIGGERED BY"
      SSIELIG_FIRST="SSI EARLIEST ELIGIBILITY DATE (CONSTRUCTED)"
      FRADATE = "FULL RETIREMENT DATE"
      SSI&DAFYY="SSI CURRENT PAY STATUS IN 20&DAFYY."
      SSDI&DAFYY="SSDI CURRENT PAY STATUS IN 20&DAFYY."
      SEX = "GENDER (FROM DEMO FILE)"
      ;
    RENAME EN=EN_NAME
         PYMT_TYPE=ENPAY_TYPE
         PAY_NUM=ENPAY_NUM
         MONTHDATE=ENPAY_TRIG_DATE
         AMOUNT=ENPAY_AMOUNT
         DATE_PAYMENT=ENPAY_DATE
         ;

  RUN;
  %MEND DOIT;
  %DOIT;

   PROC CONTENTS DATA=OPAYV.ENPAYVER_FINAL
             OUT=OPYVC.ENPAYVER_CON;
   RUN;
```

Appendix A.175
JCL/SAS Code: COPYV

```
//#6266CPV  JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//*
//*     *-------------------------------------------*
//*     |  OPDR.TG.PRD.ETTW.#7429.ENPAY.PRDLIB(COPYV) |
//*     *-------------------------------------------*
//*
//*     1.  COPY VERTICAL PAYMENT FILE FROM TAPE TO TAPE
//*
//*****************************************************************
//STEPA   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.ENPAYVER,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18C.ENPAYVER,
//         DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//SYSIN  DD  DUMMY
```

Appendix A.176
JCL/SAS Code: PMTH10P

```
//#6266PTH JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//* PROJECT: DAF17
//*
//* PROJECT
//* DIRECTOR:    LAURA KOSAR
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.#7429.DAF17.ENPAY.PRDLIB(PMTH10P)
//*
//* DESCRIPTION: CREATE THE SIMPLE 10% EXTRACT DATA MART FOR PAYMENT
//* HORIZONTAL FILE
//*
//* INPUT:      OPDR.TG.PRD.ETTW.DRAFT.DAF17P.ENPAY
//* OUTPUT:     OPDR.TG.PRD.ETTW.DRAFT.DAF17D.P10PAYH
//*
//*
//* PURPOSE: CREATE THE SIMPLE 10% EXTRACT DATA MART FOR PAYMENT
//*****************************************************************
//*
//SAS      EXEC SAS9,
//         WORK='120000,60000'
//*
//PMT  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.ENPAY,DISP=SHR
//OUT  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10PAYH,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//TEMP   DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN  DD *

OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN  OBS=MAX;

DATA OUT.P10PAYH;
  SET PMT.ENPAY_FINAL;
  IF (SUBSTR(SSN,8,1) IN ('0', '2', '4', '7', '9')) AND
     (SUBSTR(SSN,9,1) IN ('0', '5'));
RUN;
```

Appendix A.177
JCL/SAS Code: PMTV10P

```
//#6266PTV JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//* PROJECT: DAF17
//*
//* PROJECT
//* DIRECTOR:    LAURA KOSAR
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.#7429.DAF17.ENPAY.PRDLIB(PMTV10P)
//*
//* DESCRIPTION: CREATE THE SIMPLE 10% EXTRACT DATA MART FOR PAYMENT
//*            VERTICAL FILE
//*
//* INPUT:     OPDR.TG.PRD.ETTW.DRAFT.DAFYYC.ENPAYVER
//* OUTPUT:    OPDR.TG.PRD.ETTW.DRAFT.DAFYYD.P10PAYV
//*
//*
//* PURPOSE: CREATE THE SIMPLE 10% EXTRACT DATA MART FOR PAYMENT
//*****************************************************************
//*
//SAS      EXEC SAS9,
//        WORK='120000,60000'
//*
//PMT  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18C.ENPAYVER,DISP=SHR
//OUT  DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10PAYV,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//TEMP   DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN  DD *

OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN  OBS=MAX;

DATA OUT.P10PAYV;
  SET PMT.ENPAYVER_FINAL;
  IF (SUBSTR(SSN,8,1) IN ('0', '2', '4', '7', '9')) AND
     (SUBSTR(SSN,9,1) IN ('0', '5'));
RUN;
```

Appendix A.178
JCL/SAS Code: 001_LOAD_VRRMS

```
*************************************************************************;
* PROJECT:      DAF18 (50214)
* RESEARCHER:
* PROGRAM:      001_LOAD_VRRMS.sas
* PURPOSE:      READ IN THE LATEST NEW FORMAT VRRMS XLSX FILES
* PROGRAMMER:    SERGE LUKASHANETS 11/5/2019
* MODIFICATION:
*************************************************************************;
OPTIONS MPRINT MACROGEN COMPRESS=BINARY NOCENTER /*NOLABEL*/ LINESIZE=MAX
      PAGESIZE=MAX REPLACE=YES OBS=MAX;

%LET DIR=M:\DAF18\TASK 16 Create VRRMS Component;
%LET OLD=M:\DAF17\TASK 16 Create VRRMS Component;


*LIBNAME INLIB  "&dir.\Data";
LIBNAME OUTLIB "&dir.\Data\SAS";
LIBNAME INOLD "&old.\Data\SAS";


*************************************************************************;
* Load Excel file into SAS.                                             *;
*************************************************************************;
%MACRO IMPORT_DT(FILENM=,SHEETNM=,DT=);
PROC IMPORT DATAFILE="&DIR.\Data\Excel\&FILENM..XLSX"
         OUT=OUTLIB.&DT. REPLACE
              DBMS=XLSX;
              SHEET="&SHEETNM.";
/*                    GETNAMES=YES;*/
RUN;

PROC CONTENTS DATA=OUTLIB.&DT.;
RUN;

* CHECK MISSING COSSN IN EACH DATASET *;
PROC SQL;
  CREATE TABLE &DT._CHECK_MISS1 AS
  SELECT SUM(CASE WHEN MISSING(COSSN) THEN 1 ELSE 0 END) AS CK_MISS_COSSN
  FROM OUTLIB.&DT.;
QUIT;

* CHECK MISSING VR_CLM_SNUM IN EACH DATASET *;
PROC SQL;
  CREATE TABLE &DT._CHECK_MISS2 AS
```

Appendix A.178
JCL/SAS Code: 001_LOAD_VRRMS

```
      SELECT SUM(CASE WHEN MISSING(VR_CLM_SNUM) THEN 1 ELSE 0 END) AS CK_MISS_SNUM
      FROM OUTLIB.&DT.;
    QUIT;

    * CHECK # OF OBS FOR EACH COSSN/VR_CLM_SNUM COMBINATION. *;
    PROC SQL;
      CREATE TABLE &DT._CHECK AS
      SELECT  CNT_COMBS
              ,COUNT(*) AS CNT_NUM_RECS
      FROM (SELECT  COSSN
                ,VR_CLM_SNUM
                  ,COUNT(COSSN) AS CNT_COMBS
            FROM OUTLIB.&DT.
            GROUP BY COSSN,VR_CLM_SNUM)
      GROUP BY CNT_COMBS
      ORDER BY CNT_COMBS;
    QUIT;
    %MEND IMPORT_DT;

    /*%IMPORT_DT(FILENM=CWOSS SGAMNTRK DATA (2018OCT30),SHEETNM=CWOSS SGAMNTRK DATA
(2018OCT30),DT=SGAMNTRK);*/
    %IMPORT_DT(FILENM=DAF18_VRAWRKCS,SHEETNM=VRAWRKCS,DT=VRAWRKCS);
    %IMPORT_DT(FILENM=VRRMS VRHCLAIM data 4 Paul 20191104,SHEETNM=VRRMS VRHCLAIM data 4 Paul
2019,DT=VRHCLAIM);
    %IMPORT_DT(FILENM=DAF18_VRPAYMNT,SHEETNM=VRPAYMNT,DT=VRPAYMNT);

    /*
    PROC IMPORT DATAFILE="M:\DAF18\TASK 16 Create VRRMS Component\Data\Excel\DAF18_VRAWRKCS.XLSX"
            OUT=OUTLIB.VRAWRKCS REPLACE
                  DBMS=XLSX;
                  SHEET="VRAWRKCS ";
    RUN;
    */


/*****************************************************************************************
******
    *
    *ADD TO PREVIOUS DAF VRRMS
    *

*****************************************************************************************
*****/

    proc compare base=OUTLIB.Vrawrkcs compare=INOLD.Vrawrkcs novalues;
```

```
    run;

    proc compare base=OUTLIB.VRHCLAIM compare=INOLD.VRHCLAIM novalues;
    run;
```

Appendix A.178
JCL/SAS Code: 001_LOAD_VRRMS

```
    proc compare base=OUTLIB.VRPAYMNT compare=INOLD.VRPAYMNT novalues;
```

Appendix A.178
JCL/SAS Code: 001_LOAD_VRRMS

```
run;

data VRPAYMNT;
set OUTLIB.VRPAYMNT (rename=(COSSN=_COSSN_ch PSTUS_TS=_PSTUS_TS_long));
COSSN=input(_COSSN_ch,best.);
PSTUS_TS=datepart(_PSTUS_TS_long);

/*fix pairs*/
retain _cossn;
if cossn ne . then _cossn=cossn;
if cossn = . then _miss_flag=1;

if PMT_SEQ_NUM>1 & lag(PMT_SEQ_NUM)<PMT_SEQ_NUM & cossn=. then do;
cossn = _cossn;
_flag=1;
end;
run;

proc freq data=VRPAYMNT;
tables _miss_flag / list missing;
run;

data _a;
set VRPAYMNT;
where _COSSN_ch="";
run;

proc sort data=VRPAYMNT nouniquekeys out=_a;by _cossn VR_CLM_SNUM PMT_SEQ_NUM;run;/*no recs*/
proc sort data=VRPAYMNT nouniquekeys out=_a;by _cossn VR_CLM_SNUM;run;
proc sql;
create table _b as select *,max(PMT_SEQ_NUM) as max_SEQ_NUM
from _a group by _cossn, VR_CLM_SNUM;
quit;
proc freq data=_b;
tables _flag*_miss_flag max_SEQ_NUM*PMT_SEQ_NUM*VR_PSTUS_CD
/ list missing;
run;
/*only VR_PSTUS_CD=P will be kept later*/


/*test combine*/
data VRPAYMNT_both;
set VRPAYMNT (in=a) inold.VRPAYMNT (in=b);
where strip(VR_PSTUS_CD)="P"; /*this restriction is used in VRRMS procession*/
if a then _new=1;
```

Appendix A.178
JCL/SAS Code: 001_LOAD_VRRMS

```
if b then _old=1;
run;
proc sort data=VRPAYMNT_both nouniquekeys out=_a;by cossn VR_CLM_SNUM;run;
/*four recs in old, all P's; no overlap*/
proc sort data=VRPAYMNT_both nouniquekeys out=_a;by cossn VR_CLM_SNUM PMT_SEQ_NUM;run;/*no recs*/


PROC FREQ DATA=VRPAYMNT_both;
  TABLES _new*_old*(VR_PSTUS_CD PSTUS_TS) / LIST MISSING;
  FORMAT PSTUS_TS YYMMN6.;
RUN;
/*no dates overlap*/
/*VRPAYMNT is ready for procession*/

/*Check VRCLAIM file*/
/*
Variable          Dataset        Type  Length  Format    Informat  Label

Entlt_Cd          INLIB.VRHCLAIM  Char      2  $2.       $2.       Entlt Cd
                INOLD.VRHCLAIM  Num       8                   Entlt Cd
Post_Empt_Prd_Endt  INLIB.VRHCLAIM  Num       8  MMDDYY10.          Post Empt Prd Endt
                INOLD.VRHCLAIM  Char     10  $10.      $10.      Post Empt Prd Endt
Post_Empt_Prd_Stdt  INLIB.VRHCLAIM  Num       8  MMDDYY10.          Post Empt Prd Stdt
                INOLD.VRHCLAIM  Char      9  $9.       $9.       Post Empt Prd Stdt
Vr_Pmt_Actn_Cd     INLIB.VRHCLAIM  Char      3  $3.       $3.       Vr Pmt Actn Cd
                INOLD.VRHCLAIM  Num       8                   Vr Pmt Actn Cd
Vr_Sga_Cprd_Typ_Cd  INLIB.VRHCLAIM  Char      2  $2.       $2.       Vr Sga Cprd Typ Cd
                INOLD.VRHCLAIM  Num       8                   Vr Sga Cprd Typ Cd
*/
proc freq data=OUTLIB.VRHCLAIM;
tables Entlt_Cd Vr_Pmt_Actn_Cd Vr_Sga_Cprd_Typ_Cd
/ list missing;
run;

data VRHCLAIM;
set OUTLIB.VRHCLAIM
  (rename=(Entlt_Cd=_Entlt_Cd
               Post_Empt_Prd_Endt=_Post_Empt_Prd_Endt
            Post_Empt_Prd_Stdt=_Post_Empt_Prd_Stdt
               Vr_Pmt_Actn_Cd=_Vr_Pmt_Actn_Cd
               Vr_Sga_Cprd_Typ_Cd=_Vr_Sga_Cprd_Typ_Cd
               Pmt_Ts=_Pmt_Ts
               ));
/*recode*/
if _Entlt_Cd ne "C" then Entlt_Cd=input(_Entlt_Cd,best.);
```

Appendix A.178
JCL/SAS Code: 001_LOAD_VRRMS

```
    if _Vr_Pmt_Actn_Cd ne "VVV" then Vr_Pmt_Actn_Cd=input(_Vr_Pmt_Actn_Cd,best.);
    if _Vr_Sga_Cprd_Typ_Cd ne "NN" then Vr_Sga_Cprd_Typ_Cd=input(_Vr_Sga_Cprd_Typ_Cd,best.);

    Post_Empt_Prd_Endt=put(left(put(_Post_Empt_Prd_Endt,MMDDYY10.)),$10.);
    Post_Empt_Prd_Stdt=put(left(put(_Post_Empt_Prd_Stdt,MMDDYY10.)),$10.);

    Pmt_Ts=datepart(_Pmt_Ts);
    run;

    proc print data=VRHCLAIM (obs=10); var Post_Empt_Prd_Endt _Post_Empt_Prd_Endt; where _Post_Empt_Prd_Endt
ne .; run;
    proc print data=VRHCLAIM (obs=10); var Post_Empt_Prd_Stdt _Post_Empt_Prd_Stdt; where _Post_Empt_Prd_Stdt
ne .; run;

    proc freq data=VRHCLAIM;
    tables              Entlt_Cd*_Entlt_Cd
                Vr_Pmt_Actn_Cd*_Vr_Pmt_Actn_Cd
                Vr_Sga_Cprd_Typ_Cd*_Vr_Sga_Cprd_Typ_Cd
    / list missing;
    run;

    /*test combine*/
    data VRHCLAIM_both;
    length Post_Empt_Prd_Endt Post_Empt_Prd_Stdt $10.;
    set inold.VRHCLAIM (in=b) VRHCLAIM (in=a drop=_:) ;
    if a then _new=1;
    if b then _old=1;
    run;
    proc sort data=VRHCLAIM_both nouniquekeys out=_a;by cossn VR_CLM_SNUM PMT_SEQ_NUM;run;/*no recs*/
    proc sort data=VRHCLAIM_both nouniquekeys out=_a;by cossn VR_CLM_SNUM;run;/*no recs*/


    ************************************************************************;
    *FINALIZE FOR PROCESSION                                               *;
    ************************************************************************;
    data OUTLIB.VRHCLAIM_comb;
    set VRHCLAIM_both;
    drop _:;
    run;

    data OUTLIB.VRPAYMNT_comb;
    set VRPAYMNT_both;
    drop _:;
    run;
```

Appendix A.179
JCL/SAS Code: 002_PROCESS_VRRMS

```
*********************************************************************;
* PROJECT:      DAF18 (50214)
* RESEARCHER:
* PROGRAM:      002_PROCESS_VRRMS.sas
* PURPOSE:      PROCESS SAS VERSION OF THE VRRMS DATASETS
* PROGRAMMER:    SERGE LUKASHANETS 11/12/2019
* MODIFICATION:
*********************************************************************;
OPTIONS MPRINT MACROGEN COMPRESS=BINARY NOCENTER /*NOLABEL*/ LINESIZE=MAX
      PAGESIZE=MAX REPLACE=YES FORMCHAR='|-++++++++++=Ý-/\<>*' OBS=MAX;

%LET DIR=M:\DAF18\TASK 16 Create VRRMS Component;

LIBNAME INLIB "&dir.\Data\SAS";
LIBNAME OUTLIB "&dir.\Data\Final";

* CHECK VARIABLES IN VRPAYMNT.                              *;
PROC FORMAT;
  VALUE MISSF
          . = "MISSING"
      OTHER = "NON-MISSING";
RUN;

PROC FREQ DATA=INLIB.VRPAYMNT_comb;
  TABLES COSSN VR_PSTUS_CD PSTUS_TS / LIST MISSING;
  FORMAT PSTUS_TS YYMMN6.
      COSSN MISSF.;
RUN;

*********************************************************************;
* CREATE BASE FILE.                                          *;
*********************************************************************;
* MERGE VRPAYMNT FILE WITH VRHCLAIM FILE. KEEP RECORDS IN BOTH FILES.  *;
PROC SQL VERBOSE;
  CREATE TABLE COMB_VRRMS AS
  SELECT  B.*
       ,A.PSTUS_TS
         ,A.TOT_DUE_AMT
         ,A.TOT_PAID_AMT
         ,A.VR_PSTUS_CD
         ,LENGTH(STRIP(PUT(B.COSSN,32.))) AS COSSN_LEN
          /* CONVERT COSSN TO CHARACTER AND ADD LEADING ZERO
            WHEN THE LENGTH IS LESS THAN 9, CREATE FLAG VARIABLE */
         ,CASE WHEN LENGTH(STRIP(PUT(B.COSSN,32.)))<9
```

Appendix A.179
JCL/SAS Code: 002_PROCESS_VRRMS

```
            THEN PUT(B.COSSN,Z9.) ELSE PUT(B.COSSN,9.)
          END AS COSSNC
           ,CASE WHEN LENGTH(STRIP(PUT(B.COSSN,9.)))<9
            THEN 1 ELSE 0
          END AS COSSN_FLAG

   FROM (SELECT *
        FROM INLIB.VRPAYMNT_comb /*PAYMENT FILE*/
        WHERE COSSN>0 AND
             STRIP(VR_PSTUS_CD)="P" AND
             PSTUS_TS>="01MAR2017"D) A

       INNER JOIN

         (SELECT *
        FROM INLIB.VRHCLAIM_comb /*CLAIMS FILE*/
        WHERE COSSN>0) B

   ON A.COSSN=B.COSSN AND
     A.VR_CLM_SNUM=B.VR_CLM_SNUM AND
    A.PMT_SEQ_NUM=B.PMT_SEQ_NUM

   ORDER BY COSSN,VR_CLM_SNUM,PMT_SEQ_NUM;
QUIT;

* CHECK THE LENGTH OF COSSN IN THE ORIGINAL VALUE.                    *;
TITLE "CHECK LENGTH OF COSSN IN THE ORIGINAL VALUE";
PROC FREQ DATA=COMB_VRRMS;
   TABLES COSSN_LEN COSSN_FLAG / LIST MISSING;
RUN;
TITLE;

* CHECK NUMBER OF UNIQUE COSSN IN THE COMBINED FILE.                   *;
TITLE "CHECK NUMBER OF UNIQUE COSSN";
PROC SQL VERBOSE;
   SELECT  "# OF UNIQUE COSSN" AS NAME
        ,COUNT(DISTINCT COSSN) AS CNT_COSSN
   FROM COMB_VRRMS;
QUIT;
TITLE;

*********************************************************************;
* RESHAPE THE DATASET.                                              *;
*********************************************************************;
****************************** PART1 ******************************;
```

Appendix A.179
JCL/SAS Code: 002_PROCESS_VRRMS

```
* CHECK IF THE VR_CLNT_ENTRY_DT IS THE SAME ACROSS THE SAME COSSN AND  *;
* VR_CLM_SNUM.                                                         *;
%MACRO CHECK1;
PROC SQL VERBOSE NOPRINT;
  SELECT COUNT(*) INTO :CHECK_RECS SEPARATED BY " "
  FROM (SELECT  COSSNC
            ,VR_CLM_SNUM
            ,COUNT(DISTINCT VR_CLNT_ENTRY_DT) AS CNT_RECS
        FROM COMB_VRRMS
        GROUP BY COSSNC,VR_CLM_SNUM)
  WHERE CNT_RECS>1;
QUIT;

%IF &CHECK_RECS. > 1 %THEN %DO;
DATA _NULL_;
PUT "!!!NOTE: FOR THE SAME COSSN AND VR_CLM_SNUM, THERE ARE DIFFERENT VR_CLNT_ENTRY_DT";
RUN;
%END;
%ELSE %DO;
DATA _NULL_;
PUT "!!!NOTE: FOR THE SAME COSSN AND VR_CLM_SNUM, VR_CLNT_ENTRY_DT IS THE SAME";
RUN;
%END;
%MEND CHECK1;
%CHECK1;

* CHECK IF THERE ARE MULTIPLE RECORDS BY COSSN AND VR_CLM_SNUM.       *;
%MACRO CHECK2;
PROC SQL VERBOSE NOPRINT;
  SELECT COUNT(*) INTO :CHECK_DUPS SEPARATED BY " "
  FROM (SELECT  COSSNC
            ,VR_CLM_SNUM
            ,COUNT(COSSNC) AS CNT_DUPS
        FROM COMB_VRRMS
        GROUP BY COSSNC,VR_CLM_SNUM)
  WHERE CNT_DUPS>1;
QUIT;

%IF &CHECK_DUPS. > 1 %THEN %DO;
DATA _NULL_;
PUT "!!!NOTE: THERE ARE MULTIPLE RECORDS BY COSSN AND VR_CLM_SNUM";
RUN;
%END;
%ELSE %DO;
DATA _NULL_;
```

Appendix A.179
JCL/SAS Code: 002_PROCESS_VRRMS

```
PUT "!!!NOTE: THERE IS NO MULTIPLE RECORDS BY COSSN AND VR_CLM_SNUM";
RUN;
%END;
%MEND CHECK2;
%CHECK2;

* IF THERE ARE MULTIPLE RECORDS BY COSSN AND VR_CLM_SNUM, THEN SUM     *;
* TOT_DUE_AMT AND TOT_PAID_AMT.                                         *;
PROC SQL VERBOSE;
  CREATE TABLE VRRMS_TEMP1_PART1 AS
  SELECT  COSSNC
       ,VR_CLM_SNUM
       ,SUM(TOT_DUE_AMT) AS TOT_DUE_AMT
         ,SUM(TOT_PAID_AMT) AS TOT_PAID_AMT
         ,MAX(PSTUS_TS) AS PSTUS_TS
         ,COUNT(COSSNC) AS NPAYSEQ
  FROM COMB_VRRMS
  GROUP BY COSSNC,VR_CLM_SNUM
  ORDER BY COSSNC,VR_CLM_SNUM;
QUIT;

* FOR THE VARIABLES LISTED BELOW, GET VALUES FROM THE LAST RECORDS BY  *;
* COSSN, VR_CLM_SNUM AND PMT_SEQ_NUM.                                  *;
PROC SORT DATA=COMB_VRRMS;
  BY COSSNC VR_CLM_SNUM PMT_SEQ_NUM;
RUN;

DATA VRRMS_TEMP1_PART2(KEEP=COSSNC
                    VR_CLM_SNUM
                    VR_CLMBSS_CD
                    VR_CLNT_ENTRY_DT
                    SSA_RCPDT
                    TOT_PAYBL_AMT
                    CLNT_EMPT_STDT
                    IPE_SGN_DT
                    ST_VR_ABBR_CD
                    VR_FNL_CLOSR_DT
                    VR_PMT_ACTN_CD
                    VR_PRD_ENDT
                    VR_PRD_STDT);
 SET COMB_VRRMS;
 BY COSSNC VR_CLM_SNUM PMT_SEQ_NUM;
 IF LAST.PMT_SEQ_NUM THEN OUTPUT;
RUN;
```

Appendix A.179
JCL/SAS Code: 002_PROCESS_VRRMS

```
* COMBINE TWO SETS OF DATASET TOGETHER.                          *;
* THIS DATASET WILL INCLUDE VARAIBLES WITH VALUE FROM THE LAST RECORDS *;
* WITHIN EACH GROUP OF COSSN, VR_CLM_SNUM (AND PMT_SEQ_NUM).          *;
PROC SQL VERBOSE;
  CREATE TABLE VRRMS_TEMP1 AS
  SELECT  B.*
       ,A.TOT_DUE_AMT
         ,A.TOT_PAID_AMT
         ,A.PSTUS_TS
         ,A.NPAYSEQ
  FROM VRRMS_TEMP1_PART1 A
      FULL JOIN
        VRRMS_TEMP1_PART2 B
  ON A.COSSNC=B.COSSNC AND
    A.VR_CLM_SNUM=B.VR_CLM_SNUM
  ORDER BY B.COSSNC,B.VR_CLNT_ENTRY_DT,B.VR_CLM_SNUM;
QUIT;

* ASSIGN SEQUENCE NUMBER WITHIN EACH GROUP OF COSSN AND VR_CLM_SNUM.   *;
DATA VRRMS_TEMP1;
  SET VRRMS_TEMP1;
  BY COSSNC VR_CLNT_ENTRY_DT VR_CLM_SNUM;
  COUNT+1;
  IF FIRST.COSSNC THEN COUNT=1;

  * REMOVE ALL LABELS *;
  ATTRIB _ALL_ LABEL="";
RUN;

TITLE "CHECK NPAYSEQ AND COUNT VARABLES IN TEMP1 DATASET";
PROC FREQ DATA=VRRMS_TEMP1;
  TABLES NPAYSEQ COUNT / LIST MISSING;
RUN;

TITLE "PRINT 20 OBS FOR TEMP1";
PROC PRINT DATA=VRRMS_TEMP1(OBS=20);
RUN;
TITLE;

******************************** PART2 ********************************;
* CREATE NCLAIM: NUMBER OF COMBNATION OF ENTRY_DT AND VR_CLM_SNUM.     *;
* CREATE NSPELL: NUMBER OF UNIQUE ENTRY_DT WITHIN A SINGLR SSN.        *;
PROC SQL VERBOSE NOPRINT;
  CREATE TABLE VRRMS_TEMP2_PART1 AS
  SELECT  COSSNC
```

Appendix A.179
JCL/SAS Code: 002_PROCESS_VRRMS

```
            ,COUNT(DISTINCT VR_CLM_SNUM) AS NCLAIM
            ,COUNT(DISTINCT VR_CLNT_ENTRY_DT) AS NSPELL
  FROM VRRMS_TEMP1
  GROUP BY COSSNC
  ORDER BY COSSNC;
QUIT;

* RESHAPE THE DATASET FROM LONG TO WIDE.                    *;
%MACRO TRANS(VAR=);
PROC TRANSPOSE DATA=VRRMS_TEMP1
            OUT=&VAR. (DROP=_NAME_) PREFIX=&VAR.;
  BY COSSNC;
  ID COUNT;
  VAR &VAR.;
RUN;
%MEND TRANS;

%TRANS(VAR=VR_CLM_SNUM);
%TRANS(VAR=NPAYSEQ);
%TRANS(VAR=VR_CLMBSS_CD);
%TRANS(VAR=VR_CLNT_ENTRY_DT);
%TRANS(VAR=SSA_RCPDT);
%TRANS(VAR=PSTUS_TS);
%TRANS(VAR=TOT_PAYBL_AMT);
%TRANS(VAR=TOT_DUE_AMT);
%TRANS(VAR=TOT_PAID_AMT);
%TRANS(VAR=CLNT_EMPT_STDT);
%TRANS(VAR=IPE_SGN_DT);
%TRANS(VAR=ST_VR_ABBR_CD);
%TRANS(VAR=VR_FNL_CLOSR_DT);
%TRANS(VAR=VR_PMT_ACTN_CD);
%TRANS(VAR=VR_PRD_ENDT);
%TRANS(VAR=VR_PRD_STDT);

* MERGE ALL TRANS DATASET TOGETHER.                         *;
DATA VRRMS_TEMP2;
  MERGE VR_CLM_SNUM
      NPAYSEQ
      VR_CLMBSS_CD
      VR_CLNT_ENTRY_DT
      SSA_RCPDT
      PSTUS_TS
      TOT_PAYBL_AMT
      TOT_DUE_AMT
      TOT_PAID_AMT
```

Appendix A.179
JCL/SAS Code: 002_PROCESS_VRRMS

```
        CLNT_EMPT_STDT
        IPE_SGN_DT
        ST_VR_ABBR_CD
        VR_FNL_CLOSR_DT
        VR_PMT_ACTN_CD
        VR_PRD_ENDT
        VR_PRD_STDT
          VRRMS_TEMP2_PART1;
  BY COSSNC;
RUN;

TITLE "CHECK NCLAIM AND NSPELL IN TEMP2";
PROC FREQ DATA=VRRMS_TEMP2;
  TABLES NCLAIM NSPELL / LIST MISSING;
RUN;
TITLE;

******************************** PART3 ********************************;
* GET VALUE OF THE FOLLOWING VARAIBLES FROM THE LATEST ENTRY_DT WITHIN *;
* EACH COSSN.                                                          *;
PROC SQL VERBOSE NOPRINT;
  CREATE TABLE VRRMS_TEMP3 AS
  SELECT  A.COSSNC
        ,B.ACPL_CAAMT
        ,B.ACPL_CCAMT
        ,B.ADDL_ACPL_CSTS_AMT
        ,B.AVRCLSR_TRKG_CCAMT
        ,B.CLNT_FNM
        ,B.CLNT_LNM
        ,B.CLNT_MNM
        ,B.CONTS_SGA_LAST_MDT
        ,B.CONTS_SGA_MNTH1_DT
        ,B.CRNT_ENTLT_DT
        ,B.DIRCT_CAAMT
        ,B.DIRCT_CCAMT
        ,B.DOB
        ,B.ENTLT_CD
        ,B.MED_SRVS_PRVDD_IND
        ,B.OTH_CAAMT
        ,B.OTH_CCAMT
        ,B.PMT_PRD_CLM_BIC
        ,B.PMT_PRD_ENDT
        ,B.PMT_PRD_STDT
        ,B.PMT_SEQ_NUM
        ,B.PMT_TS
```

Appendix A.179
JCL/SAS Code: 002_PROCESS_VRRMS

```
        ,B.POST_EMPT_PRD_ENDT
        ,B.POST_EMPT_PRD_STDT
        ,B.PRE_AWRD_AMT
        ,B.PRIOR_VRCLMPO_AMT
        ,B.SEX_CD
        ,B.SSA_TOT_SAVGS_AMT
          ,B.SVCALC_PIA
        ,B.SVCALC_T16_FEDBAMT
        ,B.SVCALCWCMP_OFS_AMT
        ,B.TFSRDUC_AMT
        ,B.TOT_ACPL_CSTS_AMT
        ,B.TOT_CCAMT
        ,B.TRKG_CAAMT
        ,B.VR_SGA_CPRD_TYP_CD
        ,B.VR_STYBLNDS_SW
        ,B.VR_T16_SW
        ,B.VR_T2_BIC
  FROM (SELECT  COSSNC
            ,MAX(VR_CLNT_ENTRY_DT) AS MAX_VR_CLNT_ENTRY_DT
                    ,MAX(VR_CLM_SNUM) AS MAX_VR_CLM_SNUM
          FROM COMB_VRRMS
          GROUP BY COSSNC) A

          LEFT JOIN

        COMB_VRRMS B

   ON A.COSSNC=B.COSSNC AND
    A.MAX_VR_CLNT_ENTRY_DT=B.VR_CLNT_ENTRY_DT AND
    A.MAX_VR_CLM_SNUM=B.VR_CLM_SNUM
   ORDER BY COSSNC;
QUIT;

************************* PART4: FINAL STEP ***************************;
* COMBINE TEMP2 AND TEMP3 DATASETS TOGETHER.                          *;
DATA VRRMS(RENAME=(COSSNC=SSN));
  MERGE VRRMS_TEMP2 VRRMS_TEMP3;
  BY COSSNC;
RUN;

TITLE "CHECK CONTENTS OF FINAL VRRMS DATASET";
PROC CONTENTS DATA=VRRMS;
RUN;

TITLE "CHECK NCLAIM AND NSPELL IN VRRMS";
```

Appendix A.179
JCL/SAS Code: 002_PROCESS_VRRMS

```
PROC FREQ DATA=VRRMS;
  TABLES NCLAIM NSPELL / LIST MISSING;
RUN;

TITLE "PRINT 20 OBS OF FINAL DATASET FOR CHECKING";
PROC PRINT DATA=VRRMS(OBS=20);
RUN;
TITLE;

* OUTPUT PERMANENT DATASET. *;
DATA OUTLIB.VRRMS;
  SET VRRMS;
RUN;
```

Appendix A.180
JCL/SAS Code: 003_UPLOAD_VRRMS

```
/*****************************************************************************
** Purpose: Upload the VRRMS file to the mainframe
*****************************************************************************/
options comamid=tcp; %let SY56=SY56.sspf.ssa.gov; %let tcpsec=_prompt_; options remote=sy56.spawner; run;

SIGNON ;
libname datain "M:\DAF18\TASK 16 Create VRRMS Component\Data\Final";
RSUBMIT;

LIBNAME jcllib   'OPDR.TG.PRD.ETTW.#6266.DAF18I.VRRMS.SA.V1';
OPTION COMPRESS=BINARY REMOTE=session_id;

PROC UPLOAD DATA=datain.vrrms  OUT=jcllib.VRRMS (COMPRESS=BINARY);RUN;

ENDRSUBMIT;
SIGNOFF;
```

Appendix A.181
JCL/SAS Code: FINVRRMS

```
//#6266FVR  JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//* PROJECT:  BUILDING THE TICKET RESEARCH FILE (50214)
//* DIRECTOR: LAURA KOSAR
//* PROGRAM:  OPDR.TG.PRD.ETTW.ID.DAF--.VRRMS.PRDLIB(VRRMSFIN)
//* DATE:     12/07/16 SERGE LUKASHANETS
//* UPDATED:  12/20/18 MIAOMIAO SHEN FOR DAF17
//*          MSHEN@MATHEMATICA-MPR.COM
//*          MIAOMIAO.SHEN@SSA.GOV
//*****************************************************************
//*
//SAS       EXEC SAS9,
//         WORK='120000,60000'
//*
//COM    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.COMVARS.SA.V1,DISP=SHR
//VRM    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18I.VRRMS.SA.V1,DISP=SHR
//OUT    DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.VRRMS,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//OUTCN  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18P.VRRMSCN.SA.V1,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//OUT10  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10VRRMS,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//TEMP1  DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(1000,100),RLSE)
//TEMP2  DD DSN=&&TEMPX,UNIT=SYSDA,
//         DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN  DD *

OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN OBS=MAX;

%MACRO DOIT;

PROC SORT DATA=VRM.VRRMS OUT=TEMP1.VRRMS;
  BY SSN;
RUN;

DATA OUT.VRRMS;
  MERGE TEMP1.VRRMS(IN=VRRMS)
```

Appendix A.181
JCL/SAS Code: FINVRRMS

```
        COM.COMVARS;
   BY SSN;
   IF VRRMS;

   %INCLUDE "OPDR.TG.PRD.ETTW.#6266.DAF18.VRRMS.PRDLIB(VRMLBLS)";
RUN;
%MEND DOIT;
%DOIT;

PROC CONTENTS DATA=OUT.VRRMS
          OUT=OUTCN.VRRMSCN;
RUN;

 /* CREATE 10% DM FOR VRRMS */
DATA OUT10.P10VRRMS;
  SET OUT.VRRMS;
  IF (SUBSTR(SSN,8,1) IN ('0', '2', '4', '7', '9')) AND
     (SUBSTR(SSN,9,1) IN ('0', '5'));
RUN;
```

Appendix A.182
JCL/SAS Code: VRMLBLS

```
 %MACRO GETLB;
LABEL
ACPL_CAAMT="VR ACP COSTS ALLOWED"
ACPL_CCAMT="ACP COSTS CLAIMED DURING VR"
ADDL_ACPL_CSTS_AMT="ADDITIONAL ADMINISTRATIVE, COUNSELING,
AND PLACEMENT (ACP) COSTS AMOUNT"
AVRCLSR_TRKG_CCAMT="TRACKING COSTS CLAIMED AFTER VR"
SSN="SOCIAL SECURITY NUMBER"
CLNT_FNM="VR CLIENT FIRST NAME"
CLNT_LNM="VR CLIENT LAST NAME"
CLNT_MNM="VR CLIENT MIDDLE NAME"
CONTS_SGA_LAST_MDT="VR LAST MONTH OF CONTINUOUS SGA"
CONTS_SGA_MNTH1_DT="VR FIRST MONTH OF CONTINUOUS SGA"
CRNT_ENTLT_DT="VR CURRENT DATE OF ENTITLEMENT FOR THE ACCOUNT"
DIRCT_CAAMT="VR DIRECT COSTS ALLOWED"
DIRCT_CCAMT="VR DIRECT COSTS CLAIMED"
DOB="DATE OF BIRTH"
ENTLT_CD="VR ENTITLEMENT CODE"
MED_SRVS_PRVDD_IND="VR MEDICAL SERVICES PROVIDED"
NCLAIM="VR NUMBER OF UNIQUE VR_CLM_SNUM WITHIN EACH SSN"
NSPELL="NUMBER OF UNIQUE VR_CLNT_ENTRY_DT WITHIN EACH SSN"
OTH_CAAMT="VR OTHER COSTS ALLOWED"
OTH_CCAMT="VR OTHER COSTS CLAIMED"
PMT_PRD_CLM_BIC="VR PAYMENT PERIOD CLAIM ACCOUNT BIC"
PMT_PRD_ENDT="VR PAYMENT PERIOD END DATE"
PMT_PRD_STDT="VR PAYMENT PERIOD BEGIN DATE"
PMT_SEQ_NUM="VR PAYMENT SEQUENCE NUMBER"
PMT_TS="VR PAYMENT TIMESTAMP"
POST_EMPT_PRD_ENDT="VR POST-EMPLOYMENT PERIOD END DATE"
POST_EMPT_PRD_STDT="VR POST-EMPLOYMENT PERIOD BEGIN DATE"
PRE_AWRD_AMT="PRE AWARD AMOUNT"
PRIOR_VRCLMPO_AMT="PRIOR PAYOUT"
SEX_CD="GENDER"
SSA_TOT_SAVGS_AMT="VR TOTAL SSA SAVINGS AMOUNT"
SVCALC_PIA="VR SAVINGS PIA USED AMOUNT"
SVCALC_T16_FEDBAMT="VR SSI FBA USED AMOUNT"
SVCALCWCMP_OFS_AMT="VR SAVINGS WORKERS  COMP USED AMOUNT"
TFSRDUC_AMT="VR TRUST FUND SAVINGS REDUCTION"
TOT_ACPL_CSTS_AMT="TOTAL ADMINISTRATIVE, COUNSELING, AND PLACEMENT
(ACP) COSTS AMOUNT"
TOT_CCAMT="VR TOTAL COSTS CLAIMED"
TRKG_CAAMT="VR TRACKING COSTS ALLOWED"
VR_SGA_CPRD_TYP_CD="VR SGA PERIOD TYPE"
VR_STYBLNDS_SW="SVR STATUTORILY BLIND"
```

Appendix A.182
JCL/SAS Code: VRMLBLS

```
VR_T16_SW="SVR SSO INVOLVED"
VR_T2_BIC="SVR CLMBIC"
 %DO I=1 %TO 11 %BY 1;
CLNT_EMPT_STDT&I.="VR DATE EMPLOYMENT BEGAN &I."
IPE_SGN_DT&I.="VR DATE SIGNED IPE &I."
NPAYSEQ&I.="VR NUMBER OF RECORDS FOR THE SAME VR_CLM_SNUM
WITHIN EACH SSN &I."
PSTUS_TS&I.="VR STATUS TIMESTAMP &I."
SSA_RCPDT&I.="VR SSA RECEIPT DATE &I."
ST_VR_ABBR_CD&I.="THE STATE VR AGENCY ABBRIVATION CODE &I."
TOT_DUE_AMT&I.="VR TOTAL AMOUNT DUE &I."
TOT_PAID_AMT&I.="VR TOTAL AMOUNT PAID &I."
TOT_PAYBL_AMT&I.="VR TOTAL PAYABLE &I."
VR_CLMBSS_CD&I.="VR CLAIM BASIS &I."
VR_CLM_SNUM&I.="VR CLAIM UID &I."
VR_CLNT_ENTRY_DT&I.="DATE CLIENT ENTERED VR &I."
VR_FNL_CLOSR_DT&I.="DATE OF FINAL VR CLOSURE &I."
VR_PMT_ACTN_CD&I.="VR PAYMENT ACTION CODE &I."
VR_PRD_ENDT&I.="VR PERIOD END DATE &I."
VR_PRD_STDT&I.="VR PERIOD BEGIN DATE &I."
 %END;
;
 %MEND GETLB;
 %GETLB;
```

Appendix A.183
JCL/SAS Code: CPYVRRMS

```
//#6266CPV  JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    LAURA KOSAR
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6266.VRRMS.PRDLIB(CPYVRRMS)
//* DESCRIPTION: COPY VRRMS FINAL FILE FROM DISK TO DISK
//* DATE:        09/12/17 SERGE LUKASHANETS
//* UPDATE:      9/28/2017 MIAOMIAO SHEN DAF16
//* EMAIL:       MSHEN@MATHEMATICA-MPR.COM
//*             MIAOMIAO.SHEN@SSA.GOV
//*****************************************************************
//*STEPA    EXEC PGM=IEBGENER
//*SYSPRINT DD SYSOUT=*
//*SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.VRRMS,DISP=SHR
//*SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.VRRMS,
//*          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//*          SPACE=(CYL,(3000,3000),RLSE)
//*SYSIN    DD DUMMY
//*
//STEPA    EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.VRRMS,DISP=SHR
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18C.VRRMS,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//SYSIN    DD DUMMY
//* COPY 10%DM
//*STEPA    EXEC PGM=IEBGENER
//*SYSPRINT DD SYSOUT=*
//*SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10VRRMS,DISP=SHR
//*SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.P10VRRMS,
//*          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//*          SPACE=(CYL,(3000,3000),RLSE)
//*SYSIN    DD DUMMY
//*
//STEPA    EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.P10VRRMS,DISP=SHR
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18C.P10VRRMS,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//SYSIN    DD DUMMY
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
/* ---------------------------------------------------------------------
   Code generated by a SAS task

   Generated on Monday, December 10, 2018 at 10:23:07 AM
   By task:     Import Data Wizard

   Source file: M:\DAF17\RSA\RSA911FY17Q4toFY18Q1_2.csv
   Server:      Local File System

   Output data: WORK.RSA911FY17Q4toFY18Q1_2
   Server:      Local

   12/10/2018: Automated code developed by SAS Enterprise Guide
   In order to read in the RSA data in the new format in a CSV file.
   --------------------------------------------------------------------- */
options obs=max mprint;
LIBNAME OUT 'M:\DAF17\RSA\upd';

%macro read(pt);
DATA OUT.RSA17_NewFormat_PT&pt.;
   LENGTH
      SubmissionDate     8
      AgencyCode         8
      IndividualID     $ 12
      ApplicationDate    8
      BirthDate          8
      Sex              $ 1 /*Formerly 8*/
      AmerIndian         8
      Asian              8
      Black              8
      Hawaiian           8
      White              8
      Hispanic           8
      Veteran            8
      LivingArangementCD   8
      State            $ 2
      CountyFIPSCode     8
      ZIPCode            8
      Referral           8
      Student            8
      appSSDI            8
      appSSI             8
      appTANF            8
      appGenAssistance   8
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
appVeteransDisability   8
appWorkersComp     8
appUI            8
appPrimSupportCode   8
appMedicaid       8
appMedicare       8
appACAExchange     8
appOtherPublicIns   8
appEmployerIns     8
appEmployerInsNYE   8
appOtherPrivateIns   8
EligibilityDate    8
EligibilityExt     8
OOSPlacementDate   8
OOSExitDate       8
Disability        8
PrimDisabilityCodeType   8
PrimDisabilityCodeSource   8
SecondaryDisabilityType   8
SecondaryDisabilitySource   8
DisabilitySigCode   8
TWEStartDate      8
TWEEndDate        8
IPEAmendedDate     8
IPESupportedEmpGoal   8
ipeEmpStatus      8
ipePrimaryOcc     8
ipeHourlyWage     8
ipeWeeklyHoursWorked   8
Adult            8
AdultEd          8
DislocatedWorker   8
JobCorps         8
VocRehab         8
WPEmpService      8
Youth            8
YouthBuild       $ 14
LongTermUnemp     8
ExhaustTANF       8
FosterCareYouth    8
HomelessOrRunaway   8
ExOffenderStatus   8
LowIncomeStatus    8
EnglishLearner     8
BasicSkillsDeficient   8
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
CulturalBarriers 8
SingleParent 8
DisHomemaker 8
MigrantFarmworker 8
StateDisStudentAgeRange 8
SchoolStatus 8
EdLevelCompleted 8
SchoolGradeCompleted 8
InSecondaryEd 8
SpecialEdCertCompDate 8
EnrolledInASE 8
SecSchoolDiplomaDate 8
GEDDate 8
PostsecEdYear 8
EnrolledInPostsecEd 8
CredProgramEnrollDate 8
CompletedSomePostsecEd 8
AssociateDegreeDate 8
BachelorDegreeDate 8
MastersDegreeDate 8
DegreeAboveMastersDate 8
EnrolledInCTTPNoCred 8
EnrolledInCTTPCred 8
VTLicenseDate 8
VTCertificateDate 8
OtherLicOrCertDate 8
PETSStartDate 8
jecVRAgencyStaff 8
jecVRAgencyPurchase 8
jecPurchaseProviderType 8
jecVRServicePurchaseExpenditure 8
jecCompServiceProvider 8
jecCompServiceProviderType $ 8
wbleVRAgencyStaff 8
wbleVRAgencyPurchase 8
wblePurchaseProviderType 8
wbleVRServicePurchaseExpenditure 8
wbleCompServiceProvider 8
wbleCompServiceProviderType $ 8
ceoVRAgencyStaff 8
ceoVRAgencyPurchase 8
ceoPurchaseProviderType 8
ceoVRServicePurchaseExpenditure 8
ceoCompServiceProvider 8
ceoCompServiceProviderType $ 8
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
wrtVRAgencyStaff 8
wrtVRAgencyPurchase 8
wrtPurchaseProviderType 8
wrtVRServicePurchaseExpenditure 8
wrtCompServiceProvider 8
wrtCompServiceProviderType $ 8
isaVRAgencyStaff 8
isaVRAgencyPurchase 8
isaPurchaseProviderType 8
isaVRServicePurchaseExpenditure 8
isaCompServiceProvider 8
isaCompServiceProviderType $ 8
VRServiceStartDate 8
CareerServiceDate 8
gcutVRAgencyStaff 8
gcutVRAgencyPurchase 8
gcutPurchaseProviderType 8
gcutVRTitleIFundsExpended 8
gcutSETitleVIFundsExpended 8
gcutCompServiceProvider 8
gcutCompServiceProviderType $ 8
fycutVRAgencyStaff 8
fycutVRAgencyPurchase 8
fycutPurchaseProviderType 8
fycutVRTitleIFundsExpended 8
fycutSETitleVIFundsExpended 8
fycutCompServiceProvider 8
fycutCompServiceProviderType $ 8
jcctVRAgencyStaff 8
jcctVRAgencyPurchase 8
jcctPurchaseProviderType 8
jcctVRTitleIFundsExpended 8
jcctSETitleVIFundsExpended 8
jcctCompServiceProvider 8
jcctCompServiceProviderType $ 8
ovtVRAgencyStaff 8
ovtVRAgencyPurchase 8
ovtPurchaseProviderType 8
ovtVRTitleIFundsExpended 8
ovtSETitleVIFundsExpended 8
ovtCompServiceProvider 8
ovtCompServiceProviderType $ 8
ojtVRAgencyStaff 8
ojtVRAgencyPurchase 8
ojtPurchaseProviderType 8
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
ojtVRTitleIFundsExpended   8
ojtSETitleVIFundsExpended   8
ojtCompServiceProvider   8
ojtCompServiceProviderType $ 8
ratVRAgencyPurchase   8
ratPurchaseProviderType   8
ratVRTitleIFundsExpended   8
ratSETitleVIFundsExpended   8
ratCompServiceProvider   8
ratCompServiceProviderType $ 8
barltVRAgencyStaff   8
barltVRAgencyPurchase   8
barltPurchaseProviderType   8
barltVRTitleIFundsExpended   8
barltSETitleVIFundsExpended   8
barltCompServiceProvider   8
barltCompServiceProviderType $ 8
jrtVRAgencyStaff   8
jrtVRAgencyPurchase   8
jrtPurchaseProviderType   8
jrtVRTitleIFundsExpended   8
jrtSETitleVIFundsExpended   8
jrtCompServiceProvider   8
jrtCompServiceProviderType $ 8
drstVRAgencyStaff   8
drstVRAgencyPurchase   8
drstPurchaseProviderType   8
drstVRTitleIFundsExpended   8
drstSETitleVIFundsExpended   8
drstCompServiceProvider   8
drstCompServiceProviderType $ 8
mtVRAgencyStaff   8
mtVRAgencyPurchase   8
mtPurchaseProviderType   8
mtVRTitleIFundsExpended   8
mtSETitleVIFundsExpended   8
mtCompServiceProvider   8
mtCompServiceProviderType $ 8
rsetVRAgencyStaff   8
rsetVRAgencyPurchase   8
rsetPurchaseProviderType   8
rsetVRTitleIFundsExpended   8
rsetSETitleVIFundsExpended   8
rsetCompServiceProvider   8
rsetCompServiceProviderType $ 1
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
ctVRAgencyStaff 8
ctVRAgencyPurchase 8
ctPurchaseProviderType 8
ctVRTitleIFundsExpended 8
ctSETitleVIFundsExpended 8
ctCompServiceProvider 8
ctCompServiceProviderType $ 1
assVRAgencyStaff 8
assVRAgencyPurchase 8
assPurchaseProviderType 8
assVRTitleIFundsExpended 8
assSETitleVIFundsExpended 8
assCompServiceProvider 8
assCompServiceProviderType $ 8
dtiVRAgencyStaff 8
dtiVRAgencyPurchase 8
dtiPurchaseProviderType 8
dtiVRTitleIFundsExpended 8
dtiSETitleVIFundsExpended 8
dtiCompServiceProvider 8
dtiCompServiceProviderType $ 8
vrcgVRAgencyStaff 8
vrcgVRAgencyPurchase 8
vrcgPurchaseProviderType 8
vrcgVRTitleIFundsExpended 8
vrcgSETitleVIFundsExpended 8
vrcgCompServiceProvider 8
vrcgCompServiceProviderType $ 8
jsaVRAgencyStaff 8
jsaVRAgencyPurchase 8
jsaPurchaseProviderType 8
jsaVRTitleIFundsExpended 8
jsaSETitleVIFundsExpended 8
jsaCompServiceProvider 8
jsaCompServiceProviderType $ 8
jpaVRAgencyStaff 8
jpaVRAgencyPurchase 8
jpaPurchaseProviderType 8
jpaVRTitleIFundsExpended 8
jpaSETitleVIFundsExpended 8
jpaCompServiceProvider 8
jpaCompServiceProviderType $ 8
stjsVRAgencyStaff $ 1
stjsVRAgencyPurchase 8
stjsPurchaseProviderType 8
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
stjsVRTitleIFundsExpended 8
stjsSETitleVIFundsExpended 8
stjsCompServiceProvider 8
stjsCompServiceProviderType $ 8
sesVRAgencyStaff 8
sesVRAgencyPurchase 8
sesPurchaseProviderType 8
sesVRTitleIFundsExpended 8
sesSETitleVIFundsExpended 8
sesCompServiceProvider 8
sesCompServiceProviderType $ 8
irsVRAgencyStaff 8
irsVRAgencyPurchase 8
irsPurchaseProviderType 8
irsVRTitleIFundsExpended 8
irsSETitleVIFundsExpended 8
irsCompServiceProvider 8
irsCompServiceProviderType $ 8
bcVRAgencyStaff 8
bcVRAgencyPurchase 8
bcPurchaseProviderType 8
bcVRTitleIFundsExpended 8
bcSETitleVIFundsExpended 8
bcCompServiceProvider 8
bcCompServiceProviderType $ 8
cesVRAgencyStaff 8
cesVRAgencyPurchase 8
cesPurchaseProviderType 8
cesVRTitleIFundsExpended 8
cesSETitleVIFundsExpended 8
cesCompServiceProvider 8
cesCompServiceProviderType $ 8
esVRAgencyStaff 8
esVRAgencyPurchase 8
esPurchaseProviderType 8
esVRTitleIFundsExpended 8
esSETitleVIFundsExpended 8
tranVRAgencyStaff 8
tranVRAgencyPurchase 8
tranPurchaseProviderType 8
tranVRTitleIFundsExpended 8
tranSETitleVIFundsExpended 8
tranCompServiceProvider 8
tranCompServiceProviderType $ 8
mntVRAgencyStaff 8
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
mntVRAgencyPurchase 8
mntPurchaseProviderType 8
mntVRTitleIFundsExpended 8
mntSETitleVIFundsExpended 8
mntCompServiceProvider 8
mntCompServiceProviderType $ 8
rtVRAgencyStaff 8
rtVRAgencyPurchase 8
rtPurchaseProviderType 8
rtVRTitleIFundsExpended 8
rtSETitleVIFundsExpended 8
rtCompServiceProvider 8
rtCompServiceProviderType $ 8
pasVRAgencyStaff 8
pasVRAgencyPurchase 8
pasPurchaseProviderType 8
pasVRTitleIFundsExpended 8
pasSETitleVIFundsExpended 8
pasCompServiceProvider 8
pasCompServiceProviderType $ 8
tasVRAgencyStaff 8
tasVRAgencyPurchase 8
tasPurchaseProviderType 8
tasVRTitleIFundsExpended 8
tasSETitleVIFundsExpended 8
tasCompServiceProvider 8
tasCompServiceProviderType $ 8
rsVRAgencyStaff 8
rsVRAgencyPurchase 8
rsPurchaseProviderType 8
rsVRTitleIFundsExpended 8
rsSETitleVIFundsExpended 8
rsCompServiceProvider 8
rsCompServiceProviderType $ 8
isVRAgencyStaff 8
isVRAgencyPurchase 8
isPurchaseProviderType 8
isVRTitleIFundsExpended 8
isSETitleVIFundsExpended 8
isCompServiceProvider 8
isCompServiceProviderType $ 8
osVRAgencyStaff 8
osVRAgencyPurchase 8
osPurchaseProviderType 8
osVRTitleIFundsExpended 8
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
osSETitleVIFundsExpended   8
osCompServiceProvider   8
osCompServiceProviderType $ 8
EdFuncLevelDate    8
SecondaryDate      8
PostsecTransReportCardDate   8
TrainingMilestoneDate   8
SkillGainSkillsProgDate   8
EmpOutcome        8
eoPrimOccupation   8
eoPrimOccupationStartDate   8
eoHourlyWage       8
eoHoursWorkedPerWeek   8
exitDate          8
exitType          8
exitReason        8
exitEmpOutcome     8
exitPrimOccupation   8
exitPrimOccStartDate   8
exitHourlyWage     8
exitWeeklyHoursWorked   8
exitSSDI          8
exitSSI           8
exitTANF          8
exitGenAssistance   8
exitVeteransDisability   8
exitWorkersComp    8
exitOtherSupport   8
exitPrimSupportCode   8
exitMedicaid       8
exitMedicare       8
exitACAExchange    8
exitOtherPublicIns   8
exitEmployerIns    8
exitEmployerInsNYE   8
exitOtherPrivateIns   8
peCredProgramEnrollDate   8
peCredAttainmentDate   8
peCredentialType   8
q1aeEmpStatus      8
q1aeEmpMatchType   8
q1aeWages          8
q2aeEmpRelatedToTraining   8
q2aeEmpStatus      8
q2aeEmpMatchType   8
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
    q2aeWages         8
    q3aeEmpStatus     8
    q3aeEmpMatchType   8
    q3aeWages         8
    q4aeEmpStatus     8
    q4aeEmpMatchType   8
    q4aeWages         8
    q4aeRetentionQ2AndQ4   8
    appOtherSupport    8
    ImportAgency     $ 4
    Report_Through     8
    SSN            $ 9 ;
  FORMAT
    SubmissionDate   YYMMDD10.
    AgencyCode       BEST3.
    IndividualID     $CHAR12.
    ApplicationDate  YYMMDD10.
    BirthDate        YYMMDD10.
    Sex              $CHAR1. /*Formerly BEST1.*/
    AmerIndian       BEST1.
    Asian            BEST1.
    Black            BEST1.
    Hawaiian         BEST1.
    White            BEST1.
    Hispanic         BEST1.
    Veteran          BEST1.
    LivingArangementCD BEST2.
    State            $CHAR2.
    CountyFIPSCode   BEST5.
    ZIPCode          BEST5.
    Referral         BEST2.
    Student          BEST1.
    appSSDI          BEST1.
    appSSI           BEST1.
    appTANF          BEST1.
    appGenAssistance BEST1.
    appVeteransDisability BEST1.
    appWorkersComp   BEST1.
    appUI            BEST1.
    appPrimSupportCode BEST1.
    appMedicaid      BEST1.
    appMedicare      BEST1.
    appACAExchange   BEST1.
    appOtherPublicIns BEST1.
    appEmployerIns   BEST1.
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
appEmployerInsNYE BEST1.
appOtherPrivateIns BEST1.
EligibilityDate  YYMMDD10.
EligibilityExt   BEST1.
OOSPlacementDate YYMMDD10.
OOSExitDate      YYMMDD10.
Disability       BEST1.
PrimDisabilityCodeType BEST2.
PrimDisabilityCodeSource BEST2.
SecondaryDisabilityType BEST2.
SecondaryDisabilitySource BEST2.
DisabilitySigCode BEST1.
TWEStartDate     YYMMDD10.
TWEEndDate       YYMMDD10.
IPEAmendedDate   YYMMDD10.
IPESupportedEmpGoal BEST1.
ipeEmpStatus     BEST2.
ipePrimaryOcc    BEST6.
ipeHourlyWage    BEST7.
ipeWeeklyHoursWorked BEST5.
Adult            BEST1.
AdultEd          BEST1.
DislocatedWorker BEST1.
JobCorps         BEST1.
VocRehab         BEST1.
WPEmpService     BEST1.
Youth            BEST1.
YouthBuild       $CHAR14.
LongTermUnemp    BEST1.
ExhaustTANF      BEST1.
FosterCareYouth  BEST1.
HomelessOrRunaway BEST1.
ExOffenderStatus BEST1.
LowIncomeStatus  BEST1.
EnglishLearner   BEST1.
BasicSkillsDeficient BEST1.
CulturalBarriers BEST1.
SingleParent     BEST1.
DisHomemaker     BEST1.
MigrantFarmworker BEST1.
StateDisStudentAgeRange TIME8.
SchoolStatus     BEST1.
EdLevelCompleted BEST1.
SchoolGradeCompleted BEST2.
InSecondaryEd    BEST1.
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
SpecialEdCertCompDate YYMMDD10.
EnrolledInASE    BEST1.
SecSchoolDiplomaDate YYMMDD10.
GEDDate          YYMMDD10.
PostsecEdYear    BEST1.
EnrolledInPostsecEd BEST1.
CredProgramEnrollDate YYMMDD10.
CompletedSomePostsecEd BEST1.
AssociateDegreeDate YYMMDD10.
BachelorDegreeDate YYMMDD10.
MastersDegreeDate YYMMDD10.
DegreeAboveMastersDate YYMMDD10.
EnrolledInCTTPNoCred BEST1.
EnrolledInCTTPCred BEST1.
VTLicenseDate    YYMMDD10.
VTCertificateDate YYMMDD10.
OtherLicOrCertDate YYMMDD10.
PETSStartDate    YYMMDD10.
jecVRAgencyStaff BEST1.
jecVRAgencyPurchase BEST1.
jecPurchaseProviderType BEST1.
jecVRServicePurchaseExpenditure BEST5.
jecCompServiceProvider BEST1.
jecCompServiceProviderType $CHAR8.
wbleVRAgencyStaff BEST1.
wbleVRAgencyPurchase BEST1.
wblePurchaseProviderType BEST1.
wbleVRServicePurchaseExpenditure BEST5.
wbleCompServiceProvider BEST1.
wbleCompServiceProviderType $CHAR8.
ceoVRAgencyStaff BEST1.
ceoVRAgencyPurchase BEST1.
ceoPurchaseProviderType BEST1.
ceoVRServicePurchaseExpenditure BEST5.
ceoCompServiceProvider BEST1.
ceoCompServiceProviderType $CHAR8.
wrtVRAgencyStaff BEST1.
wrtVRAgencyPurchase BEST1.
wrtPurchaseProviderType BEST1.
wrtVRServicePurchaseExpenditure BEST5.
wrtCompServiceProvider BEST1.
wrtCompServiceProviderType $CHAR8.
isaVRAgencyStaff BEST1.
isaVRAgencyPurchase BEST1.
isaPurchaseProviderType BEST1.
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
isaVRServicePurchaseExpenditure BEST5.
isaCompServiceProvider BEST1.
isaCompServiceProviderType $CHAR8.
VRServiceStartDate YYMMDD10.
CareerServiceDate YYMMDD10.
gcutVRAgencyStaff BEST1.
gcutVRAgencyPurchase BEST1.
gcutPurchaseProviderType BEST1.
gcutVRTitleIFundsExpended BEST6.
gcutSETitleVIFundsExpended BEST3.
gcutCompServiceProvider BEST1.
gcutCompServiceProviderType $CHAR8.
fycutVRAgencyStaff BEST1.
fycutVRAgencyPurchase BEST1.
fycutPurchaseProviderType BEST1.
fycutVRTitleIFundsExpended BEST6.
fycutSETitleVIFundsExpended BEST4.
fycutCompServiceProvider BEST1.
fycutCompServiceProviderType $CHAR8.
jcctVRAgencyStaff BEST1.
jcctVRAgencyPurchase BEST1.
jcctPurchaseProviderType BEST1.
jcctVRTitleIFundsExpended BEST5.
jcctSETitleVIFundsExpended BEST5.
jcctCompServiceProvider BEST1.
jcctCompServiceProviderType $CHAR8.
ovtVRAgencyStaff BEST1.
ovtVRAgencyPurchase BEST1.
ovtPurchaseProviderType BEST1.
ovtVRTitleIFundsExpended BEST5.
ovtSETitleVIFundsExpended BEST5.
ovtCompServiceProvider BEST1.
ovtCompServiceProviderType $CHAR8.
ojtVRAgencyStaff BEST1.
ojtVRAgencyPurchase BEST1.
ojtPurchaseProviderType BEST1.
ojtVRTitleIFundsExpended BEST5.
ojtSETitleVIFundsExpended BEST4.
ojtCompServiceProvider BEST1.
ojtCompServiceProviderType $CHAR8.
ratVRAgencyPurchase BEST1.
ratPurchaseProviderType BEST1.
ratVRTitleIFundsExpended BEST5.
ratSETitleVIFundsExpended BEST5.
ratCompServiceProvider BEST1.
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
ratCompServiceProviderType $CHAR8.
barltVRAgencyStaff BEST1.
barltVRAgencyPurchase BEST1.
barltPurchaseProviderType BEST1.
barltVRTitleIFundsExpended BEST4.
barltSETitleVIFundsExpended BEST3.
barltCompServiceProvider BEST1.
barltCompServiceProviderType $CHAR8.
jrtVRAgencyStaff BEST1.
jrtVRAgencyPurchase BEST1.
jrtPurchaseProviderType BEST1.
jrtVRTitleIFundsExpended BEST5.
jrtSETitleVIFundsExpended BEST5.
jrtCompServiceProvider BEST1.
jrtCompServiceProviderType $CHAR8.
drstVRAgencyStaff BEST1.
drstVRAgencyPurchase BEST1.
drstPurchaseProviderType BEST1.
drstVRTitleIFundsExpended BEST5.
drstSETitleVIFundsExpended BEST3.
drstCompServiceProvider BEST1.
drstCompServiceProviderType $CHAR8.
mtVRAgencyStaff  BEST1.
mtVRAgencyPurchase BEST1.
mtPurchaseProviderType BEST1.
mtVRTitleIFundsExpended BEST5.
mtSETitleVIFundsExpended BEST4.
mtCompServiceProvider BEST1.
mtCompServiceProviderType $CHAR8.
rsetVRAgencyStaff BEST1.
rsetVRAgencyPurchase BEST1.
rsetPurchaseProviderType BEST1.
rsetVRTitleIFundsExpended BEST4.
rsetSETitleVIFundsExpended BEST1.
rsetCompServiceProvider BEST1.
rsetCompServiceProviderType $CHAR1.
ctVRAgencyStaff  BEST1.
ctVRAgencyPurchase BEST1.
ctPurchaseProviderType BEST1.
ctVRTitleIFundsExpended BEST5.
ctSETitleVIFundsExpended BEST1.
ctCompServiceProvider BEST1.
ctCompServiceProviderType $CHAR1.
assVRAgencyStaff BEST1.
assVRAgencyPurchase BEST1.
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
assPurchaseProviderType BEST1.
assVRTitleIFundsExpended BEST6.
assSETitleVIFundsExpended BEST5.
assCompServiceProvider BEST1.
assCompServiceProviderType $CHAR8.
dtiVRAgencyStaff BEST1.
dtiVRAgencyPurchase BEST1.
dtiPurchaseProviderType BEST1.
dtiVRTitleIFundsExpended BEST6.
dtiSETitleVIFundsExpended BEST4.
dtiCompServiceProvider BEST1.
dtiCompServiceProviderType $CHAR8.
vrcgVRAgencyStaff BEST1.
vrcgVRAgencyPurchase BEST1.
vrcgPurchaseProviderType BEST1.
vrcgVRTitleIFundsExpended BEST5.
vrcgSETitleVIFundsExpended BEST1.
vrcgCompServiceProvider BEST1.
vrcgCompServiceProviderType $CHAR8.
jsaVRAgencyStaff BEST1.
jsaVRAgencyPurchase BEST1.
jsaPurchaseProviderType BEST1.
jsaVRTitleIFundsExpended BEST5.
jsaSETitleVIFundsExpended BEST5.
jsaCompServiceProvider BEST1.
jsaCompServiceProviderType $CHAR8.
jpaVRAgencyStaff BEST1.
jpaVRAgencyPurchase BEST1.
jpaPurchaseProviderType BEST1.
jpaVRTitleIFundsExpended BEST5.
jpaSETitleVIFundsExpended BEST5.
jpaCompServiceProvider BEST1.
jpaCompServiceProviderType $CHAR8.
stjsVRAgencyStaff $CHAR1.
stjsVRAgencyPurchase BEST1.
stjsPurchaseProviderType BEST1.
stjsVRTitleIFundsExpended BEST5.
stjsSETitleVIFundsExpended BEST5.
stjsCompServiceProvider BEST1.
stjsCompServiceProviderType $CHAR8.
sesVRAgencyStaff BEST1.
sesVRAgencyPurchase BEST1.
sesPurchaseProviderType BEST1.
sesVRTitleIFundsExpended BEST5.
sesSETitleVIFundsExpended BEST5.
```

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JCL/SAS Code: Read_RSA_CSV

```
sesCompServiceProvider BEST1.
sesCompServiceProviderType $CHAR8.
irsVRAgencyStaff BEST1.
irsVRAgencyPurchase BEST1.
irsPurchaseProviderType BEST1.
irsVRTitleIFundsExpended BEST4.
irsSETitleVIFundsExpended BEST3.
irsCompServiceProvider BEST1.
irsCompServiceProviderType $CHAR8.
bcVRAgencyStaff  BEST1.
bcVRAgencyPurchase BEST1.
bcPurchaseProviderType BEST1.
bcVRTitleIFundsExpended BEST5.
bcSETitleVIFundsExpended BEST4.
bcCompServiceProvider BEST1.
bcCompServiceProviderType $CHAR8.
cesVRAgencyStaff BEST1.
cesVRAgencyPurchase BEST1.
cesPurchaseProviderType BEST1.
cesVRTitleIFundsExpended BEST5.
cesSETitleVIFundsExpended BEST5.
cesCompServiceProvider BEST1.
cesCompServiceProviderType $CHAR8.
esVRAgencyStaff  BEST1.
esVRAgencyPurchase BEST1.
esPurchaseProviderType BEST1.
esVRTitleIFundsExpended BEST3.
esSETitleVIFundsExpended BEST4.
tranVRAgencyStaff BEST1.
tranVRAgencyPurchase BEST1.
tranPurchaseProviderType BEST1.
tranVRTitleIFundsExpended BEST6.
tranSETitleVIFundsExpended BEST4.
tranCompServiceProvider BEST1.
tranCompServiceProviderType $CHAR8.
mntVRAgencyStaff BEST1.
mntVRAgencyPurchase BEST1.
mntPurchaseProviderType BEST1.
mntVRTitleIFundsExpended BEST6.
mntSETitleVIFundsExpended BEST4.
mntCompServiceProvider BEST1.
mntCompServiceProviderType $CHAR8.
rtVRAgencyStaff  BEST1.
rtVRAgencyPurchase BEST1.
rtPurchaseProviderType BEST1.
```

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JCL/SAS Code: Read_RSA_CSV

```
rtVRTitleIFundsExpended BEST6.
rtSETitleVIFundsExpended BEST5.
rtCompServiceProvider BEST1.
rtCompServiceProviderType $CHAR8.
pasVRAgencyStaff BEST1.
pasVRAgencyPurchase BEST1.
pasPurchaseProviderType BEST1.
pasVRTitleIFundsExpended BEST6.
pasSETitleVIFundsExpended BEST4.
pasCompServiceProvider BEST1.
pasCompServiceProviderType $CHAR8.
tasVRAgencyStaff BEST1.
tasVRAgencyPurchase BEST1.
tasPurchaseProviderType BEST1.
tasVRTitleIFundsExpended BEST5.
tasSETitleVIFundsExpended BEST4.
tasCompServiceProvider BEST1.
tasCompServiceProviderType $CHAR8.
rsVRAgencyStaff  BEST1.
rsVRAgencyPurchase BEST1.
rsPurchaseProviderType BEST1.
rsVRTitleIFundsExpended BEST5.
rsSETitleVIFundsExpended BEST1.
rsCompServiceProvider BEST1.
rsCompServiceProviderType $CHAR8.
isVRAgencyStaff  BEST1.
isVRAgencyPurchase BEST1.
isPurchaseProviderType BEST1.
isVRTitleIFundsExpended BEST6.
isSETitleVIFundsExpended BEST4.
isCompServiceProvider BEST1.
isCompServiceProviderType $CHAR8.
osVRAgencyStaff  BEST1.
osVRAgencyPurchase BEST1.
osPurchaseProviderType BEST1.
osVRTitleIFundsExpended BEST6.
osSETitleVIFundsExpended BEST5.
osCompServiceProvider BEST1.
osCompServiceProviderType $CHAR8.
EdFuncLevelDate  YYMMDD10.
SecondaryDate    YYMMDD10.
PostsecTransReportCardDate YYMMDD10.
TrainingMilestoneDate YYMMDD10.
SkillGainSkillsProgDate YYMMDD10.
EmpOutcome       BEST1.
```

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JCL/SAS Code: Read_RSA_CSV

```
eoPrimOccupation BEST6.
eoPrimOccupationStartDate YYMMDD10.
eoHourlyWage     BEST7.
eoHoursWorkedPerWeek BEST2.
exitDate         YYMMDD10.
exitType         BEST1.
exitReason       BEST2.
exitEmpOutcome   BEST1.
exitPrimOccupation BEST6.
exitPrimOccStartDate YYMMDD10.
exitHourlyWage   BEST7.
exitWeeklyHoursWorked BEST2.
exitSSDI         BEST5.
exitSSI          BEST5.
exitTANF         BEST4.
exitGenAssistance BEST4.
exitVeteransDisability BEST4.
exitWorkersComp  BEST5.
exitOtherSupport BEST5.
exitPrimSupportCode BEST1.
exitMedicaid     BEST1.
exitMedicare     BEST1.
exitACAExchange  BEST1.
exitOtherPublicIns BEST1.
exitEmployerIns  BEST1.
exitEmployerInsNYE BEST1.
exitOtherPrivateIns BEST1.
peCredProgramEnrollDate YYMMDD10.
peCredAttainmentDate YYMMDD10.
peCredentialType BEST1.
q1aeEmpStatus    BEST1.
q1aeEmpMatchType BEST1.
q1aeWages        BEST8.
q2aeEmpRelatedToTraining BEST1.
q2aeEmpStatus    BEST1.
q2aeEmpMatchType BEST1.
q2aeWages        BEST8.
q3aeEmpStatus    BEST1.
q3aeEmpMatchType BEST1.
q3aeWages        BEST6.
q4aeEmpStatus    BEST1.
q4aeEmpMatchType BEST1.
q4aeWages        BEST6.
q4aeRetentionQ2AndQ4 BEST1.
appOtherSupport  BEST1.
```

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```
    ImportAgency     $CHAR4.
    Report_Through   YYMMDD10.
    SSN              $CHAR9. ;
  INFORMAT
    SubmissionDate   YYMMDD10.
    AgencyCode       BEST3.
    IndividualID     $CHAR12.
    ApplicationDate  YYMMDD10.
    BirthDate        YYMMDD10.
    Sex              $CHAR1. /*Formerly BEST1.*/
    AmerIndian       BEST1.
    Asian            BEST1.
    Black            BEST1.
    Hawaiian         BEST1.
    White            BEST1.
    Hispanic         BEST1.
    Veteran          BEST1.
    LivingArangementCD BEST2.
    State            $CHAR2.
    CountyFIPSCode   BEST5.
    ZIPCode          BEST5.
    Referral         BEST2.
    Student          BEST1.
    appSSDI          BEST1.
    appSSI           BEST1.
    appTANF          BEST1.
    appGenAssistance BEST1.
    appVeteransDisability BEST1.
    appWorkersComp   BEST1.
    appUI            BEST1.
    appPrimSupportCode BEST1.
    appMedicaid      BEST1.
    appMedicare      BEST1.
    appACAExchange   BEST1.
    appOtherPublicIns BEST1.
    appEmployerIns   BEST1.
    appEmployerInsNYE BEST1.
    appOtherPrivateIns BEST1.
    EligibilityDate  YYMMDD10.
    EligibilityExt   BEST1.
    OOSPlacementDate YYMMDD10.
    OOSExitDate      YYMMDD10.
    Disability       BEST1.
    PrimDisabilityCodeType BEST2.
    PrimDisabilityCodeSource BEST2.
```

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JCL/SAS Code: Read_RSA_CSV

```
SecondaryDisabilityType BEST2.
SecondaryDisabilitySource BEST2.
DisabilitySigCode BEST1.
TWEStartDate     YYMMDD10.
TWEEndDate       YYMMDD10.
IPEAmendedDate   YYMMDD10.
IPESupportedEmpGoal BEST1.
ipeEmpStatus     BEST2.
ipePrimaryOcc    BEST6.
ipeHourlyWage    BEST7.
ipeWeeklyHoursWorked BEST5.
Adult            BEST1.
AdultEd          BEST1.
DislocatedWorker BEST1.
JobCorps         BEST1.
VocRehab         BEST1.
WPEmpService     BEST1.
Youth            BEST1.
YouthBuild       $CHAR14.
LongTermUnemp    BEST1.
ExhaustTANF      BEST1.
FosterCareYouth  BEST1.
HomelessOrRunaway BEST1.
ExOffenderStatus BEST1.
LowIncomeStatus  BEST1.
EnglishLearner   BEST1.
BasicSkillsDeficient BEST1.
CulturalBarriers BEST1.
SingleParent     BEST1.
DisHomemaker     BEST1.
MigrantFarmworker BEST1.
StateDisStudentAgeRange TIME11.
SchoolStatus     BEST1.
EdLevelCompleted BEST1.
SchoolGradeCompleted BEST2.
InSecondaryEd    BEST1.
SpecialEdCertCompDate YYMMDD10.
EnrolledInASE    BEST1.
SecSchoolDiplomaDate YYMMDD10.
GEDDate          YYMMDD10.
PostsecEdYear    BEST1.
EnrolledInPostsecEd BEST1.
CredProgramEnrollDate YYMMDD10.
CompletedSomePostsecEd BEST1.
AssociateDegreeDate YYMMDD10.
```

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JCL/SAS Code: Read_RSA_CSV

```
BachelorDegreeDate YYMMDD10.
MastersDegreeDate YYMMDD10.
DegreeAboveMastersDate YYMMDD10.
EnrolledInCTTPNoCred BEST1.
EnrolledInCTTPCred BEST1.
VTLicenseDate    YYMMDD10.
VTCertificateDate YYMMDD10.
OtherLicOrCertDate YYMMDD10.
PETSStartDate    YYMMDD10.
jecVRAgencyStaff BEST1.
jecVRAgencyPurchase BEST1.
jecPurchaseProviderType BEST1.
jecVRServicePurchaseExpenditure BEST5.
jecCompServiceProvider BEST1.
jecCompServiceProviderType $CHAR8.
wbleVRAgencyStaff BEST1.
wbleVRAgencyPurchase BEST1.
wblePurchaseProviderType BEST1.
wbleVRServicePurchaseExpenditure BEST5.
wbleCompServiceProvider BEST1.
wbleCompServiceProviderType $CHAR8.
ceoVRAgencyStaff BEST1.
ceoVRAgencyPurchase BEST1.
ceoPurchaseProviderType BEST1.
ceoVRServicePurchaseExpenditure BEST5.
ceoCompServiceProvider BEST1.
ceoCompServiceProviderType $CHAR8.
wrtVRAgencyStaff BEST1.
wrtVRAgencyPurchase BEST1.
wrtPurchaseProviderType BEST1.
wrtVRServicePurchaseExpenditure BEST5.
wrtCompServiceProvider BEST1.
wrtCompServiceProviderType $CHAR8.
isaVRAgencyStaff BEST1.
isaVRAgencyPurchase BEST1.
isaPurchaseProviderType BEST1.
isaVRServicePurchaseExpenditure BEST5.
isaCompServiceProvider BEST1.
isaCompServiceProviderType $CHAR8.
VRServiceStartDate YYMMDD10.
CareerServiceDate YYMMDD10.
gcutVRAgencyStaff BEST1.
gcutVRAgencyPurchase BEST1.
gcutPurchaseProviderType BEST1.
gcutVRTitleIFundsExpended BEST6.
```

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JCL/SAS Code: Read_RSA_CSV

```
gcutSETitleVIFundsExpended BEST3.
gcutCompServiceProvider BEST1.
gcutCompServiceProviderType $CHAR8.
fycutVRAgencyStaff BEST1.
fycutVRAgencyPurchase BEST1.
fycutPurchaseProviderType BEST1.
fycutVRTitleIFundsExpended BEST6.
fycutSETitleVIFundsExpended BEST4.
fycutCompServiceProvider BEST1.
fycutCompServiceProviderType $CHAR8.
jcctVRAgencyStaff BEST1.
jcctVRAgencyPurchase BEST1.
jcctPurchaseProviderType BEST1.
jcctVRTitleIFundsExpended BEST5.
jcctSETitleVIFundsExpended BEST5.
jcctCompServiceProvider BEST1.
jcctCompServiceProviderType $CHAR8.
ovtVRAgencyStaff BEST1.
ovtVRAgencyPurchase BEST1.
ovtPurchaseProviderType BEST1.
ovtVRTitleIFundsExpended BEST5.
ovtSETitleVIFundsExpended BEST5.
ovtCompServiceProvider BEST1.
ovtCompServiceProviderType $CHAR8.
ojtVRAgencyStaff BEST1.
ojtVRAgencyPurchase BEST1.
ojtPurchaseProviderType BEST1.
ojtVRTitleIFundsExpended BEST5.
ojtSETitleVIFundsExpended BEST4.
ojtCompServiceProvider BEST1.
ojtCompServiceProviderType $CHAR8.
ratVRAgencyPurchase BEST1.
ratPurchaseProviderType BEST1.
ratVRTitleIFundsExpended BEST5.
ratSETitleVIFundsExpended BEST5.
ratCompServiceProvider BEST1.
ratCompServiceProviderType $CHAR8.
barltVRAgencyStaff BEST1.
barltVRAgencyPurchase BEST1.
barltPurchaseProviderType BEST1.
barltVRTitleIFundsExpended BEST4.
barltSETitleVIFundsExpended BEST3.
barltCompServiceProvider BEST1.
barltCompServiceProviderType $CHAR8.
jrtVRAgencyStaff BEST1.
```

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```
jrtVRAgencyPurchase BEST1.
jrtPurchaseProviderType BEST1.
jrtVRTitleIFundsExpended BEST5.
jrtSETitleVIFundsExpended BEST5.
jrtCompServiceProvider BEST1.
jrtCompServiceProviderType $CHAR8.
drstVRAgencyStaff BEST1.
drstVRAgencyPurchase BEST1.
drstPurchaseProviderType BEST1.
drstVRTitleIFundsExpended BEST5.
drstSETitleVIFundsExpended BEST3.
drstCompServiceProvider BEST1.
drstCompServiceProviderType $CHAR8.
mtVRAgencyStaff  BEST1.
mtVRAgencyPurchase BEST1.
mtPurchaseProviderType BEST1.
mtVRTitleIFundsExpended BEST5.
mtSETitleVIFundsExpended BEST4.
mtCompServiceProvider BEST1.
mtCompServiceProviderType $CHAR8.
rsetVRAgencyStaff BEST1.
rsetVRAgencyPurchase BEST1.
rsetPurchaseProviderType BEST1.
rsetVRTitleIFundsExpended BEST4.
rsetSETitleVIFundsExpended BEST1.
rsetCompServiceProvider BEST1.
rsetCompServiceProviderType $CHAR1.
ctVRAgencyStaff  BEST1.
ctVRAgencyPurchase BEST1.
ctPurchaseProviderType BEST1.
ctVRTitleIFundsExpended BEST5.
ctSETitleVIFundsExpended BEST1.
ctCompServiceProvider BEST1.
ctCompServiceProviderType $CHAR1.
assVRAgencyStaff BEST1.
assVRAgencyPurchase BEST1.
assPurchaseProviderType BEST1.
assVRTitleIFundsExpended BEST6.
assSETitleVIFundsExpended BEST5.
assCompServiceProvider BEST1.
assCompServiceProviderType $CHAR8.
dtiVRAgencyStaff BEST1.
dtiVRAgencyPurchase BEST1.
dtiPurchaseProviderType BEST1.
dtiVRTitleIFundsExpended BEST6.
```

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JCL/SAS Code: Read_RSA_CSV

```
dtiSETitleVIFundsExpended BEST4.
dtiCompServiceProvider BEST1.
dtiCompServiceProviderType $CHAR8.
vrcgVRAgencyStaff BEST1.
vrcgVRAgencyPurchase BEST1.
vrcgPurchaseProviderType BEST1.
vrcgVRTitleIFundsExpended BEST5.
vrcgSETitleVIFundsExpended BEST1.
vrcgCompServiceProvider BEST1.
vrcgCompServiceProviderType $CHAR8.
jsaVRAgencyStaff BEST1.
jsaVRAgencyPurchase BEST1.
jsaPurchaseProviderType BEST1.
jsaVRTitleIFundsExpended BEST5.
jsaSETitleVIFundsExpended BEST5.
jsaCompServiceProvider BEST1.
jsaCompServiceProviderType $CHAR8.
jpaVRAgencyStaff BEST1.
jpaVRAgencyPurchase BEST1.
jpaPurchaseProviderType BEST1.
jpaVRTitleIFundsExpended BEST5.
jpaSETitleVIFundsExpended BEST5.
jpaCompServiceProvider BEST1.
jpaCompServiceProviderType $CHAR8.
stjsVRAgencyStaff $CHAR1.
stjsVRAgencyPurchase BEST1.
stjsPurchaseProviderType BEST1.
stjsVRTitleIFundsExpended BEST5.
stjsSETitleVIFundsExpended BEST5.
stjsCompServiceProvider BEST1.
stjsCompServiceProviderType $CHAR8.
sesVRAgencyStaff BEST1.
sesVRAgencyPurchase BEST1.
sesPurchaseProviderType BEST1.
sesVRTitleIFundsExpended BEST5.
sesSETitleVIFundsExpended BEST5.
sesCompServiceProvider BEST1.
sesCompServiceProviderType $CHAR8.
irsVRAgencyStaff BEST1.
irsVRAgencyPurchase BEST1.
irsPurchaseProviderType BEST1.
irsVRTitleIFundsExpended BEST4.
irsSETitleVIFundsExpended BEST3.
irsCompServiceProvider BEST1.
irsCompServiceProviderType $CHAR8.
```

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```
bcVRAgencyStaff  BEST1.
bcVRAgencyPurchase BEST1.
bcPurchaseProviderType BEST1.
bcVRTitleIFundsExpended BEST5.
bcSETitleVIFundsExpended BEST4.
bcCompServiceProvider BEST1.
bcCompServiceProviderType $CHAR8.
cesVRAgencyStaff BEST1.
cesVRAgencyPurchase BEST1.
cesPurchaseProviderType BEST1.
cesVRTitleIFundsExpended BEST5.
cesSETitleVIFundsExpended BEST5.
cesCompServiceProvider BEST1.
cesCompServiceProviderType $CHAR8.
esVRAgencyStaff  BEST1.
esVRAgencyPurchase BEST1.
esPurchaseProviderType BEST1.
esVRTitleIFundsExpended BEST3.
esSETitleVIFundsExpended BEST4.
tranVRAgencyStaff BEST1.
tranVRAgencyPurchase BEST1.
tranPurchaseProviderType BEST1.
tranVRTitleIFundsExpended BEST6.
tranSETitleVIFundsExpended BEST4.
tranCompServiceProvider BEST1.
tranCompServiceProviderType $CHAR8.
mntVRAgencyStaff BEST1.
mntVRAgencyPurchase BEST1.
mntPurchaseProviderType BEST1.
mntVRTitleIFundsExpended BEST6.
mntSETitleVIFundsExpended BEST4.
mntCompServiceProvider BEST1.
mntCompServiceProviderType $CHAR8.
rtVRAgencyStaff  BEST1.
rtVRAgencyPurchase BEST1.
rtPurchaseProviderType BEST1.
rtVRTitleIFundsExpended BEST6.
rtSETitleVIFundsExpended BEST5.
rtCompServiceProvider BEST1.
rtCompServiceProviderType $CHAR8.
pasVRAgencyStaff BEST1.
pasVRAgencyPurchase BEST1.
pasPurchaseProviderType BEST1.
pasVRTitleIFundsExpended BEST6.
pasSETitleVIFundsExpended BEST4.
```

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```
pasCompServiceProvider BEST1.
pasCompServiceProviderType $CHAR8.
tasVRAgencyStaff BEST1.
tasVRAgencyPurchase BEST1.
tasPurchaseProviderType BEST1.
tasVRTitleIFundsExpended BEST5.
tasSETitleVIFundsExpended BEST4.
tasCompServiceProvider BEST1.
tasCompServiceProviderType $CHAR8.
rsVRAgencyStaff  BEST1.
rsVRAgencyPurchase BEST1.
rsPurchaseProviderType BEST1.
rsVRTitleIFundsExpended BEST5.
rsSETitleVIFundsExpended BEST1.
rsCompServiceProvider BEST1.
rsCompServiceProviderType $CHAR8.
isVRAgencyStaff  BEST1.
isVRAgencyPurchase BEST1.
isPurchaseProviderType BEST1.
isVRTitleIFundsExpended BEST6.
isSETitleVIFundsExpended BEST4.
isCompServiceProvider BEST1.
isCompServiceProviderType $CHAR8.
osVRAgencyStaff  BEST1.
osVRAgencyPurchase BEST1.
osPurchaseProviderType BEST1.
osVRTitleIFundsExpended BEST6.
osSETitleVIFundsExpended BEST5.
osCompServiceProvider BEST1.
osCompServiceProviderType $CHAR8.
EdFuncLevelDate  YYMMDD10.
SecondaryDate    YYMMDD10.
PostsecTransReportCardDate YYMMDD10.
TrainingMilestoneDate YYMMDD10.
SkillGainSkillsProgDate YYMMDD10.
EmpOutcome       BEST1.
eoPrimOccupation BEST6.
eoPrimOccupationStartDate YYMMDD10.
eoHourlyWage     BEST7.
eoHoursWorkedPerWeek BEST2.
exitDate         YYMMDD10.
exitType         BEST1.
exitReason       BEST2.
exitEmpOutcome   BEST1.
exitPrimOccupation BEST6.
```

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JCL/SAS Code: Read_RSA_CSV

```
    exitPrimOccStartDate YYMMDD10.
    exitHourlyWage   BEST7.
    exitWeeklyHoursWorked BEST2.
    exitSSDI        BEST5.
    exitSSI         BEST5.
    exitTANF        BEST4.
    exitGenAssistance BEST4.
    exitVeteransDisability BEST4.
    exitWorkersComp  BEST5.
    exitOtherSupport BEST5.
    exitPrimSupportCode BEST1.
    exitMedicaid     BEST1.
    exitMedicare     BEST1.
    exitACAExchange  BEST1.
    exitOtherPublicIns BEST1.
    exitEmployerIns  BEST1.
    exitEmployerInsNYE BEST1.
    exitOtherPrivateIns BEST1.
    peCredProgramEnrollDate YYMMDD10.
    peCredAttainmentDate YYMMDD10.
    peCredentialType BEST1.
    q1aeEmpStatus    BEST1.
    q1aeEmpMatchType BEST1.
    q1aeWages        BEST8.
    q2aeEmpRelatedToTraining BEST1.
    q2aeEmpStatus    BEST1.
    q2aeEmpMatchType BEST1.
    q2aeWages        BEST8.
    q3aeEmpStatus    BEST1.
    q3aeEmpMatchType BEST1.
    q3aeWages        BEST6.
    q4aeEmpStatus    BEST1.
    q4aeEmpMatchType BEST1.
    q4aeWages        BEST6.
    q4aeRetentionQ2AndQ4 BEST1.
    appOtherSupport  BEST1.
    ImportAgency     $CHAR4.
    Report_Through   YYMMDD10.
    SSN              $CHAR9. ;
INFILE "M:\2017-2018 New RSA 911 raw file from Dept of Education\SSACY18pt&pt..csv"
    LRECL=32767
    FIRSTOBS=2
    ENCODING="WLATIN1"
    DLM='2c'x
    MISSOVER
```

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```
    DSD ;
  INPUT
    SubmissionDate   : ?? YYMMDD8.
    AgencyCode       : ?? BEST3.
    IndividualID     : $CHAR12.
    ApplicationDate  : ?? YYMMDD8.
    BirthDate        : ?? YYMMDD8.
    Sex              : ?? $CHAR1. /*Formerly BEST1.*/
    AmerIndian       : ?? BEST1.
    Asian            : ?? BEST1.
    Black            : ?? BEST1.
    Hawaiian         : ?? BEST1.
    White            : ?? BEST1.
    Hispanic         : ?? BEST1.
    Veteran          : ?? BEST1.
    LivingArangementCD : ?? BEST2.
    State            : $CHAR2.
    CountyFIPSCode   : ?? BEST5.
    ZIPCode          : ?? BEST5.
    Referral         : ?? BEST2.
    Student          : ?? BEST1.
    appSSDI          : ?? BEST1.
    appSSI           : ?? BEST1.
    appTANF          : ?? BEST1.
    appGenAssistance : ?? BEST1.
    appVeteransDisability : ?? BEST1.
    appWorkersComp   : ?? BEST1.
    appUI            : ?? BEST1.
    appPrimSupportCode : ?? BEST1.
    appMedicaid      : ?? BEST1.
    appMedicare      : ?? BEST1.
    appACAExchange   : ?? BEST1.
    appOtherPublicIns : ?? BEST1.
    appEmployerIns   : ?? BEST1.
    appEmployerInsNYE : ?? BEST1.
    appOtherPrivateIns : ?? BEST1.
    EligibilityDate  : ?? YYMMDD8.
    EligibilityExt   : ?? BEST1.
    OOSPlacementDate : ?? YYMMDD8.
    OOSExitDate      : ?? YYMMDD8.
    Disability       : ?? BEST1.
    PrimDisabilityCodeType : ?? BEST2.
    PrimDisabilityCodeSource : ?? BEST2.
    SecondaryDisabilityType : ?? BEST2.
    SecondaryDisabilitySource : ?? BEST2.
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
DisabilitySigCode : ?? BEST1.
TWEStartDate     : ?? YYMMDD8.
TWEEndDate       : ?? YYMMDD8.
IPEAmendedDate   : ?? YYMMDD8.
IPESupportedEmpGoal : ?? BEST1.
ipeEmpStatus     : ?? BEST2.
ipePrimaryOcc    : ?? COMMA6.
ipeHourlyWage    : ?? COMMA7.
ipeWeeklyHoursWorked : ?? COMMA5.
Adult            : ?? BEST1.
AdultEd          : ?? BEST1.
DislocatedWorker : ?? BEST1.
JobCorps         : ?? BEST1.
VocRehab         : ?? BEST1.
WPEmpService     : ?? BEST1.
Youth            : ?? BEST1.
YouthBuild       : $CHAR14.
LongTermUnemp    : ?? BEST1.
ExhaustTANF      : ?? BEST1.
FosterCareYouth  : ?? BEST1.
HomelessOrRunaway : ?? BEST1.
ExOffenderStatus : ?? BEST1.
LowIncomeStatus  : ?? BEST1.
EnglishLearner   : ?? BEST1.
BasicSkillsDeficient : ?? BEST1.
CulturalBarriers : ?? BEST1.
SingleParent     : ?? BEST1.
DisHomemaker     : ?? BEST1.
MigrantFarmworker : ?? BEST1.
StateDisStudentAgeRange : ?? TIME5.
SchoolStatus     : ?? BEST1.
EdLevelCompleted : ?? BEST1.
SchoolGradeCompleted : ?? BEST2.
InSecondaryEd    : ?? BEST1.
SpecialEdCertCompDate : ?? YYMMDD8.
EnrolledInASE    : ?? BEST1.
SecSchoolDiplomaDate : ?? YYMMDD8.
GEDDate          : ?? YYMMDD8.
PostsecEdYear    : ?? BEST1.
EnrolledInPostsecEd : ?? BEST1.
CredProgramEnrollDate : ?? YYMMDD8.
CompletedSomePostsecEd : ?? BEST1.
AssociateDegreeDate : ?? YYMMDD8.
BachelorDegreeDate : ?? YYMMDD8.
MastersDegreeDate : ?? YYMMDD8.
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
DegreeAboveMastersDate : ?? YYMMDD8.
EnrolledInCTTPNoCred : ?? BEST1.
EnrolledInCTTPCred : ?? BEST1.
VTLicenseDate    : ?? YYMMDD8.
VTCertificateDate : ?? YYMMDD8.
OtherLicOrCertDate : ?? YYMMDD8.
PETSStartDate    : ?? YYMMDD8.
jecVRAgencyStaff : ?? BEST1.
jecVRAgencyPurchase : ?? BEST1.
jecPurchaseProviderType : ?? BEST1.
jecVRServicePurchaseExpenditure : ?? BEST5.
jecCompServiceProvider : ?? BEST1.
jecCompServiceProviderType : $CHAR8.
wbleVRAgencyStaff : ?? BEST1.
wbleVRAgencyPurchase : ?? BEST1.
wblePurchaseProviderType : ?? BEST1.
wbleVRServicePurchaseExpenditure : ?? BEST5.
wbleCompServiceProvider : ?? BEST1.
wbleCompServiceProviderType : $CHAR8.
ceoVRAgencyStaff : ?? BEST1.
ceoVRAgencyPurchase : ?? BEST1.
ceoPurchaseProviderType : ?? BEST1.
ceoVRServicePurchaseExpenditure : ?? BEST5.
ceoCompServiceProvider : ?? BEST1.
ceoCompServiceProviderType : $CHAR8.
wrtVRAgencyStaff : ?? BEST1.
wrtVRAgencyPurchase : ?? BEST1.
wrtPurchaseProviderType : ?? BEST1.
wrtVRServicePurchaseExpenditure : ?? BEST5.
wrtCompServiceProvider : ?? BEST1.
wrtCompServiceProviderType : $CHAR8.
isaVRAgencyStaff : ?? BEST1.
isaVRAgencyPurchase : ?? BEST1.
isaPurchaseProviderType : ?? BEST1.
isaVRServicePurchaseExpenditure : ?? BEST5.
isaCompServiceProvider : ?? BEST1.
isaCompServiceProviderType : $CHAR8.
VRServiceStartDate : ?? YYMMDD8.
CareerServiceDate : ?? YYMMDD8.
gcutVRAgencyStaff : ?? BEST1.
gcutVRAgencyPurchase : ?? BEST1.
gcutPurchaseProviderType : ?? BEST1.
gcutVRTitleIFundsExpended : ?? BEST6.
gcutSETitleVIFundsExpended : ?? BEST3.
gcutCompServiceProvider : ?? BEST1.
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
gcutCompServiceProviderType : $CHAR8.
fycutVRAgencyStaff : ?? BEST1.
fycutVRAgencyPurchase : ?? BEST1.
fycutPurchaseProviderType : ?? BEST1.
fycutVRTitleIFundsExpended : ?? BEST6.
fycutSETitleVIFundsExpended : ?? BEST4.
fycutCompServiceProvider : ?? BEST1.
fycutCompServiceProviderType : $CHAR8.
jcctVRAgencyStaff : ?? BEST1.
jcctVRAgencyPurchase : ?? BEST1.
jcctPurchaseProviderType : ?? BEST1.
jcctVRTitleIFundsExpended : ?? BEST5.
jcctSETitleVIFundsExpended : ?? BEST5.
jcctCompServiceProvider : ?? BEST1.
jcctCompServiceProviderType : $CHAR8.
ovtVRAgencyStaff : ?? BEST1.
ovtVRAgencyPurchase : ?? BEST1.
ovtPurchaseProviderType : ?? BEST1.
ovtVRTitleIFundsExpended : ?? BEST5.
ovtSETitleVIFundsExpended : ?? BEST5.
ovtCompServiceProvider : ?? BEST1.
ovtCompServiceProviderType : $CHAR8.
ojtVRAgencyStaff : ?? BEST1.
ojtVRAgencyPurchase : ?? BEST1.
ojtPurchaseProviderType : ?? BEST1.
ojtVRTitleIFundsExpended : ?? BEST5.
ojtSETitleVIFundsExpended : ?? BEST4.
ojtCompServiceProvider : ?? BEST1.
ojtCompServiceProviderType : $CHAR8.
ratVRAgencyPurchase : ?? BEST1.
ratPurchaseProviderType : ?? BEST1.
ratVRTitleIFundsExpended : ?? BEST5.
ratSETitleVIFundsExpended : ?? BEST5.
ratCompServiceProvider : ?? BEST1.
ratCompServiceProviderType : $CHAR8.
barltVRAgencyStaff : ?? BEST1.
barltVRAgencyPurchase : ?? BEST1.
barltPurchaseProviderType : ?? BEST1.
barltVRTitleIFundsExpended : ?? BEST4.
barltSETitleVIFundsExpended : ?? BEST3.
barltCompServiceProvider : ?? BEST1.
barltCompServiceProviderType : $CHAR8.
jrtVRAgencyStaff : ?? BEST1.
jrtVRAgencyPurchase : ?? BEST1.
jrtPurchaseProviderType : ?? BEST1.
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
jrtVRTitleIFundsExpended : ?? BEST5.
jrtSETitleVIFundsExpended : ?? BEST5.
jrtCompServiceProvider : ?? BEST1.
jrtCompServiceProviderType : $CHAR8.
drstVRAgencyStaff : ?? BEST1.
drstVRAgencyPurchase : ?? BEST1.
drstPurchaseProviderType : ?? BEST1.
drstVRTitleIFundsExpended : ?? BEST5.
drstSETitleVIFundsExpended : ?? BEST3.
drstCompServiceProvider : ?? BEST1.
drstCompServiceProviderType : $CHAR8.
mtVRAgencyStaff  : ?? BEST1.
mtVRAgencyPurchase : ?? BEST1.
mtPurchaseProviderType : ?? BEST1.
mtVRTitleIFundsExpended : ?? BEST5.
mtSETitleVIFundsExpended : ?? BEST4.
mtCompServiceProvider : ?? BEST1.
mtCompServiceProviderType : $CHAR8.
rsetVRAgencyStaff : ?? BEST1.
rsetVRAgencyPurchase : ?? BEST1.
rsetPurchaseProviderType : ?? BEST1.
rsetVRTitleIFundsExpended : ?? BEST4.
rsetSETitleVIFundsExpended : ?? BEST1.
rsetCompServiceProvider : ?? BEST1.
rsetCompServiceProviderType : $CHAR1.
ctVRAgencyStaff  : ?? BEST1.
ctVRAgencyPurchase : ?? BEST1.
ctPurchaseProviderType : ?? BEST1.
ctVRTitleIFundsExpended : ?? BEST5.
ctSETitleVIFundsExpended : ?? BEST1.
ctCompServiceProvider : ?? BEST1.
ctCompServiceProviderType : $CHAR1.
assVRAgencyStaff : ?? BEST1.
assVRAgencyPurchase : ?? BEST1.
assPurchaseProviderType : ?? BEST1.
assVRTitleIFundsExpended : ?? BEST6.
assSETitleVIFundsExpended : ?? BEST5.
assCompServiceProvider : ?? BEST1.
assCompServiceProviderType : $CHAR8.
dtiVRAgencyStaff : ?? BEST1.
dtiVRAgencyPurchase : ?? BEST1.
dtiPurchaseProviderType : ?? BEST1.
dtiVRTitleIFundsExpended : ?? BEST6.
dtiSETitleVIFundsExpended : ?? BEST4.
dtiCompServiceProvider : ?? BEST1.
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
dtiCompServiceProviderType : $CHAR8.
vrcgVRAgencyStaff : ?? BEST1.
vrcgVRAgencyPurchase : ?? BEST1.
vrcgPurchaseProviderType : ?? BEST1.
vrcgVRTitleIFundsExpended : ?? BEST5.
vrcgSETitleVIFundsExpended : ?? BEST1.
vrcgCompServiceProvider : ?? BEST1.
vrcgCompServiceProviderType : $CHAR8.
jsaVRAgencyStaff : ?? BEST1.
jsaVRAgencyPurchase : ?? BEST1.
jsaPurchaseProviderType : ?? BEST1.
jsaVRTitleIFundsExpended : ?? BEST5.
jsaSETitleVIFundsExpended : ?? BEST5.
jsaCompServiceProvider : ?? BEST1.
jsaCompServiceProviderType : $CHAR8.
jpaVRAgencyStaff : ?? BEST1.
jpaVRAgencyPurchase : ?? BEST1.
jpaPurchaseProviderType : ?? BEST1.
jpaVRTitleIFundsExpended : ?? BEST5.
jpaSETitleVIFundsExpended : ?? BEST5.
jpaCompServiceProvider : ?? BEST1.
jpaCompServiceProviderType : $CHAR8.
stjsVRAgencyStaff : $CHAR1.
stjsVRAgencyPurchase : ?? BEST1.
stjsPurchaseProviderType : ?? BEST1.
stjsVRTitleIFundsExpended : ?? BEST5.
stjsSETitleVIFundsExpended : ?? BEST5.
stjsCompServiceProvider : ?? BEST1.
stjsCompServiceProviderType : $CHAR8.
sesVRAgencyStaff : ?? BEST1.
sesVRAgencyPurchase : ?? BEST1.
sesPurchaseProviderType : ?? BEST1.
sesVRTitleIFundsExpended : ?? BEST5.
sesSETitleVIFundsExpended : ?? BEST5.
sesCompServiceProvider : ?? BEST1.
sesCompServiceProviderType : $CHAR8.
irsVRAgencyStaff : ?? BEST1.
irsVRAgencyPurchase : ?? BEST1.
irsPurchaseProviderType : ?? BEST1.
irsVRTitleIFundsExpended : ?? BEST4.
irsSETitleVIFundsExpended : ?? BEST3.
irsCompServiceProvider : ?? BEST1.
irsCompServiceProviderType : $CHAR8.
bcVRAgencyStaff  : ?? BEST1.
bcVRAgencyPurchase : ?? BEST1.
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
bcPurchaseProviderType : ?? BEST1.
bcVRTitleIFundsExpended : ?? BEST5.
bcSETitleVIFundsExpended : ?? BEST4.
bcCompServiceProvider : ?? BEST1.
bcCompServiceProviderType : $CHAR8.
cesVRAgencyStaff : ?? BEST1.
cesVRAgencyPurchase : ?? BEST1.
cesPurchaseProviderType : ?? BEST1.
cesVRTitleIFundsExpended : ?? BEST5.
cesSETitleVIFundsExpended : ?? BEST5.
cesCompServiceProvider : ?? BEST1.
cesCompServiceProviderType : $CHAR8.
esVRAgencyStaff  : ?? BEST1.
esVRAgencyPurchase : ?? BEST1.
esPurchaseProviderType : ?? BEST1.
esVRTitleIFundsExpended : ?? BEST3.
esSETitleVIFundsExpended : ?? BEST4.
tranVRAgencyStaff : ?? BEST1.
tranVRAgencyPurchase : ?? BEST1.
tranPurchaseProviderType : ?? BEST1.
tranVRTitleIFundsExpended : ?? BEST6.
tranSETitleVIFundsExpended : ?? BEST4.
tranCompServiceProvider : ?? BEST1.
tranCompServiceProviderType : $CHAR8.
mntVRAgencyStaff : ?? BEST1.
mntVRAgencyPurchase : ?? BEST1.
mntPurchaseProviderType : ?? BEST1.
mntVRTitleIFundsExpended : ?? BEST6.
mntSETitleVIFundsExpended : ?? BEST4.
mntCompServiceProvider : ?? BEST1.
mntCompServiceProviderType : $CHAR8.
rtVRAgencyStaff  : ?? BEST1.
rtVRAgencyPurchase : ?? BEST1.
rtPurchaseProviderType : ?? BEST1.
rtVRTitleIFundsExpended : ?? BEST6.
rtSETitleVIFundsExpended : ?? BEST5.
rtCompServiceProvider : ?? BEST1.
rtCompServiceProviderType : $CHAR8.
pasVRAgencyStaff : ?? BEST1.
pasVRAgencyPurchase : ?? BEST1.
pasPurchaseProviderType : ?? BEST1.
pasVRTitleIFundsExpended : ?? BEST6.
pasSETitleVIFundsExpended : ?? BEST4.
pasCompServiceProvider : ?? BEST1.
pasCompServiceProviderType : $CHAR8.
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
tasVRAgencyStaff : ?? BEST1.
tasVRAgencyPurchase : ?? BEST1.
tasPurchaseProviderType : ?? BEST1.
tasVRTitleIFundsExpended : ?? BEST5.
tasSETitleVIFundsExpended : ?? BEST4.
tasCompServiceProvider : ?? BEST1.
tasCompServiceProviderType : $CHAR8.
rsVRAgencyStaff  : ?? BEST1.
rsVRAgencyPurchase : ?? BEST1.
rsPurchaseProviderType : ?? BEST1.
rsVRTitleIFundsExpended : ?? BEST5.
rsSETitleVIFundsExpended : ?? BEST1.
rsCompServiceProvider : ?? BEST1.
rsCompServiceProviderType : $CHAR8.
isVRAgencyStaff  : ?? BEST1.
isVRAgencyPurchase : ?? BEST1.
isPurchaseProviderType : ?? BEST1.
isVRTitleIFundsExpended : ?? BEST6.
isSETitleVIFundsExpended : ?? BEST4.
isCompServiceProvider : ?? BEST1.
isCompServiceProviderType : $CHAR8.
osVRAgencyStaff  : ?? BEST1.
osVRAgencyPurchase : ?? BEST1.
osPurchaseProviderType : ?? BEST1.
osVRTitleIFundsExpended : ?? BEST6.
osSETitleVIFundsExpended : ?? BEST5.
osCompServiceProvider : ?? BEST1.
osCompServiceProviderType : $CHAR8.
EdFuncLevelDate  : ?? YYMMDD8.
SecondaryDate    : ?? YYMMDD8.
PostsecTransReportCardDate : ?? YYMMDD8.
TrainingMilestoneDate : ?? YYMMDD8.
SkillGainSkillsProgDate : ?? YYMMDD8.
EmpOutcome       : ?? BEST1.
eoPrimOccupation : ?? BEST6.
eoPrimOccupationStartDate : ?? YYMMDD8.
eoHourlyWage     : ?? COMMA7.
eoHoursWorkedPerWeek : ?? BEST2.
exitDate         : ?? YYMMDD8.
exitType         : ?? BEST1.
exitReason       : ?? BEST2.
exitEmpOutcome   : ?? BEST1.
exitPrimOccupation : ?? BEST6.
exitPrimOccStartDate : ?? YYMMDD8.
exitHourlyWage   : ?? COMMA7.
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
        exitWeeklyHoursWorked : ?? BEST2.
        exitSSDI        : ?? BEST5.
        exitSSI         : ?? BEST5.
        exitTANF        : ?? BEST4.
        exitGenAssistance : ?? BEST4.
        exitVeteransDisability : ?? BEST4.
        exitWorkersComp  : ?? BEST5.
        exitOtherSupport : ?? BEST5.
        exitPrimSupportCode : ?? BEST1.
        exitMedicaid     : ?? BEST1.
        exitMedicare     : ?? BEST1.
        exitACAExchange  : ?? BEST1.
        exitOtherPublicIns : ?? BEST1.
        exitEmployerIns  : ?? BEST1.
        exitEmployerInsNYE : ?? BEST1.
        exitOtherPrivateIns : ?? BEST1.
        peCredProgramEnrollDate : ?? YYMMDD8.
        peCredAttainmentDate : ?? YYMMDD8.
        peCredentialType : ?? BEST1.
        q1aeEmpStatus    : ?? BEST1.
        q1aeEmpMatchType : ?? BEST1.
        q1aeWages        : ?? COMMA8.
        q2aeEmpRelatedToTraining : ?? BEST1.
        q2aeEmpStatus    : ?? BEST1.
        q2aeEmpMatchType : ?? BEST1.
        q2aeWages        : ?? COMMA8.
        q3aeEmpStatus    : ?? BEST1.
        q3aeEmpMatchType : ?? BEST1.
        q3aeWages        : ?? BEST6.
        q4aeEmpStatus    : ?? BEST1.
        q4aeEmpMatchType : ?? BEST1.
        q4aeWages        : ?? BEST6.
        q4aeRetentionQ2AndQ4 : ?? BEST1.
        appOtherSupport  : ?? BEST1.
        ImportAgency     : $CHAR4.
        Report_Through   : ?? YYMMDD8.
        SSN              : $CHAR9. ;
    RUN;
    %mend read;
    %read(1);
    %read(2);
    %read(3);
    %read(4);

    data OUT.RSA17_NewFormat;
```

Appendix A.184
JCL/SAS Code: Read_RSA_CSV

```
  set OUT.RSA17_NewFormat_PT1
     OUT.RSA17_NewFormat_PT2
        OUT.RSA17_NewFormat_PT3
        OUT.RSA17_NewFormat_PT4
        ;
RUN;

proc contents data = OUT.RSA17_NewFormat; run;

proc print data = OUT.RSA17_NewFormat (obs = 10);
where ranuni(1100) < 0.01;
run;

PROC SORT DATA=OUT.RSA17_NewFormat; BY SSN; RUN;
```

Appendix A.185
JCL/SAS Code: RSACOMB

```
//$4671RSA  JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: BUILD DAF17
//* PROJECT
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF17.RSA.PRDLIB(RSACOMB)
//*
//* DESCRIPTION: COMBINED RSA SAS LOADED FILES
//*
//* DATE:       11/01/10 DAWN PHELPS (FERRAGAMO)
//*             1/10/18 SERGE LUKASHANETS
//*             12/14/18 ALEX BRYCE
//*****************************************************************
//*
//RSA       EXEC SAS9,
//         WORK='120000,60000'
//*
//* RSA FILE - OLD FORMAT ALL YEARS
//RSAPREV DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF17P.RSAALLOF.SA.V1,DISP=SHR
//* RSA FILE FROM CURRENT YEAR OF DAF PROCESSING - NEW FORMAT
//RSA18   DD DSN=OPDR.TG.PRD.ETTW.DAF18.RSANEW.SA.V1,DISP=SHR
//*
//* RSA FILE IN NEW FORMAT
//RSA    DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.RSAALL.SA.V1,
//         DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(4000,2000),RLSE)
//* EVS FILE WITH SSN DOB GENDER
//EVS   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.RSAEVS.SA.V1,
//       DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//       SPACE=(CYL,(4000,2000),RLSE)
//*
//FIN   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.RSAFIN.FL.V1,
//        DISP=(OLD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//TEMP1  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//*
//SYSIN  DD *

PROC FORMAT;
   VALUE $SEX '1'='M'
            '2'='F'
```

Appendix A.185
JCL/SAS Code: RSACOMB

```
            ;
RUN;

* NEW FORMAT RSA DATA;
DATA RSA.RSAALL;
   * NOTE:  THE MEMBER NAME INDICATES RSA17 BUT THIS DATA INCLUDES
     BOTH THE CORRECTED DATA FOR DAF17 AND THE NEW DATA FOR DAF18;
   SET RSA18.RSA17_NEWFORMAT (RENAME=(BIRTHDATE=RSADOB SEX=RSASEX));
   BY SSN;
RUN;

* BUILDS EVS FILE WITH SSN DOB GENDER;
DATA EVS.RSAEVS (RENAME = (RSADOB = DOB RSASEX = GENDER));
  SET RSAPREV.RSAALL (KEEP = SSN RSADOB RSASEX)
      RSA.RSAALL (KEEP = SSN RSADOB RSASEX);
  BY SSN;
  FORMAT RSADOB MMDDYY10.
        RSASEX $SEX.
  ;
  DOBYEAR=YEAR(RSADOB);

  IF LAST.SSN THEN DO;
    FILE FIN;
    PUT @001 SSN  $CHAR9.
    ;
  END;
RUN;

PROC FREQ DATA=EVS.RSAEVS;
TABLES DOBYEAR*GENDER / LIST MISSING;WHERE SSN = "";
RUN;

PROC CONTENTS DATA=RSA.RSAALL ORDER=VARNUM;
RUN;

PROC CONTENTS DATA=EVS.RSAEVS;
RUN;

TITLE1 'RSA:  OLD FORMAT';
PROC PRINT DATA=RSAPREV.RSAALL (OBS=50);
RUN;

TITLE1 'RSA:  NEW FORMAT';
PROC PRINT DATA=RSA.RSAALL (OBS=50);
RUN;
```

Appendix A.185
JCL/SAS Code: RSACOMB

```
TITLE1 'RSA EVS:  COMBINED OLD AND NEW FORMAT';
PROC PRINT DATA = EVS.RSAEVS(OBS = 50);
RUN;
```

Appendix A.186
JCL/SAS Code: READNUM

```
//$4671NUM JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT:  DAF
//* PROGRAM;OPDR.TG.PRD.ETTW.$4671.DAF18.RSA.PRDLIB(READNUM)
//* DESCRIPTION: LOAD RAW RSA NUMIDENT DATA INTO SAS
//* PROGRAMMER:
//* E-MAIL DPHELPS@MATHEMATICA-MPR.COM
//* MATHEMATICA PHONE: 202-554-7556
//*****************************************************************
//  SET REG='64M'
//*
//JS010  EXEC SAS9,
//      WORK='200000,100000',
//      REGION=&REG,
//      PARM='MEMSIZE=&REG'
//*
//IN1     DD DSN=OPDR.TG.PRD.ETTW.DAF18.RSA.NUMIDENT.D1908,DISP=SHR
//TEMP    DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         UNIT=TSILO
//TEMP1   DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         UNIT=TSILO
//OUT1    DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.RSANUM.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         SPACE=(CYL,(1000,100),RLSE)
//*
OPTIONS NOCENTER COMPRESS=YES OBS=MAX;
  /* READ IN NUMIDENT DATA */
DATA TEMP.RSANUM;
 INFILE IN1 TRUNCOVER;
  INPUT @027 REC $1.
   @;
   /* READ DATA FROM DIFFERENT RECORD TYPES */
    IF REC IN ('G' 'J' 'K' '0' '1' '2' '4' '5' '9'
            'P' 'S' 'W' 'V') THEN DO;
      INPUT @13  SSN     $9.
           @27  ENTCD   $1.
           @29  CYCDTE  $8.
           @37  FRSTNAM $15.
           @53  MIDNAM  $15.
           @69  LASTNAM $20.
           @90  NAMESUF $4.
```

Appendix A.186
JCL/SAS Code: READNUM

```
        @97  DOBR    $8.
        @105 SEXR    $1.
        @106 RACER   $1.
          ;
    END;
    ELSE IF REC  IN ('D' 'L') THEN DO;
     INPUT @13  SSN     $9.
        @27  ENTCD   $1.
        @29  CYCDTE  $8.
        @37  FRSTNAM $15.
        @53  MIDNAM  $15.
        @69  LASTNAM $20.
        @90  NAMESUF $4.
        @97  DOBR    $8.
        @105 SEXR    $1.
        @298 DODR    $8.
      ;
    END;
    ELSE IF REC = 'T' THEN DO;
     INPUT @13  SSN     $9.
        @27  ENTCD   $1.
        @29  CYCDTE  $8.
        @37  FRSTNAM $15.
        @53  MIDNAM  $15.
        @69  LASTNAM $20.
        @90  NAMESUF $4.
        @97  DOBR    $8.
        @105 SEXR    $1.
        @145 DODR    $8.
          ;
    END;
    ELSE IF REC = 'E' THEN DO;
      INPUT @13  SSN     $9.
         @27  ENTCD   $1.
         @29  CYCDTE  $8.
         @37  FRSTNAM $15.
         @53  MIDNAM  $15.
         @69  LASTNAM $20.
         @90  NAMESUF $4.
         @97  DOBR    $8.
          ;
    END;

  /* IF SSN NE ' ';*/
  RUN;
```

Appendix A.186
JCL/SAS Code: READNUM

```
 /* ORDER THE RECORDS CHRONOLOGICALLY */
PROC FREQ DATA=TEMP.RSANUM; TABLES REC / LIST MISSING; RUN;
PROC SORT DATA=TEMP.RSANUM OUT=TEMP1.RSANUM; BY SSN CYCDTE;
   WHERE SSN NE ' '; RUN;
PROC PRINT DATA=TEMP1.RSANUM (OBS=100); TITLE 'AFTER SORT';
RUN;
DATA OUT1.RSANUM(KEEP=SSN
                 ENTLST
                 CYCDTLST
                 DOB
                 SEX
                 RACE
                 FRSTNAME
                 MIDNAME
                 LASTNAME
                 NAMESUFX
                 DOD )
                 ;
 SET TEMP1.RSANUM; BY SSN CYCDTE;

  /* DATA IS ORDERED BY CYCLE DATE FOR EACH SSN          */
  /* READ THROUGH ALL RECORDS AND KEEP THE NON-BLANKS      */

    LENGTH
        ENTLST   $1
        CYCDTLST $8
        DOB      $8
        SEX      $1
        RACE     $1
        FRSTNAME $15
        MIDNAME  $15
        LASTNAME $20
        NAMESUFX $4
        DOD      $8
        ;
    RETAIN
        ENTLST
        CYCDTLST
        DOB
        SEX
        RACE
        FRSTNAME
        MIDNAME
        LASTNAME
        NAMESUFX
```

Appendix A.186
JCL/SAS Code: READNUM

```
        DOD
        ;
  ARRAY ALL(*) ENTLST
            CYCDTLST
            DOB
            SEX
            RACE
            FRSTNAME
            MIDNAME
            LASTNAME
            NAMESUFX
            DOD;
 IF FIRST.SSN THEN  DO;
  DO I = 1 TO DIM(ALL);
   ALL(I) = ' ';
  END;
 END;
 IF DOBR  NE ' ' THEN DOB  = DOBR;
 IF DODR  NE ' ' THEN DOD  = DODR;
 IF SEXR  NE ' ' THEN SEX  = SEXR;
 IF RACER GT '0' THEN RACE = RACER;
 ENTLST = ENTCD;
 CYCDTLST = CYCDTE;
 IF FRSTNAM  NE ' ' THEN FRSTNAME = FRSTNAM;
 IF MIDNAM   NE ' ' THEN MIDNAME  = MIDNAM;
 IF LASTNAM  NE ' ' THEN LASTNAME = LASTNAM;
 IF NAMESUF  NE ' ' THEN NAMESUFX = NAMESUF;
IF LAST.SSN;
RUN;
PROC PRINT DATA=OUT1.RSANUM(OBS=50); TITLE 'AFTER LAST'; RUN;
PROC FREQ DATA=OUT1.RSANUM; TABLES ENTLST SEX RACE; RUN;
```

Appendix A.187
JCL/SAS Code: EVS

```
//$4671EVS  JOB (12510000,T715,,SAS,,ITC9FL),PHELPS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: DAF17
//*
//* PROJECT
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF18.RSA.PRDLIB(EVS)
//*
//* DESCRIPTION: MPR-EVS SYSTEM -- VERIFIES SSNS BY COMPARING
//*              SSN, DOB, AND/OR GENDER ON A SUPPLIED FILE
//*              AGAINST THE RSA NUMIDENT FILE
//*
//*****************************************************************
//*
//EVS       EXEC SAS9,
//         WORK='120000,60000'
//*
//* RSA NUMIDENT FILE
//IN1  DD  DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.RSANUM.SA.V1,DISP=SHR
//*
//* FILE TO BE VERIFIED
//IN2  DD  DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.RSAEVS.SA.V1,DISP=SHR
//*
//OUT1 DD  DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.RSAEVSR.RP.V1,
//        DISP=(NEW,CATLG,DELETE),
//        SPACE=(CYL,(4000,2000),RLSE)
//OUT2 DD  DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.RSAEVSR.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        SPACE=(CYL,(4000,2000),RLSE)
//TEMP   DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN  DD *

OPTIONS LS=132 COMPRESS=YES MPRINT OBS = MAX;

*********************************************************************
*
*  VERIFY CODE MAPPING
*
*  blank = initial value
*  S = no match in TRF.Demo
*  N = fails name check
```

Appendix A.187
JCL/SAS Code: EVS

```
*  G = fails gender check
*  Y = passes EVS
*  B = fails date of birth check
*  D = duplicate SSN
*  D = duplicate SSN, DOB, GENDER, NAME or duplicate SSN, DOB, NAME (all
*     fields used for EVS are duplicates)
*
*
*****************************************************************;

%LET NAME_CHK=0;    /*** 0=Don't perform name check / 1=Do ***/

 /*************************************************************/
 /** Macro to store number of observations in a given dataset ***/
 /*************************************************************/
%MACRO NUMOBS(ds,mvar,condition);
  DATA TEMP.TEMP;
    SET &ds.&condition.;
  RUN;

  %global &mvar.;
  %let dsid = %sysfunc(open(TEMP.TEMP));
  %let &mvar. =%sysfunc(attrn(&dsid.,NOBS));
  %let rc = %sysfunc(close(&dsid));
%MEND;

 /****************************************/
 /**  Merge with submitted data        ***/
 /****************************************/
 DATA TEMP.SUBMITTED_DATA;
  SET IN2.RSAEVS;
  IF GENDER = "1" THEN GENDER = "M";
  ELSE IF GENDER = "2" THEN GENDER = "F";
  FORMAT _ALL_ ;
RUN;

PROC CONTENTS DATA=TEMP.SUBMITTED_DATA;
RUN;

DATA TEMP.SUBMITTED_DATA_MATCH TEMP.WD (KEEP=DOBRNUM);
  MERGE TEMP.SUBMITTED_DATA(IN=IN1)
      IN1.RSANUM(IN=IN2
              KEEP=SSN DOB SEX
                  RENAME=(DOB=DOBRNUM SEX=ORIG_SEX)
              );
```

Appendix A.187
JCL/SAS Code: EVS

```
    BY SSN;
    IF IN1;
    IF IN1 AND IN2 THEN MRG_SSN=1;
    ELSE DO;
      MRG_SSN=0;
      VER_CODE="S";
    END;

    IF ORIG_SEX = '1' THEN SEX = 'M';
    ELSE IF ORIG_SEX = '2' THEN SEX = 'F';
    ELSE SEX = ' ';

    ***SCREEN OUT CASES WHICH HAVE THE WRONG DATA
    FOR DOBRNUM IN NUMIDENT FILE***;

    IF NOTDIGIT(TRIM(SUBSTR(DOBRNUM,5,4))) = 0
    THEN NYR = SUBSTR(DOBRNUM,5,4);
    NUMYR = INPUT(NYR,8.);

    IF NOTDIGIT(TRIM(DOBRNUM)) = 0 THEN DO;
    DOBNUM = INPUT(DOBRNUM,MMDDYY10.);
    IF _ERROR_=1 THEN DO; OUTPUT TEMP.WD; END;
    END;
    FORMAT DOBNUM MMDDYY10. SEX;
  OUTPUT TEMP.SUBMITTED_DATA_MATCH;
  RUN;

  TITLE "CHECK BAD DATES";
  PROC FREQ DATA=TEMP.WD; TABLES DOBRNUM / LIST MISSING; RUN; TITLE;

  DATA TEMP.SUBMITTED_DATA_MATCH;
    SET TEMP.SUBMITTED_DATA_MATCH;
    BY SSN;

    NAME_CHK = &name_chk.;

    DOB_SRCE=" ";
    TRF_NAME=.;

    /*** Proceed only if match during merge ***/
    IF MRG_SSN=1 /*AND VFLAG=0*/ THEN DO;

      /*** Verify Name ***/
      IF &name_chk.=1 THEN DO;
        IF COMPRESS(BGN)="" OR COMPRESS(BLN)="" THEN DO;
```

Appendix A.187
JCL/SAS Code: EVS

```
      TRF_NAME=0;
      VER_CODE="N";
     END;
      ELSE DO;
      IF UPCASE(SUBSTR(LNAME,1,7)) NE UPCASE(SUBSTR(BLN,1,7))
      THEN DO;
        TRF_NAME=0;
        VER_CODE="N";
      END;
      ELSE DO;
        IF UPCASE(SUBSTR(FNAME,1,1)) NE UPCASE(SUBSTR(BGN,1,1))
        THEN DO;
          TRF_NAME=0;
          VER_CODE="N";
               END;
        ELSE DO;
          IF COMPRESS(SUBSTR(INIT,1,1)) NE ""
          AND COMPRESS(SUBSTR(BMI,1,1)) NE "" THEN DO;
            IF UPCASE(SUBSTR(INIT,1,1))=UPCASE(SUBSTR(BMI,1,1))
            THEN TRF_NAME=1;
                         ELSE DO;
             TRF_NAME=0;
             VER_CODE="N";
                         END;
          END;
                ELSE DO;
                  TRF_NAME=1;
          END;
        END;
    END;
    END;
END; /*** end name check ***/

/*** proceed on only if name checking was sucessful (or not done)*/
IF (&name_chk.=1 AND TRF_NAME=1) OR &name_chk.=0 THEN DO;

  /*** Verify DOB ***/
  IF /*MONTH(DOB)=MONTH(DOBMBR) AND*/ YEAR(DOB)=NUMYR
  AND NUMYR NE . THEN DOB_SRCE="R";
  ELSE VER_CODE="B";

  * IF RECORD PASSES DOB CHECK;
  IF DOB_SRCE  = "R" THEN DO;
    /*** Verify Gender ***/
```

Appendix A.187
JCL/SAS Code: EVS

```
      * IF TRF HAS M,F GENDER THEN GO THRU VERIFICATION PROCESS;
      IF UPCASE(SEX) IN("M","F") THEN DO;
        IF UPCASE(GENDER)=UPCASE(SEX) THEN GENDER_VERIFY="Y";

        * IF INPUT DOES NOT HAVE M,F GENDER OR INPUT GENDER DOES NOT
          EQUAL TRF GENDER;
        ELSE DO;
          GENDER_VERIFY="N";
          VER_CODE="G";
        END;
      END;

      * IF TRF DOES NOT HAVE M,F GENDER BUT INPUT DOES THEN PASS;
      ELSE IF UPCASE(GENDER) IN ("M","F") THEN DO;
          GENDER_VERIFY="N";
          VER_CODE="Y";
      END;

      * IF TRF DOES NOT HAVE M,F GENDER AND INPUT DOES NOT HAVE M,F
        GENDER THEN FAIL;
      ELSE DO;
          GENDER_VERIFY="N";
          VER_CODE="G";
      END;
    END;
    /*** If case makes it this far then it passes verification ***/
    IF DOB_SRCE NE " " AND GENDER_VERIFY="Y" THEN DO;
       VER_CODE="Y";
      VFLAG=1;
      END;
   END;
  END;   /*** end of MRG_SSN=1 ***/
RUN;

PROC FREQ;
  TABLES MRG_SSN*VER_CODE*TRF_NAME*DOB_SRCE*GENDER_VERIFY
  /MISSING LIST;
RUN;

 /****************************************/
 /***     Output File              ***/
 /****************************************/

DATA OUT2.MPR_EVS4;
   SET TEMP.SUBMITTED_DATA_MATCH;
```

Appendix A.187
JCL/SAS Code: EVS

```
    KEEP /*STATUS*/ SSN FNAME INIT LNAME DOB GENDER
        VER_CODE NAME_CHK MRG_SSN TRF_NAME DOB_SRCE
        DOBNUM SEX DOBYEAR
        ;
RUN;

 /****************************************/
 /**     Output Report              ***/
 /****************************************/
%NUMOBS(TEMP.SUBMITTED_DATA,LINE1,);
%NUMOBS(OUT2.MPR_EVS4,LINE5,);
%NUMOBS(OUT2.MPR_EVS4,LINE6,%STR( (WHERE=(VER_CODE='Y')) ));
%NUMOBS(OUT2.MPR_EVS4,LINE7,%STR( (WHERE=(VER_CODE NE 'Y')) ));
%NUMOBS(OUT2.MPR_EVS4,LINE8,%STR( (WHERE=(VER_CODE='S')) ));
%NUMOBS(OUT2.MPR_EVS4,LINE10,%STR( (WHERE=(VER_CODE='N')) ));
%NUMOBS(OUT2.MPR_EVS4,LINE11,%STR( (WHERE=(VER_CODE='B')) ));
%NUMOBS(OUT2.MPR_EVS4,LINE12,%STR( (WHERE=(VER_CODE='G')) ));

DATA _NULL_;
FILE OUT1;

PUT "MPR-EVS: Summary Results &SYSDATE.";
put "for Submitted File: SUBMITTED_DATA";
IF &name_chk.=0 THEN PUT "Name checking was NOT performed";
ELSE PUT "Name checking WAS performed";
PUT;

PUT "&line1.=Total Input records";
PUT "&line5.=Output records";
PUT "&line6.=Input records that verified";
PUT "&line7.=Input records that did not verify";
PUT "&line8.=Input records that did not merge with TRF.DEMO";
PUT "&line10.=Input records that did not verify due to name";
PUT "&line11.=Input records that did not verify due to date of birth";
PUT "&line12.=Input records that did not verify due to gender";

RUN;

PROC FREQ;
  TABLES VER_CODE /MISSING LIST;
RUN;
PROC PRINT DATA = OUT2.MPR_EVS4(OBS = 100);
WHERE  DOB_SRCE = "R";
VAR DOB DOBNUM SEX;
RUN;
```

Appendix A.187
JCL/SAS Code: EVS

```
****************************************************
PRINT OBSERVATIONS THAT DID NOT VERIFY FOR EACH TYPE
****************************************************;

*OBS THAT DID NOT MATCH TO TRF.DEMO;
TITLE 'OBS THAT DID NOT MATCH TO TRF.DEMO';
PROC PRINT DATA = OUT2.MPR_EVS4 (OBS = 100);
WHERE RANUNI(1100) < 0.1 AND VER_CODE='S';
RUN;

PROC FORMAT;
   VALUE $SSNMISS ' ' = 'MISSING'
              OTHER='NOT MISSING'
          ;
RUN;

PROC FREQ DATA = OUT2.MPR_EVS4;
WHERE VER_CODE = 'S';
TABLES SSN / LIST MISSING;
FORMAT SSN $SSNMISS.;
RUN;


*OBS THAT DID NOT VERIFY DUE TO DOB;
TITLE 'OBS THAT DID NOT VERIFY DUE TO DOB';
PROC PRINT DATA = OUT2.MPR_EVS4 (OBS = 100);
WHERE RANUNI(1100) < 0.1 AND VER_CODE='B';
FORMAT DOB mmddyy10.;
RUN;

PROC FREQ DATA = OUT2.MPR_EVS4;
WHERE VER_CODE = 'B';
TABLES DOBYEAR / LIST MISSING;
RUN;

*OBS THAT DID NOT VERIFY DUE TO GENDER;
TITLE 'OBS THAT DID NOT VERIFY DUE TO GENDER';
PROC PRINT DATA = OUT2.MPR_EVS4 (OBS = 100);
WHERE RANUNI(1100) < 0.1 AND VER_CODE='G' ;
RUN;

PROC FREQ DATA = OUT2.MPR_EVS4;
WHERE VER_CODE = 'G';
TABLES DOBYEAR / LIST MISSING;
```

Appendix A.187
JCL/SAS Code: EVS

```
TABLES GENDER * SEX / LIST MISSING;
RUN;
```

Appendix A.188
JCL/SAS Code: RSAEVS

```
//$4671EVS  JOB (12510000,T715,,SAS,,ITC9FL),PHELPS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: DAF (6545) DAF18
//*
//* PROJECT
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF17.RSA.PRDLIB(RSAEVS)
//*
//* DESCRIPTION: MERGE EVS RESULTS TO ALL RSA DATA
//*****************************************************************
//*
//EVS       EXEC SAS9,
//         WORK='120000,60000'
//*
//IN1   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.RSAEVSR.SA.V1,DISP=SHR
//*
//RSA   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.RSAALL.SA.V1,DISP=SHR
//*
//OUT   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.RSAVERCD.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO
//TEMP2 DD DSN=&&TEMP,
//        DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP  DD DSN=&&TEMP,
//        DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN DD *

OPTIONS LS=132 COMPRESS=YES MPRINT MACROGEN OBS=MAX;

* Read in RSA EVS DATA;
DATA TEMP.EVS(DROP=RSADOB);/* DROP RSADOB IN ORDER TO KEEP ORIGINAL */

   * RENAME VARIABLES FOR MERGING AND DROP UNNECESSARY ONES;
   SET IN1.MPR_EVS4(RENAME=(DOB=RSADOB
                      GENDER=RSASEX )
               DROP=FNAME INIT LNAME)
               ;
   * CREATE A DOB YEAR VARIABLE;
   DOBYR=YEAR(RSADOB);
   * CONVERT RSASEX FROM CHARACTER FLAGS TO NUMERIC FLAGS;
```

Appendix A.188
JCL/SAS Code: RSAEVS

```
    IF RSASEX='M' THEN RSASEX='1';
    ELSE IF RSASEX='F' THEN RSASEX='2';
RUN;

* SORT RSA EVS DATA BY VERIFICATION KEY AND DESCENDING VER_CODE
* SO THAT THE VER_CODE='Y' WILL BE FIRST;
PROC SORT DATA=TEMP.EVS;
    BY SSN DOBYR RSASEX DESCENDING VER_CODE;
RUN;

* SORT RSA EVS DATA BY VERIFICATION KEY KEEPING ONLY THE FIRST
* UNIQUE OCCURRENCE.  IF MULTIPLE OBS WITH THE KEY ARE FOUND
* AND ONE HAS A VER_CODE='Y' THEN THAT ONE WILL BE KEPT;
PROC SORT DATA=TEMP.EVS OUT=TEMP2.EVS NODUPKEYS;
    BY SSN DOBYR RSASEX;
RUN;

TITLE1 'EVS';
PROC PRINT DATA=TEMP2.EVS(OBS=50);
RUN;

* READ RSA ALL YEARS SAS FILES;
DATA TEMP.RSAALL;
    SET RSA.RSAALL
        ;
    * CREATE A DOB YEAR VARIABLE;
    DOBYR=YEAR(RSADOB);
RUN;

PROC SORT DATA=TEMP.RSAALL OUT=TEMP2.RSAALL;
    BY SSN DOBYR RSASEX;
RUN;

TITLE1 'RSA';
PROC PRINT DATA=TEMP2.RSAALL(OBS=50);
RUN;

* MERGE RSA EVS RESULTS WITH RSA ALL YEARS FILE;
DATA OUT.RSAVERCD;
    MERGE TEMP2.RSAALL(IN=RSA)
          TEMP2.EVS(IN=EVS)
          ;
    BY SSN DOBYR RSASEX;

    * KEEP ALL RECORDS IN THE RSA ALL YEARS FILE;
```

Appendix A.188
JCL/SAS Code: RSAEVS

```
    IF RSA;
    IF EVS THEN BOTH=1;
    ELSE BOTH=0;

RUN;

PROC FREQ DATA=OUT.RSAVERCD;
    TABLE VER_CODE;
    TABLE BOTH;
RUN;

TITLE1 'RSA W/ EVS';
PROC PRINT DATA=OUT.RSAVERCD(OBS=50);
RUN;

ENDSAS;
```

Appendix A.189
JCL/SAS Code: RSAEVSOF

```
//$4671EVS  JOB (12510000,T715,,SAS,,ITC9FL),PHELPS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: DAF (6545) DAF18
//*
//* PROJECT
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF17.RSA.PRDLIB(RSAEVS)
//*
//* DESCRIPTION: MERGE EVS RESULTS TO ALL RSA DATA
//*****************************************************************
//*
//EVS       EXEC SAS9,
//         WORK='120000,60000'
//*
//IN1   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.RSAEVSR.SA.V1,DISP=SHR
//*
//RSA   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF17P.RSAALLOF.SA.V1,DISP=SHR
//*
//OUT   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.RSAVEROF.SA.V1,
//        DISP=(NEW,CATLG,DELETE),
//        UNIT=TSILO
//TEMP2 DD DSN=&&TEMP,
//        DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP  DD DSN=&&TEMP,
//        DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN DD *

OPTIONS LS=132 COMPRESS=YES MPRINT MACROGEN OBS=MAX;

* Read in RSA EVS DATA;
DATA TEMP.EVS(DROP=RSADOB);/* DROP RSADOB IN ORDER TO KEEP ORIGINAL */

   * RENAME VARIABLES FOR MERGING AND DROP UNNECESSARY ONES;
   SET IN1.MPR_EVS4(RENAME=(DOB=RSADOB
                      GENDER=RSASEX )
               DROP=FNAME INIT LNAME)
               ;
   * CREATE A DOB YEAR VARIABLE;
   DOBYR=YEAR(RSADOB);
   * CONVERT RSASEX FROM CHARACTER FLAGS TO NUMERIC FLAGS;
```

Appendix A.189
JCL/SAS Code: RSAEVSOF

```
   IF RSASEX='M' THEN RSASEX='1';
   ELSE IF RSASEX='F' THEN RSASEX='2';
RUN;

* SORT RSA EVS DATA BY VERIFICATION KEY AND DESCENDING VER_CODE
* SO THAT THE VER_CODE='Y' WILL BE FIRST;
PROC SORT DATA=TEMP.EVS;
   BY SSN DOBYR RSASEX DESCENDING VER_CODE;
RUN;

* SORT RSA EVS DATA BY VERIFICATION KEY KEEPING ONLY THE FIRST
* UNIQUE OCCURRENCE.  IF MULTIPLE OBS WITH THE KEY ARE FOUND
* AND ONE HAS A VER_CODE='Y' THEN THAT ONE WILL BE KEPT;
PROC SORT DATA=TEMP.EVS OUT=TEMP2.EVS NODUPKEYS;
   BY SSN DOBYR RSASEX;
RUN;

TITLE1 'EVS';
PROC PRINT DATA=TEMP2.EVS(OBS=50);
RUN;

* READ RSA ALL YEARS SAS FILES;
DATA TEMP.RSAALL;
   SET RSA.RSAALL
       ;
   * CREATE A DOB YEAR VARIABLE;
   DOBYR=YEAR(RSADOB);
RUN;

PROC SORT DATA=TEMP.RSAALL OUT=TEMP2.RSAALL;
   BY SSN DOBYR RSASEX;
RUN;

TITLE1 'RSA';
PROC PRINT DATA=TEMP2.RSAALL(OBS=50);
RUN;

* MERGE RSA EVS RESULTS WITH RSA ALL YEARS FILE;
DATA OUT.RSAVERCD;
   MERGE TEMP2.RSAALL(IN=RSA)
         TEMP2.EVS(IN=EVS)
         ;
   BY SSN DOBYR RSASEX;

   * KEEP ALL RECORDS IN THE RSA ALL YEARS FILE;
```

Appendix A.189
JCL/SAS Code: RSAEVSOF

```
    IF RSA;
    IF EVS THEN BOTH=1;
    ELSE BOTH=0;

RUN;

PROC FREQ DATA=OUT.RSAVERCD;
    TABLE VER_CODE;
    TABLE BOTH;
RUN;

TITLE1 'RSA W/ EVS';
PROC PRINT DATA=OUT.RSAVERCD(OBS=50);
RUN;

ENDSAS;
```

Appendix A.190
JCL/SAS Code: RSAFLAT

```
//$4671RNF  JOB (12510000,T715,,SAS,,ITC9FL),PHELPS-DAWN,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: DAF18
//* PROJECT DIRECTOR:  JODY SCHIMMEL HYDE
//* PROGRAM: OPDR.TG.PRD.ETTW.$4671.DAF18.RSA.PRDLIB(RSAFLAT)
//* DESCRIPTION: FLATTEN RSA RECORDS TO ONE PER SSN (NEW FORMAT)
//* PROGRAMMER:  DAWN PHELPS
//*            DPHELPS@MATHEMATICA-MPR.COM
//*            202-554-7556
//*****************************************************************
//*
//RSA       EXEC SAS9,
//         WORK='120000,60000'
//*
//* INPUT
//*
//IN     DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.RSAVERCD.SA.V1,DISP=SHR
//*
//TEMP   DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(1000,100),RLSE),VOL=(,,,10)
//OUT    DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.RSAFLAT,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//CONT   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.RSAFLAT.CONT,
//         DISP=(NEW,CATLG,DELETE),
//         SPACE=(CYL,(400,200),RLSE)
//SYSIN  DD *

OPTIONS OBS=MAX;

*CALCULATE THE MAX NUMBER OF RECS PER SSN;
PROC SQL NOPRINT; CREATE TABLE B AS
SELECT N(SSN) AS NSSN FROM IN.RSAVERCD WHERE VER_CODE='Y'
GROUP BY SSN;
SELECT MAX(NSSN) INTO :NR FROM B; QUIT;
%LET NR = %LEFT(&NR);
%PUT "&NR";


DATA TEMP.RSAFLAT(KEEP=SSN RSAAGY: RSADOA: RSADOE: RSAEXTTYP:
                 RSADOEXT: RSAIPE: RSADOPREMP:);
   RETAIN RSAAGY1-RSAAGY&NR.
```

Appendix A.190
JCL/SAS Code: RSAFLAT

```
        RSADOA1-RSADOA&NR.
        RSADOE1-RSADOE&NR.
        RSAEXTTYP1-RSAEXTTYP&NR.
        RSADOEXT1-RSADOEXT&NR.
        RSAIPE1-RSAIPE&NR.
        RSADOPREMP1-RSADOPREMP&NR.
        RECCNT
        ;

    SET IN.RSAVERCD;

    * KEEP ONLY EVS VERIFIED RECORDS;
    WHERE VER_CODE='Y';
    BY SSN;

    LENGTH RSADOA1-RSADOA&NR.
        RSADOE1-RSADOE&NR.
        RSADOEXT1-RSADOEXT&NR.
        RSAIPE1-RSAIPE&NR.
        RSADOPREMP1-RSADOPREMP&NR.
        8.;
    LENGTH RSAAGY1-RSAAGY&NR. $3.;
    LENGTH RSAEXTTYP1-RSAEXTTYP&NR. $1.;

    ARRAY RSAAGY RSAAGY1-RSAAGY&NR.;
    ARRAY RSADOA RSADOA1-RSADOA&NR.;
    ARRAY RSADOEA RSADOE1-RSADOE&NR.;
    ARRAY RSAEXTYP RSAEXTTYP1-RSAEXTTYP&NR.;
    ARRAY RSADOEXT RSADOEXT1-RSADOEXT&NR.;
    ARRAY RSAIPE RSAIPE1-RSAIPE&NR.;
    ARRAY RSADOPREMP RSADOPREMP1-RSADOPREMP&NR.;

    IF FIRST.SSN THEN DO I=1 TO &NR.;
       RSAAGY(I)='  ';
       RSADOA(I)=.;
       RSADOEA(I)=.;
       RSAEXTYP(I)=.;
       RSADOEXT(I)=.;
       RSAIPE(I)=' ';
       RSADOPREMP(I) = .;
       RECCNT=1;
    END;

    RSAAGY(RECCNT)=AGENCYCODE;
    RSADOA(RECCNT)=APPLICATIONDATE;
```

Appendix A.190
JCL/SAS Code: RSAFLAT

```
    RSADOEA(RECCNT)=ELIGIBILITYDATE;
    RSAEXTYP(RECCNT)=EXITTYPE;
    RSADOEXT(RECCNT)=EXITDATE;
    RSAIPE(RECCNT)=IPEAMENDEDDATE;
    RSADOPREMP(RECCNT)=PETSSTARTDATE;

    RECCNT=RECCNT+1;

    IF LAST.SSN THEN OUTPUT;

RUN;

%MACRO DOIT;
DATA OUT.RSAFLAT;
 SET TEMP.RSAFLAT;

 LABEL SSN = "SOCIAL SECURITY NUMBER"
      %DO I  = 1 %TO &NR.;
      RSAAGY&I = "RSA AGENCY &I"
      RSADOA&I = "RSA DATE OF APPLICATION &I"
      RSADOE&I = "RSA DATE OF ELIGIBILITY DETERMINATION &I"
      RSAEXTTYP&I = "RSA EXIT TYPE &I"
      RSADOEXT&I = "RSA DATE OF EXIT &I"
      RSAIPE&I = "RSA DATE OF INDIVIDUALIZED PLAN FOR EMPLOYMENT &I"
      RSADOPREMP&I ="RSA DATE OF PRE-EMPLOYMENT TRANSITION SERVICES &I"
      %END;
      ;
RUN;
%MEND DOIT;
%DOIT;
PROC PRINT DATA=IN.RSAVERCD(OBS=10);
    WHERE VER_CODE='Y';
RUN;


PROC MEANS DATA=OUT.RSAFLAT MIN MAX MEAN;
VAR RSADOA1-RSADOA&NR.
    RSADOE1-RSADOE&NR.
    RSADOEXT1-RSADOEXT&NR.
    RSADOPREMP1-RSADOPREMP&NR.
    RSAIPE1-RSAIPE&NR.
;
RUN;
```

Appendix A.190
JCL/SAS Code: RSAFLAT

```
PROC PRINT DATA=OUT.RSAFLAT(OBS=10);
RUN;

PROC CONTENTS DATA=OUT.RSAFLAT OUT=CONT.RSAFLAT;
RUN;

ENDSAS;
```

Appendix A.191
JCL/SAS Code: RSAFLAOF

```
//$4671ROF  JOB (12510000,T715,,SAS,,ITC9FL),PHELPS-DAWN,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: DAF18
//*
//* PROJECT DIRECTOF:  JODY SCHIMMEL HYDE
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF18.RSA.PRDLIB(RSAFLTOF)
//*
//* DESCRIPTION: FLATTEN RSA RECORDS TO ONE PER SSN (OLD FORMAT)
//*****************************************************************
//*
//RSA       EXEC SAS9,
//         WORK='120000,60000'
//*
//* INPUT
//*
//IN     DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.RSAVEROF.SA.V1,DISP=SHR
//*
//TEMP   DD DSN=&&TEMP,
//         DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(1000,100),RLSE),VOL=(,,,10)
//OUT    DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.RSAFLAOF,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//CONT   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.RSAFLAOF.CONT,
//         DISP=(NEW,CATLG,DELETE),
//         SPACE=(CYL,(400,200),RLSE)
//SYSIN  DD *

OPTIONS OBS=MAX;

*CALCULATE THE MAX NUMBER OF RECS PER SSN;
PROC SQL NOPRINT; CREATE TABLE B AS
SELECT N(SSN) AS NSSN FROM IN.RSAVERCD WHERE VER_CODE='Y'
GROUP BY SSN;
SELECT MAX(NSSN) INTO :NR FROM B; QUIT;
%LET NR = %LEFT(&NR);
%PUT "&NR";


DATA TEMP.RSAFLAT(KEEP=SSN RSAAGY: RSADOA: RSADOE: RSACLTYP:
                  RSADOC: RSASVS: RSAIPE:);
   RETAIN RSAAGY1-RSAAGY&NR.
```

Appendix A.191
JCL/SAS Code: RSAFLAOF

```
        RSADOA1-RSADOA&NR.
        RSADOE1-RSADOE&NR.
        RSADOC1-RSADOC&NR.
        RSASVS1-RSASVS&NR.
        RSACLTYP1-RSACLTYP&NR.
        RSAIPE1 - RSAIPE&NR.
        RECCNT
        ;

    SET IN.RSAVERCD;

    * KEEP ONLY EVS VERIFIED RECORDS;
    WHERE VER_CODE='Y';
    BY SSN;

    LENGTH RSADOA1-RSADOA&NR.
        RSADOE1-RSADOE&NR.
        RSADOC1-RSADOC&NR.
        RSASVS1-RSASVS&NR.
        RSAIPE1 - RSAIPE&NR.
        8.;
    LENGTH RSAAGY1-RSAAGY&NR. $3.;
    LENGTH RSACLTYP1-RSACLTYP&NR. $1.;

    ARRAY RSAAGY RSAAGY1-RSAAGY&NR.;
    ARRAY RSADOA RSADOA1-RSADOA&NR.;
    ARRAY RSADOEA RSADOE1-RSADOE&NR.;
    ARRAY RSADOC RSADOC1-RSADOC&NR.;
    ARRAY RSASVS RSASVS1-RSASVS&NR.;
    ARRAY RSACLTYP RSACLTYP1-RSACLTYP&NR.;
    ARRAY RSAIPE RSAIPE1-RSAIPE&NR.;

    IF FIRST.SSN THEN DO I=1 TO &NR.;
       RSAAGY(I)='  ';
       RSADOA(I)=.;
       RSADOEA(I)=.;
       RSADOC(I)=.;
       RSASVS(I)=.;
       RSACLTYP(I)=' ';
       RSAIPE(I) = .;
       RECCNT=1;
    END;

    RSAAGY(RECCNT)=AGENCY;
    RSADOA(RECCNT)=APPDATE;
```

Appendix A.191
JCL/SAS Code: RSAFLAOF

```
    RSADOEA(RECCNT)=RSADOE;
    RSADOC(RECCNT)=CLOSEDATE;
    RSASVS(RECCNT)=SVCS_PROV;
    RSACLTYP(RECCNT)=CLTYPE;
    RSAIPE(RECCNT)=DOIPE;

    RECCNT=RECCNT+1;

    IF LAST.SSN THEN OUTPUT;

RUN;

%MACRO DOIT;
DATA OUT.RSAFLAT;
 SET TEMP.RSAFLAT(DROP = RSADOE);

 LABEL SSN = "SOCIAL SECURITY NUMBER"
      %DO I  = 1 %TO &NR.;
      RSAAGY&I = "RSA AGENCY &I"
      RSADOA&I = "RSA DATE OF APPLICATION &I"
      RSADOE&I = "RSA DATE OF ELIGIBILITY DETERMINATION &I"
      RSACLTYP&I = "RSA CLOSURE TYPE &I"
      RSADOC&I = "RSA DATE OF CLOSURE &I"
      RSASVS&I = "RSA SERVICE USE FLAG &I"
      RSAIPE&I = "RSA DATE OF INDIVIDUALIZED PLAN FOR EMPLOYMENT &I"
      %END;
      ;
RUN;
%MEND DOIT;
%DOIT;
PROC PRINT DATA=IN.RSAVERCD(OBS=10);
    WHERE VER_CODE='Y';
RUN;


PROC MEANS DATA=OUT.RSAFLAT MIN MAX MEAN;
VAR RSADOA1-RSADOA&NR.
    RSADOE1-RSADOE&NR.
    RSADOC1-RSADOC&NR.
    RSASVS1-RSASVS&NR.
    RSAIPE1-RSAIPE&NR.
;
RUN;
```

Appendix A.191
JCL/SAS Code: RSAFLAOF

```
PROC PRINT DATA=OUT.RSAFLAT(OBS=10);
RUN;

PROC CONTENTS DATA=OUT.RSAFLAT OUT=CONT.RSAFLAT;
RUN;

ENDSAS;
```

Appendix A.192
JCL/SAS Code: VERRSA

```
//$4671VER  JOB (12510000,T715,,SAS,,ITC9FL),DAWN-PHELPS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: BUILD DAF16 (06979)
//* PROJECT DIRECTOR:  JODY SCHIMMEL HYDE
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF18.RSA.PRDLIB(VERRSA)
//* DESCRIPTION: CREATE LIST OF VERIFIED RSA SSNS
//*****************************************************************
//*
//EVS       EXEC SAS9,
//         WORK='120000,60000'
//*
//INNF DD  DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.RSAVERCD.SA.V1,DISP=SHR
//INOF DD  DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.RSAVEROF.SA.V1,DISP=SHR
//*
//OUT  DD  DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.VERRSA.SA.V1,
//        DISP=(MOD,CATLG,DELETE),
//        SPACE=(CYL,(4000,2000),RLSE)
//SYSIN  DD *

OPTIONS LS=132 COMPRESS=YES MPRINT MACROGEN /*OBS=0*/;

DATA OUT.VERRSA(KEEP=SSN RSADOB DOBYR SEX RSASEX);
   SET INOF.RSAVERCD (KEEP=SSN RSADOB DOBYR SEX RSASEX VER_CODE)
      INNF.RSAVERCD (KEEP=SSN RSADOB DOBYR SEX RSASEX VER_CODE);
   WHERE VER_CODE='Y';
   DOBYR=YEAR(RSADOB);
RUN;

PROC FREQ DATA=OUT.VERRSA;
   TABLE SEX*RSASEX / LIST MISSING;
RUN;

PROC SORT DATA=OUT.VERRSA NODUPKEYS;
   BY SSN DOBYR RSASEX;
RUN;

ENDSAS;
```

Appendix A.193
JCL/SAS Code: DMG

```
//$4671DEM  JOB (12510000,T715,,SAS,,ITC9FL),PHELPS-DAWN,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: RSA-DAF MATCHED EXTRACT
//* PROJECT DIRECTOR: JODY SCHIMMEL HYDE
//* PROGRAM: OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(DMG)
//* DESCRIPTION: CREATES THE RSA MINI-DAF DMG
//* PROGRAMMER:  DAWN PHELPS
//*           DPHELPS@MATHEMATICA-MPR.COM
//*           202-554-7556
//*****************************************************************
//DMG      EXEC SAS9,
//        WORK='120000,60000'
//*
//DMG    DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.DMG,DISP=SHR
//RSA    DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.VERRSA.SA.V1,DISP=SHR
//OUT    DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.DMG,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUT2   DD DSN=OPDR.TG.PRD.ETTW.$4671.RSADAF.SSN18.SA.V1,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//TEMP1  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN   DD *

OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN OBS=MAX;

PROC SORT DATA=RSA.VERRSA OUT=VERRSA NODUPKEYS;
   BY SSN;
RUN;

* MERGE RSA VERIFIED FILE WITH DAF DMG FILE KEEP RSA VERIFIED OBS;
* DROP BENE NAME VARIABLES;
DATA OUT.DMG(DROP=CAN BGN BLN BMI FRSTNAME LASTNAME NAMESUFX HUN);
   MERGE DMG.DMG (IN=DMG)
       VERRSA(IN=RSA KEEP=SSN)
       ;
   BY SSN;
   IF RSA AND DMG;
RUN;

DATA OUT2.SSN;
  SET OUT.DMG (KEEP = SSN);
```

Appendix A.193
JCL/SAS Code: DMG

```
RUN;

PROC CONTENTS DATA=OUT.DMG;
RUN;
```

Appendix A.194
JCL/SAS Code: JCLANN

```
//$4671ANN  JOB (12510000,T715,,SAS,,ITC9FL),PHELPS-DAWN,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: DAF 50214
//* PROJECT DIRECTOR: JODY SCHIMMEL HYDE
//* PROGRAM: OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(JCLANN)
//* DESCRIPTION: CREATES RSA MINI-DAF ANNUAL EXTRACTS
//*****************************************************************
//*
//ANNPROC   PROC
//ANN       EXEC SAS9,
//         WORK='120000,60000',
//         PARM='SYSPARM="&YR"'
//*
//ANN    DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y&YR.E,DISP=SHR
//LIBRARY DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.LAUS.FMTLIB,DISP=SHR
//LIBRAR2 DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.SAIPE.FMTLIB,DISP=SHR
//RSA    DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.VERRSA.SA.V1,DISP=SHR
//OUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.Y&YR.,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//OUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.L&YR.,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//TEMP1  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF17.RSADEID.PRDLIB(ANN),
//          DISP=(SHR,PASS,KEEP)
//      PEND
//*
//RUN18  EXEC ANNPROC,YR=2018
//RUN17  EXEC ANNPROC,YR=2017
//RUN16  EXEC ANNPROC,YR=2016
//RUN15  EXEC ANNPROC,YR=2015
//RUN14  EXEC ANNPROC,YR=2014
//RUN13  EXEC ANNPROC,YR=2013
//RUN12  EXEC ANNPROC,YR=2012
//RUN11  EXEC ANNPROC,YR=2011
//RUN10  EXEC ANNPROC,YR=2010
//RUN09  EXEC ANNPROC,YR=2009
//RUN08  EXEC ANNPROC,YR=2008
//RUN07  EXEC ANNPROC,YR=2007
//RUN06  EXEC ANNPROC,YR=2006
//RUN05  EXEC ANNPROC,YR=2005
```

Appendix A.194
JCL/SAS Code: JCLANN

```
//RUN04  EXEC ANNPROC,YR=2004
//RUN03  EXEC ANNPROC,YR=2003
//RUN02  EXEC ANNPROC,YR=2002
//RUN01  EXEC ANNPROC,YR=2001
//RUN00  EXEC ANNPROC,YR=2000
//RUN99  EXEC ANNPROC,YR=1999
//RUN98  EXEC ANNPROC,YR=1998
//RUN97  EXEC ANNPROC,YR=1997
//RUN96  EXEC ANNPROC,YR=1996
//RUN95  EXEC ANNPROC,YR=1995
//RUN94  EXEC ANNPROC,YR=1994
```

Appendix A.195
JCL/SAS Code: ANN

```
* EXECUTED BY OPDR.TG.PRD.ETTW.$4671.DAF17.RSADEID.PRDLIB(JCLANN);
* THIS PROGRAM EXTRACTS THE DAF ANN DATA FOR VERIFIED RSA RECORDS;

OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN OBS=MAX
FMTSEARCH = (LIBRARY LIBRAR2);

PROC SORT DATA=RSA.VERRSA OUT=VERRSA NODUPKEYS;
   BY SSN;
RUN;

%MACRO DOIT;
DATA OUT1.Y&SYSPARM.(DROP = LAUS: SAIPE:)
    OUT2.L&SYSPARM. (KEEP = SSN LAUS: SAIPE:)
    ;
   MERGE ANN.Y&SYSPARM. (IN=ANN)
        VERRSA(IN=RSA KEEP=SSN)
           ;
   BY SSN;
   IF RSA AND ANN;

   %LET YR=%SUBSTR(&SYSPARM.,3,2);

   ARRAY FIPS_BEST (*) FIPS_BEST&YR.01-FIPS_BEST&YR.12;
   ARRAY LAUS_UNEMP (*) LAUS_UNEMP&YR.01-LAUS_UNEMP&YR.12;
   ARRAY SAIPE_POV (*) SAIPE_POV&YR.01 - SAIPE_POV&YR.12;
   ARRAY SAIPE_INC (*) SAIPE_INC&YR.01 - SAIPE_INC&YR.12;

  DO MO=1 TO 9;
  IF LENGTH(FIPS_BEST(MO))=5 AND FIPS_BEST(MO) NE '' THEN DO;
  LAUS_UNEMP(MO)=PUT(CATS(FIPS_BEST(MO),"&YR.",'0',MO),$LAUS&YR.F.);
     %IF &SYSPARM. NE 1994 AND &SYSPARM. NE 1996 %THEN %DO;
  SAIPE_POV(MO)=PUT(CATS(FIPS_BEST(MO),"&YR."),$SAIPEPOV&YR.F.);
  SAIPE_INC(MO)=PUT(CATS(FIPS_BEST(MO),"&YR."),$SAIPEINC&YR.F.);
     %END;
  END;
  END;

  DO MO=10 TO 12;
  IF LENGTH(FIPS_BEST(MO))=5 AND FIPS_BEST(MO) NE '' THEN DO;
    LAUS_UNEMP(MO)=PUT(CATS(FIPS_BEST(MO),"&YR.",MO),$LAUS&YR.F.);
     %IF &SYSPARM. NE 1994 AND &SYSPARM. NE 1996 %THEN %DO;
     SAIPE_POV(MO)=PUT(CATS(FIPS_BEST(MO),"&YR."),$SAIPEPOV&YR.F.);
     SAIPE_INC(MO)=PUT(CATS(FIPS_BEST(MO),"&YR."),$SAIPEINC&YR.F.);
     %END;
```

Appendix A.195
JCL/SAS Code: ANN

```
    END;
    END;
  RUN;

  PROC CONTENTS DATA=OUT1.Y&SYSPARM.;
  RUN;
  PROC CONTENTS DATA=OUT2.L&SYSPARM.;
  RUN;

  PROC PRINT DATA = OUT2.L&SYSPARM.(OBS = 25);
  RUN;
  %MEND DOIT;
  %DOIT;
```

Appendix A.196
JCL/SAS Code: JCLTKT

```
//$4671TKT  JOB (12510000,T715,,SAS,,ITC9FL),DAWN-PHELPS,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: DAF 50214
//* PROJECT DIRECTOR: JODY SCHIMMEL HYDE
//* PROGRAM: OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(JCLTKT)
//* DESCRIPTION: CREATES RSA MINI-DAF TICKET EXTRACTS
//* PROGRAMMER: DAWN PHELPS
//*           DPHELPS@MATHEMATICA-MPR.COM
//*           202-554-7556
//*****************************************************************
//TKTBSE    EXEC SAS9,
//        WORK='120000,60000'
//*
//TKTBS  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.TICKETBS,DISP=SHR
//RSA    DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.VERRSA.SA.V1,DISP=SHR
//OUT    DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.TKTBS,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//TEMP1  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(TKTBASE),
//         DISP=(SHR,PASS,KEEP)
//*
//*****************************************************************
//* DAF TKT ANNUALS EXTRACT
//*****************************************************************
//*
//TKTAPROC   PROC
//TKTA      EXEC SAS9,
//        WORK='120000,60000',
//        PARM='SYSPARM="20&YR"'
//*
//TKTANN DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.TICKET&YR.,DISP=SHR
//RSA    DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.VERRSA.SA.V1,DISP=SHR
//OUT    DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.TKT&YR.,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//TEMP1  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(TKTANN),
//         DISP=(SHR,PASS,KEEP)
//        PEND
//*
```

Appendix A.196
JCL/SAS Code: JCLTKT

```
//RUN18  EXEC TKTAPROC,YR=18
//RUN17  EXEC TKTAPROC,YR=17
//RUN16  EXEC TKTAPROC,YR=16
//RUN15  EXEC TKTAPROC,YR=15
//RUN14  EXEC TKTAPROC,YR=14
//RUN13  EXEC TKTAPROC,YR=13
//RUN12  EXEC TKTAPROC,YR=12
//RUN11  EXEC TKTAPROC,YR=11
//RUN10  EXEC TKTAPROC,YR=10
//RUN09  EXEC TKTAPROC,YR=09
//RUN08  EXEC TKTAPROC,YR=08
//RUN07  EXEC TKTAPROC,YR=07
//RUN06  EXEC TKTAPROC,YR=06
//RUN05  EXEC TKTAPROC,YR=05
//RUN04  EXEC TKTAPROC,YR=04
//RUN03  EXEC TKTAPROC,YR=03
//RUN02  EXEC TKTAPROC,YR=02
```

Appendix A.197
JCL/SAS Code: TKTBASE

```
* EXECUTED BY OPDR.TG.PRD.ETTW.#6266.DAF16.RSADEID.PRDLIB(JCLTKT);
* THIS PROGRAM EXTRACTS THE DAF TICKET BASE DATA FOR VERIFIED RSA
* RECORDS;

OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN OBS=MAX;

PROC SORT DATA=RSA.VERRSA OUT=VERRSA NODUPKEYS;
   BY SSN;
RUN;

DATA OUT.TKTBASE(DROP=FNM LNM MNM SFX EIN: DUNS:);
   MERGE TKTBS.TICKETBS(IN=TKT)
       VERRSA(IN=RSA KEEP=SSN)
          ;
   BY SSN;
   IF RSA AND TKT;
RUN;

PROC CONTENTS DATA=OUT.TKTBASE;
RUN;
```

Appendix A.198
JCL/SAS Code: TKTANN

```
* EXECUTED BY OPDR.TG.PRD.ETTW.#6266.DAF16.RSADEID.PRDLIB(JCLTKT);
* THIS PROGRAM EXTRACTS THE DAF TICKET ANNUAL DATA FOR VERIFIED RSA
* RECORDS;

* SET MACRO VARIABLE TO THE SYSTEM PARAMETER;
%LET YR=%SUBSTR(&SYSPARM.,3,2);

OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN OBS=MAX;

PROC SORT DATA=RSA.VERRSA OUT=VERRSA NODUPKEYS;
   BY SSN;
RUN;

DATA OUT.TKT&SYSPARM.;
   MERGE TKTANN.TICKET&YR.(IN=TKT)
        VERRSA(IN=RSA KEEP=SSN)
           ;
   BY SSN;
   IF RSA AND TKT;
RUN;

PROC CONTENTS DATA=OUT.TKT&SYSPARM.;
RUN;
```

Appendix A.199
JCL/SAS Code: ENPAY

```
//$4671ENP  JOB (12510000,T715,,SAS,,ITC9FL),PHELPS-DAWN,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: RSA-DAF MATCHED EXTRACT FOR DOE
//* PROJECT DIRECTOR: JODY SCHIMMEL-HYDE
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(ENPAY)
//* DESCRIPTION: CREATES ALL THE RSA-DAF MATCHED EXTRACTS
//*****************************************************************
//*
//*****************************************************************
//* EN EXTRACTS
//*****************************************************************
//PAYH      EXEC SAS9,
//         WORK='120000,60000'
//*
//PAYH   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.ENPAY,DISP=SHR
//PAYV   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.ENPAYVER,DISP=SHR
//RSA    DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.VERRSA.SA.V1,DISP=SHR
//OUT1   DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.ENPAY,
//         DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//OUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.ENPAV,
//         DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//TEMP1  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN   DD *

OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN OBS=MAX;

PROC SORT DATA=RSA.VERRSA OUT=VERRSA NODUPKEYS;
   BY SSN;
RUN;

* MERGE RSA VERIFIED FILE WITH EN FILES KEEP RSA VERIFIED OBS;
DATA OUT1.ENPAY;
   MERGE PAYH.ENPAY_FINAL(IN=ENPAY)
        VERRSA(IN=RSA KEEP=SSN)
        ;
   BY SSN;
   IF RSA AND ENPAY;
RUN;

DATA OUT2.ENPAYVER(DROP=BENE_NAME);
```

Appendix A.199
JCL/SAS Code: ENPAY

```
    MERGE PAYV.ENPAYVER_FINAL(IN=ENPAY)
        VERRSA(IN=RSA KEEP=SSN)
                ;
        BY SSN;
        IF RSA AND ENPAY;
RUN;

PROC CONTENTS DATA=OUT1.ENPAY;
RUN;
PROC CONTENTS DATA=OUT2.ENPAYVER;
RUN;
```

Appendix A.200
JCL/SAS Code: VRRMS

```
//#6502VRR  JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT: RSA-DAF MATCHED EXTRACT FOR DOE
//* PROJECT DIRECTOR:    JODY SCHIMMEL-HYDE
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(VRRMS)
//* DESCRIPTION: CREATES ALL THE RSA-DAF MATCHED EXTRACTS
//*****************************************************************
//*
//*****************************************************************
//* DAF VRRMS EXTRACT
//*****************************************************************
//VRMS      EXEC SAS9,
//         WORK='120000,60000'
//*
//VRMS   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.VRRMS,DISP=SHR
//VRMSH  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.VRRMS.HIST,DISP=SHR
//RSA    DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.VERRSA.SA.V1,DISP=SHR
//OUT    DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.VRRMS,
//         DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//OUTH   DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.VRRMS.HIST,
//         DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//TEMP1  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN   DD *

OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN OBS=MAX;

PROC SORT DATA=RSA.VERRSA OUT=VERRSA NODUPKEYS;
   BY SSN;
RUN;

* MERGE RSA VERIFIED FILE WITH DAF VRRMS FILE KEEP RSA VERIFIED OBS;
DATA OUT.VRRMS;
   MERGE VRMS.VRRMS(IN=VRRMS DROP=CLNT_FNM CLNT_LNM CLNT_MNM)
        VERRSA(IN=RSA KEEP=SSN)
        ;
   BY SSN;
   IF RSA AND VRRMS;
RUN;

PROC CONTENTS DATA=OUT.VRRMS;
```

Appendix A.200
JCL/SAS Code: VRRMS

```
* MERGE RSA VERIFIED FILE WITH DAF HISTVRRMS FILE KEEP RSA VERIFIED OBS;
DATA OUTH.VRRMS;
   MERGE VRMSH.VRRMS(IN=VRRMS DROP=C_1ST_NAME C_LAST_NAME C_XREF_SSN)
        VERRSA(IN=RSA KEEP=SSN)
        ;
   BY SSN;
   IF RSA AND VRRMS;
RUN;

PROC CONTENTS DATA=OUTH.VRRMS;

RUN;
```

Appendix A.201
JCL/SAS Code: RSA

```
//$4671RSA  JOB (12510000,T715,,SAS,,ITC9FL),PHELPS-DAWN,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: RSA-DAF MATCHED EXTRACT FOR DOE
//* PROJECT NUMBER: 50214
//* PROJECT DIRECTOR:    JODY SCHIMMEL-HYDE
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(RSA)
//* DESCRIPTION: CREATES ALL THE RSA-DAF MATCHED EXTRACTS
//*****************************************************************
//*
//*****************************************************************
//* RSA EXTRACTF
//*****************************************************************
//RSA1998   EXEC SAS9,
//        WORK='120000,60000'
//*
//DEMO   DD DSN=OPDR.TG.PRD.ETTW.$4671.RSADAF.SSN18.SA.V1,DISP=SHR
//RSA    DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.VERRSA.SA.V1,DISP=SHR
//RSA98  DD DSN=OPDR.TG.PRD.ETTW.#3592.RSA98.SA.V1,DISP=SHR
//OUT98  DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.RSA98,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//RSA99  DD DSN=OPDR.TG.PRD.ETTW.#3592.RSA99.SA.V1,DISP=SHR
//OUT99  DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.RSA99,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//RSA00  DD DSN=OPDR.TG.PRD.ETTW.#3592.RSA00.SA.V1,DISP=SHR
//OUT00  DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.RSA00,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//RSA01  DD DSN=OPDR.TG.PRD.ETTW.#3592.RSA01.SA.V1,DISP=SHR
//OUT01  DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.RSA01,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//RSA02  DD DSN=OPDR.TG.PRD.ETTW.#3592.RSA02.SA.V1,DISP=SHR
//OUT02  DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.RSA02,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//RSA03  DD DSN=OPDR.TG.PRD.ETTW.#3592.RSA03.SA.V1,DISP=SHR
//OUT03  DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.RSA03,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//RSA04  DD DSN=OPDR.TG.PRD.ETTW.#3592.RSA04.SA.V1,DISP=SHR
//OUT04  DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.RSA04,
```

Appendix A.201
JCL/SAS Code: RSA

```
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//RSA05  DD DSN=OPDR.TG.PRD.ETTW.#3592.RSA05.SA.V1,DISP=SHR
//OUT05  DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.RSA05,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//RSA06  DD DSN=OPDR.TG.PRD.ETTW.#3592.RSA06.SA.V1,DISP=SHR
//OUT06  DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.RSA06,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//RSA07  DD DSN=OPDR.TG.PRD.ETTW.#3592.RSA07.SA.V1,DISP=SHR
//OUT07  DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.RSA07,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//RSA08  DD DSN=OPDR.TG.PRD.ETTW.#3592.RSA08.SA.V1,DISP=SHR
//OUT08  DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.RSA08,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//RSA09  DD DSN=OPDR.TG.PRD.ETTW.#3592.RSA09.SA.V1,DISP=SHR
//OUT09  DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.RSA09,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//RSA10  DD DSN=OPDR.TG.PRD.ETTW.#3592.RSA10.SA.V1,DISP=SHR
//OUT10  DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.RSA10,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//RSA11  DD DSN=OPDR.TG.PRD.ETTW.#3592.RSA11.SA.V1,DISP=SHR
//OUT11  DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.RSA11,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//RSA12  DD DSN=OPDR.TG.PRD.ETTW.#3592.RSA12.SA.V1,DISP=SHR
//OUT12  DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.RSA12,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//RSA13  DD DSN=OPDR.TG.PRD.ETTW.#3590.RSA13.SA.V1,DISP=SHR
//OUT13  DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.RSA13,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//RSA14  DD DSN=OPDR.TG.PRD.ETTW.#6266.RSA14.SA.V1,DISP=SHR
//OUT14  DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.RSA14,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//RSA15  DD DSN=OPDR.TG.PRD.ETTW.#6266.RSA15.SA.V1,DISP=SHR
//OUT15  DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.RSA15,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
```

Appendix A.201
JCL/SAS Code: RSA

```
//        SPACE=(CYL,(3000,3000),RLSE)
//RSA16  DD DSN=OPDR.TG.PRD.ETTW.#6266.RSA16.SA.V1,DISP=SHR
//OUT16  DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.RSA16,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* OLD FORMAT RSA
//RSA17  DD DSN=OPDR.TG.PRD.ETTW.#6502.RSA17OLD.SA.V1,DISP=SHR
//OUT17  DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.RSA17,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//* NEW FORMAT RSA
//RSA18   DD DSN=OPDR.TG.PRD.ETTW.DAF18.RSANEW.SA.V1,DISP=SHR
//OUT18   DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.RSA18,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//TEMP1  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP2  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN   DD *

OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN OBS=MAX;

%MACRO DOIT;
%MACRO RSA(YEAR=, N=, NAME=);

%LET YR=%SUBSTR(&YEAR.,3,2);
%IF &YEAR=2018 %THEN %LET YR2=17;
%ELSE %LET YR2=&YR;

%IF &YR.>=13 & &YR.<90 %THEN %DO;
DATA TEMP1.RSA&YR.;
   SET RSA&YR.&N..RSA&YR2.&NAME.
   %IF &YR.= 18 /*AND %LENGTH(&N.) NE 0*/ %THEN %DO;
   (RENAME=(SEX=RSASEX
         BIRTHDATE=RSADOB))
   %END;
   ;
   DOBYR=YEAR(RSADOB);
RUN;
%END;
%ELSE %DO;
DATA TEMP1.RSA&YR.;
   SET RSA&YR..RSA&YR.;
   DOBYR=YEAR(RSADOB);
```

Appendix A.201
JCL/SAS Code: RSA

```
    RENAME COSSN=SSN;
  RUN;
  %END;

  PROC SORT DATA=TEMP1.RSA&YR.;
    BY SSN DOBYR RSASEX;
  RUN;

  DATA TEMP2.RSA&YR.;
    MERGE TEMP1.RSA&YR.(IN=RSALD)
        RSA.VERRSA(IN=RSA KEEP=SSN DOBYR RSASEX)
           ;
    BY SSN DOBYR RSASEX;
    IF RSA AND RSALD;

    *** CREATE GENDER VARIABLE ***;

    IF RSASEX='1' THEN GENDER='M';
    ELSE IF RSASEX='2' THEN GENDER='F';
  RUN;

  DATA OUT&YR.&N..RSA&YR.;
    MERGE TEMP2.RSA&YR. (IN=RSA)
        DEMO.SSN(IN=DEMO)
    ;
    BY SSN;
    IF RSA;

    *** CREATE FLAG IN_DAF ***;
    IF RSA AND DEMO THEN IN_DAF = 1;
    ELSE IF RSA AND NOT DEMO THEN IN_DAF = 0;

    *** DAA MASKING FOR OLD RSA FORMAT ***;
    %IF %LENGTH(&N.) = 0 %THEN %DO;
      IF INSTTYPE IN ('07', '08', '14', '17')
      THEN INSTTYPE = '99';
    %END;

    *** IF RSA17 NEW FORMAT THEN APPLY LABELS ***;
    %IF &YR.=18 /*AND %LENGTH(&N.) NE 0*/ %THEN %DO;
    %INCLUDE "OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(RSALABEL)";
    %END;

  RUN;
```

Appendix A.201
JCL/SAS Code: RSA

```
PROC CONTENTS DATA=OUT&YR.&N..RSA&YR.;
  TITLE "CONTENTS RSA &YR.";
RUN;

PROC FREQ DATA=OUT&YR.&N..RSA&YR.;
  TABLES IN_DAF/MISSING;
  TITLE "CHECK THE FLAG VARIABLE IN_DAF &YR.";
RUN;

PROC FREQ DATA=OUT&YR.&N..RSA&YR.;
  TABLES RSASEX GENDER RSASEX*GENDER / LIST MISSING;
  TITLE "CHECK RSASEX AND GENDER VARIABLES &YR.";
RUN;

PROC FORMAT;
VALUE $INSTDAA  '99' = '99'
          OTHER = 'NOT DAA';
RUN;

 %IF %LENGTH(&N.) = 0 %THEN %DO;
 PROC FREQ DATA = OUT&YR.&N..RSA&YR.;
   TABLES INSTTYPE / LIST MISSING;
   FORMAT INSTTYPE $INSTDAA.;
   TITLE "CHECK DAA MASKING VARIABLES &YR.";
 RUN;
 %END;

PROC DATASETS LIBRARY=TEMP1;
   DELETE RSA&YR.;
RUN;

%MEND RSA;

%DO YEAR=1998 %TO 2017;
   %RSA(YEAR=&YEAR.);
%END;
   *FOR THE NEW FORMAT RSA;
   %RSA(YEAR=2018,NAME=_NEWFORMAT);

%MEND DOIT;
%DOIT;
ENDSAS;
```

Appendix A.202
JCL/SAS Code: RSALABEL

```
label
SubmissionDate="RSA DATE REPORT SUBMITTED"
AgencyCode="RSA AGENCY CODE"
IndividualID="RSA UNIQUE IDENTIFIER"
ApplicationDate="RSA DATE OF VR APPLICATION"
RSADOB="RSA DATE OF BIRTH"
RSASex="RSA SEX"
AmerIndian="RSA RACE: AMERICAN INDIAN OR ALASKA NATIVE"
Asian="RSA RACE: ASIAN"
Black="RSA RACE: BLACK OR AFRICAN AMERICAN"
Hawaiian="RSA RACE: NATIVE HAWAIIAN OR OTHER PACIFIC ISLANDER"
White="RSA RACE: WHITE"
Hispanic="RSA ETHNICITY - HISPANIC OR LATINO"
Veteran="RSA VETERAN"
LivingArangementCD="RSA LIVING ARRANGEMENT"
State="RSA STATE POSTAL CODE OF RESIDENCE"
CountyFIPSCode="RSA COUNTY FIPS CODE"
Referral="RSA SOURCE OF REFERRAL"
Student="RSA STUDENT WITH A DISABILITY"
appSSDI="RSA SUPPORT: SOCIAL SECURITY DISABILITY INSURANCE (SSDI) AT
APPLICATION"
appSSI="RSA SUPPORT: SUPPLEMENTAL SECURITY INCOME (SSI) FOR THE AGED,
BLIND, OR DISABLED AT APPLICATION"
appTANF="RSA SUPPORT: TEMPORARY ASSISTANCE FOR NEEDY FAMILIES (TANF) AT
APPLICATION"
appGenAssistance="RSA SUPPORT: GENERAL ASSISTANCE (STATE OR LOCAL
GOVERNMENT) AT APPLICATION"
appVeteransDisability="RSA SUPPORT: VETERANS' DISABILITY BENEFITS AT
APPLICATION"
appWorkersComp="RSA SUPPORT: WORKERS' COMPENSATION AT APPLICATION"
appUI="RSA SUPPORT: UNEMPLOYMENT COMPENSATION AT APPLICATION"
appPrimSupportCode="RSA SUPPORT: PRIMARY SOURCE OF SUPPORT AT
APPLICATION"
appMedicaid="RSA MEDICAL INSURANCE COVERAGE: MEDICAID AT APPLICATION"
appMedicare="RSA MEDICAL INSURANCE COVERAGE: MEDICARE AT APPLICATION"
appACAExchange="RSA MEDICAL INSURANCE COVERAGE: STATE OR FEDERAL
AFFORDABLE CARE ACT EXCHANGE AT APPLICATION"
appOtherPublicIns="RSA MEDICAL INSURANCE COVERAGE: PUBLIC INSURANCE FROM
OTHER SOURCES AT APPLICATION"
appEmployerIns="RSA MEDICAL INSURANCE COVERAGE: PRIVATE INSURANCE
THROUGH EMPLOYER AT APPLICATION"
appEmployerInsNYE="RSA MEDICAL INSURANCE COVERAGE: NOT YET ELIGIBLE FOR
PRIVATE INSURANCE THROUGH EMPLOYER AT APPLICATION"
appOtherPrivateIns="RSA MEDICAL INSURANCE COVERAGE: PRIVATE INSURANCE
```

Appendix A.202
JCL/SAS Code: RSALABEL

```
THROUGH OTHER MEANS AT APPLICATION"
EligibilityDate="RSA DATE OF VR ELIGIBILITY DETERMINATION"
EligibilityExt="RSA VR ELIGIBILITY DETERMINATION EXTENSION"
OOSPlacementDate="RSA DATE OF PLACEMENT ON OOS WAITING LIST"
OOSExitDate="RSA DATE OF EXIT FROM OOS WAITING LIST"
Disability="RSA DISABILITY: INDIVIDUAL WITH A DISABILITY"
PrimDisabilityCodeType="RSA DISABILITY: PRIMARY DISABILITY TYPE"
PrimDisabilityCodeSource="RSA DISABILITY: PRIMARY DISABILITY SOURCE"
SecondaryDisabilityType="RSA DISABILITY: SECONDARY DISABILITY TYPE"
SecondaryDisabilitySource="RSA DISABILITY: SECONDARY DISABILITY SOURCE"
DisabilitySigCode="RSA DISABILITY: SIGNIFICANCE OF DISABILITY"
TWEStartDate="RSA TRIAL WORK EXPERIENCE: START DATE OF TRIAL WORK
EXPERIENCE"
TWEEndDate="RSA TRIAL WORK EXPERIENCE: END DATE OF TRIAL WORK
EXPERIENCE"
IPEAmendedDate="RSA IPE: DATE OF MOST RECENT OR AMENDED IPE"
IPESupportedEmpGoal="RSA IPE: SUPPORTED EMPLOYMENT GOAL ON CURRENT IPE"
ipeEmpStatus="RSA IPE: EMPLOYMENT AT IPE"
ipePrimaryOcc="RSA IPE: PRIMARY OCCUPATION AT IPE"
ipeHourlyWage="RSA IPE: HOURLY WAGE AT IPE"
ipeWeeklyHoursWorked="RSA IPE: HOURS WORKED IN A WEEK AT IPE"
Adult="RSA WIOA PROGRAM: ADULT"
AdultEd="RSA WIOA PROGRAM: ADULT EDUCATION"
DislocatedWorker="RSA WIOA PROGRAM: DISLOCATED WORKER"
JobCorps="RSA WIOA PROGRAM: JOB CORPS"
VocRehab="RSA WIOA PROGRAM:  VOCATIONAL REHABILITATION"
WPEmpService="RSA WIOA PROGRAM: WAGNER-PEYSER EMPLOYMENT SERVICE"
Youth="RSA WIOA PROGRAM:  YOUTH"
YouthBuild="RSA WIOA PROGRAM: YOUTHBUILD"
LongTermUnemp="RSA BARRIERS TO EMPLOYMENT: LONG-TERM UNEMPLOYED"
ExhaustTANF="RSA BARRIERS TO EMPLOYMENT: EXHAUSTING TANF WITHIN TWO
YEARS"
FosterCareYouth="RSA BARRIERS TO EMPLOYMENT: FOSTER CARE YOUTH"
HomelessOrRunaway="RSA BARRIERS TO EMPLOYMENT: HOMELESS INDIVIDUAL,
HOMELESS CHILDREN AND YOUTHS, OR RUNAWAY YOUTH"
ExOffenderStatus="RSA BARRIERS TO EMPLOYMENT: EX-OFFENDER"
LowIncomeStatus="RSA BARRIERS TO EMPLOYMENT: LOW INCOME"
EnglishLearner="RSA BARRIERS TO EMPLOYMENT: ENGLISH LANGUAGE LEARNER"
BasicSkillsDeficient="RSA BARRIERS TO EMPLOYMENT: BASIC SKILLS
DEFICIENT/LOW LEVELS OF LITERACY"
CulturalBarriers="RSA BARRIERS TO EMPLOYMENT: CULTURAL BARRIERS"
SingleParent="RSA BARRIERS TO EMPLOYMENT: SINGLE PARENT"
DisHomemaker="RSA BARRIERS TO EMPLOYMENT: DISPLACED HOMEMAKER"
MigrantFarmworker="RSA BARRIERS TO EMPLOYMENT: MIGRANT AND SEASONAL
FARMWORKER"
```

Appendix A.202
JCL/SAS Code: RSALABEL

```
StateDisStudentAgeRange="RSA EDUCATION: STATE DEFINITION FOR AGE OF
STUDENTS WITH DISABILITIES"
SchoolStatus="RSA EDUCATION: SCHOOL STATUS"
EdLevelCompleted="RSA EDUCATION: HIGHEST EDUCATIONAL LEVEL COMPLETED"
SchoolGradeCompleted="RSA EDUCATION: HIGHEST ELEMENTARY OR SECONDARY
SCHOOL GRADE COMPLETED"
InSecondaryEd="RSA EDUCATION: ENROLLED IN SECONDARY EDUCATION"
SpecialEdCertCompDate="RSA EDUCATION: DATE RECEIVED SPECIAL EDUCATION
CERTIFICATE OF COMPLETION"
EnrolledInASE="RSA EDUCATION: ENROLLED IN A STATE ADULT SECONDARY SCHOOL
AT THE HIGH ADULT SECONDARY EDUCATION (ASE) LEVEL"
SecSchoolDiplomaDate="RSA EDUCATION: DATE ATTAINED SECONDARY SCHOOL
DIPLOMA"
GEDDate="RSA EDUCATION: DATE ATTAINED SECONDARY SCHOOL EQUIVALENCY
(GED)"
PostsecEdYear="RSA EDUCATION: ENROLLED IN POSTSECONDARY OR GRADUATE
EDUCATION"
EnrolledInPostsecEd="RSA EDUCATION: ENROLLED IN POSTSECONDARY EDUCATION"
CredProgramEnrollDate="RSA EDUCATION: DATE ENROLLED DURING PROGRAM
PARTICIPATION IN AN EDUCATION OR TRAINING PROGRAM LEADING TO A
RECOGNIZED POSTSECONDARY CREDENTIAL OR EMPLOYMENT"
CompletedSomePostsecEd= "RSA EDUCATION: COMPLETED SOME POSTSECONDARY
EDUCATION, NO DEGREE OR CERTIFICATE"
AssociateDegreeDate="RSA EDUCATION: DATE ATTAINED ASSOCIATE S DEGREE"
BachelorDegreeDate="RSA EDUCATION: DATE ATTAINED BACHELOR'S DEGREE"
MastersDegreeDate="RSA EDUCATION: DATE ATTAINED MASTER S DEGREE"
DegreeAboveMastersDate="RSA EDUCATION: DATE ATTAINED GRADUATE DEGREE
(E.G., PH.D., ED.D., J.D., M.D.)"
EnrolledInCTTPNoCred="RSA VOTECH: ENROLLED IN A CAREER OR TECHNICAL
TRAINING PROGRAM, NOT LEADING TO A RECOGNIZED POSTSECONDARY CREDENTIAL"
EnrolledInCTTPCred="RSA VOTECH: ENROLLED IN A CAREER OR TECHNICAL
TRAINING PROGRAM, LEADING TO A RECOGNIZED POSTSECONDARY CREDENTIAL"
VTLicenseDate="RSA VOTECH: DATE ATTAINED VOCATIONAL/TECHNICAL LICENSE"
VTCertificateDate="RSA VOTECH: DATE ATTAINED VOCATIONAL/TECHNICAL
CERTIFICATE"
OtherLicOrCertDate="RSA OTHER EDUCATION OR TRAINING: DATE ATTAINED OTHER
RECOGNIZED DIPLOMA, DEGREE, OR CERTIFICATE"
PETSStartDate="RSA PRE-EMP TRANSITION SERVICES: START DATE OF
PRE-EMPLOYMENT TRANSITION SERVICES"
jecVRAgencyStaff="RSA JOB EXPLORATION COUNSELING: SERVICE PROVIDED BY VR
AGENCY STAFF (IN-HOUSE)"
jecVRAgencyPurchase="RSA JOB EXPLORATION COUNSELING: SERVICE PROVIDED
THROUGH VR AGENCY PURCHASE"
jecPurchaseProviderType="RSA JOB EXPLORATION COUNSELING: PURCHASED
SERVICE PROVIDER TYPE"
```

Appendix A.202
JCL/SAS Code: RSALABEL

```
jecVRServicePurchaseExpenditure="RSA JOB EXPLORATION COUNSELING: VR
PROGRAM EXPENDITURE FOR PURCHASED SERVICE"
jecCompServiceProvider="RSA JOB EXPLORATION COUNSELING: SERVICE PROVIDED
BY COMPARABLE SERVICES AND BENEFITS PROVIDERS"
jecCompServiceProviderType="RSA JOB EXPLORATION COUNSELING: COMPARABLE
SERVICES AND BENEFITS PROVIDER TYPE"
wbleVRAgencyStaff="RSA WORK BASED LEARNING EXPERIENCES: SERVICE PROVIDED
BY VR AGENCY STAFF (IN-HOUSE)"
wbleVRAgencyPurchase="RSA WORK BASED LEARNING EXPERIENCES: SERVICE
PROVIDED THROUGH VR AGENCY PURCHASE"
wblePurchaseProviderType="RSA WORK BASED LEARNINGS: PURCHASED SERVICE
PROVIDER TYPE"
wbleVRServicePurchaseExpenditure="RSA WORK BASED LEARNING: VR PROGRAM
EXPENDITURE FOR PURCHASED SERVICE"
wbleCompServiceProvider="RSA WORK BASED LEARNING: SERVICE PROVIDED BY
COMPARABLE SERVICES AND BENEFITS PROVIDERS"
wbleCompServiceProviderType="RSA WORK BASED LEARNING: COMPARABLE
SERVICES AND BENEFITS PROVIDER TYPE"
ceoVRAgencyStaff="RSA COUNSELING ON ENROLLMENT OPPORTUNITIES: SERVICE
PROVIDED BY VR AGENCY STAFF (IN-HOUSE)"
ceoVRAgencyPurchase="RSA COUNSELING ON ENROLLMENT OPPORTUNITIES: SERVICE
PROVIDED THROUGH VR AGENCY PURCHASE"
ceoPurchaseProviderType="RSA JOB EXPLORATION COUNSELING: PURCHASED
SERVICE PROVIDER TYPE"
ceoVRServicePurchaseExpenditure="RSA COUNSELING ON ENROLLMENT
OPPORTUNITIES: VR PROGRAM EXPENDITURE FOR PURCHASED SERVICE"
ceoCompServiceProvider="RSA COUNSELING ON ENROLLMENT OPPORTUNITIES:
SERVICE PROVIDED BY COMPARABLE SERVICES AND BENEFITS PROVIDERS"
ceoCompServiceProviderType="RSA COUNSELING ON ENROLLMENT OPPORTUNITIES:
COMPARABLE SERVICES AND BENEFITS PROVIDER TYPE"
wrtVRAgencyStaff="RSA WORKPLACE READINESS TRAINING: SERVICE PROVIDED BY
VR AGENCY STAFF (IN-HOUSE)"
wrtVRAgencyPurchase="RSA WORKPLACE READINESS TRAINING: SERVICE PROVIDED
THROUGH VR AGENCY PURCHASE"
wrtPurchaseProviderType="RSA WORKPLACE READINESS TRAINING: PURCHASED
SERVICE PROVIDER TYPE"
wrtVRServicePurchaseExpenditure="RSA WORKPLACE READINESS TRAINING: VR
PROGRAM EXPENDITURE FOR PURCHASED SERVICE"
wrtCompServiceProvider="RSA WORKPLACE READINESS TRAINING: SERVICE
PROVIDED BY COMPARABLE SERVICES AND BENEFITS PROVIDERS"
wrtCompServiceProviderType="RSA WORKPLACE READINESS TRAINING: COMPARABLE
SERVICES AND BENEFITS PROVIDER TYPE"
isaVRAgencyStaff="RSA INSTRUCTION IN SELF ADVOCACY: SERVICE PROVIDED BY
VR AGENCY STAFF (IN-HOUSE)"
isaVRAgencyPurchase="RSA INSTRUCTION IN SELF ADVOCACY: SERVICE PROVIDED
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THROUGH VR AGENCY PURCHASE"
isaPurchaseProviderType="RSA INSTRUCTION IN SELF ADVOCACY: PURCHASED
SERVICE PROVIDER TYPE"
isaVRServicePurchaseExpenditure="RSA INSTRUCTION IN SELF ADVOCACY: VR
PROGRAM EXPENDITURE FOR PURCHASED SERVICE"
isaCompServiceProvider="RSA INSTRUCTION IN SELF ADVOCACY: SERVICE
PROVIDED BY COMPARABLE SERVICES AND BENEFITS PROVIDERS"
isaCompServiceProviderType="RSA INSTRUCTION IN SELF ADVOCACY: COMPARABLE
SERVICES AND BENEFITS PROVIDER TYPE"
VRServiceStartDate="RSA START DATE OF INITIAL VR SERVICE ON OR AFTER
IPE"
CareerServiceDate="RSA DATE OF MOST RECENT CAREER SERVICE"
gcutVRAgencyStaff="RSA GRADUATE COLLEGE OR UNIVERSITY: SERVICE PROVIDED
BY VR AGENCY STAFF (IN-HOUSE)"
gcutVRAgencyPurchase="RSA GRADUATE COLLEGE OR UNIVERSITY: SERVICE
PROVIDED THROUGH VR AGENCY PURCHASE"
gcutPurchaseProviderType="RSA GRADUATE COLLEGE OR UNIVERSITY: PURCHASED
SERVICE PROVIDER TYPE"
gcutVRTitleIFundsExpended="RSA GRADUATE COLLEGE OR UNIVERSITY: AMOUNT OF
VR FUNDS EXPENDED FOR SERVICE (TITLE I)"
gcutSETitleVIFundsExpended="RSA GRADUATE COLLEGE OR UNIVERSITY: AMOUNT
OF SE FUNDS EXPENDED FOR SERVICE (TITLE VI)"
gcutCompServiceProvider="RSA GRADUATE COLLEGE OR UNIVERSITY: SERVICE
PROVIDED BY COMPARABLE SERVICES AND BENEFITS PROVIDERS"
gcutCompServiceProviderType="RSA GRADUATE COLLEGE OR UNIVERSITY:
COMPARABLE SERVICES AND BENEFITS PROVIDER TYPE"
fycutVRAgencyStaff="RSA FOUR-YEAR COLLEGE OR UNIVERSITY TRAINING:
SERVICE PROVIDED BY VR AGENCY STAFF (IN-HOUSE)"
fycutVRAgencyPurchase="RSA FOUR-YEAR COLLEGE OR UNIVERSITY TRAINING:
SERVICE PROVIDED THROUGH VR AGENCY PURCHASE"
fycutPurchaseProviderType="RSA RSA FOUR-YEAR COLLEGE OR UNIVERSITY
TRAINING: PURCHASED SERVICE PROVIDER TYPE"
fycutVRTitleIFundsExpended="RSA RSA FOUR-YEAR COLLEGE OR UNIVERSITY
TRAINING: AMOUNT OF VR FUNDS EXPENDED FOR SERVICE (TITLE I)"
fycutSETitleVIFundsExpended="RSA RSA FOUR-YEAR COLLEGE OR UNIVERSITY
TRAINING: AMOUNT OF SE FUNDS EXPENDED FOR SERVICE (TITLE VI)"
fycutCompServiceProvider="RSA RSA FOUR-YEAR COLLEGE OR UNIVERSITY
TRAINING: SERVICE PROVIDED BY COMPARABLE SERVICES AND BENEFITS
PROVIDERS"
fycutCompServiceProviderType="RSA RSA FOUR-YEAR COLLEGE OR UNIVERSITY
TRAINING: COMPARABLE SERVICES AND BENEFITS PROVIDER TYPE"
jcctVRAgencyStaff="RSA JUNIOR OR COMMUNITY COLLEGE TRAINING: SERVICE
PROVIDED BY VR AGENCY STAFF (IN-HOUSE)"
jcctVRAgencyPurchase="RSA JUNIOR OR COMMUNITY COLLEGE TRAINING: SERVICE
PROVIDED THROUGH VR AGENCY PURCHASE"
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jcctPurchaseProviderType="RSA JUNIOR OR COMMUNITY COLLEGE TRAINING:
PURCHASED SERVICE PROVIDER TYPE"
jcctVRTitleIFundsExpended="RSA JUNIOR OR COMMUNITY COLLEGE TRAINING:
AMOUNT OF VR FUNDS EXPENDED FOR SERVICE (TITLE I)"
jcctSETitleVIFundsExpended="RSA JUNIOR OR COMMUNITY COLLEGE TRAINING:
AMOUNT OF SE FUNDS EXPENDED FOR SERVICE (TITLE VI)"
jcctCompServiceProvider="RSA JUNIOR OR COMMUNITY COLLEGE TRAINING:
SERVICE PROVIDED BY COMPARABLE SERVICES AND BENEFITS PROVIDERS"
jcctCompServiceProviderType="RSA JUNIOR OR COMMUNITY COLLEGE TRAINING:
COMPARABLE SERVICES AND BENEFITS PROVIDER TYPE"
ovtVRAgencyStaff="RSA OCCUPATIONAL OR VOCATIONAL TRAINING: SERVICE
PROVIDED BY VR AGENCY STAFF (IN-HOUSE)"
ovtVRAgencyPurchase="RSA OCCUPATIONAL OR VOCATIONAL TRAINING: SERVICE
PROVIDED THROUGH VR AGENCY PURCHASE"
ovtPurchaseProviderType="RSA OCCUPATIONAL OR VOCATIONAL TRAINING:
PURCHASED SERVICE PROVIDER TYPE"
ovtVRTitleIFundsExpended="RSA OCCUPATIONAL OR VOCATIONAL TRAINING:
AMOUNT OF VR FUNDS EXPENDED FOR SERVICE (TITLE I)"
ovtSETitleVIFundsExpended="RSA OCCUPATIONAL OR VOCATIONAL TRAINING:
AMOUNT OF SE FUNDS EXPENDED FOR SERVICE (TITLE VI)"
ovtCompServiceProvider="RSA OCCUPATIONAL OR VOCATIONAL TRAINING: SERVICE
PROVIDED BY COMPARABLE SERVICES AND BENEFITS PROVIDERS"
ovtCompServiceProviderType="RSA OCCUPATIONAL OR VOCATIONAL TRAINING:
COMPARABLE SERVICES AND BENEFITS PROVIDER TYPE"
ojtVRAgencyStaff="RSA ON THE JOB TRAINING: SERVICE PROVIDED BY VR AGENCY
STAFF (IN-HOUSE)"
ojtVRAgencyPurchase="RSA ON THE JOB TRAINING: SERVICE PROVIDED THROUGH
VR AGENCY PURCHASE"
ojtPurchaseProviderType="RSA ON THE JOB TRAINING: PURCHASED SERVICE
PROVIDER TYPE"
ojtVRTitleIFundsExpended="RSA ON THE JOB TRAINING: AMOUNT OF VR FUNDS
EXPENDED FOR SERVICE (TITLE I)"
ojtSETitleVIFundsExpended="RSA ON THE JOB TRAINING: AMOUNT OF SE FUNDS
EXPENDED FOR SERVICE (TITLE VI)"
ojtCompServiceProvider="RSA ON THE JOB TRAINING: SERVICE PROVIDED BY
COMPARABLE SERVICES AND BENEFITS PROVIDERS"
ojtCompServiceProviderType="RSA ON THE JOB TRAINING: COMPARABLE SERVICES
AND BENEFITS PROVIDER TYPE"
ratVRAgencyPurchase="RSA REGISTERED APPRENTICESHIP TRAINING: SERVICE
PROVIDED THROUGH VR AGENCY PURCHASE"
ratPurchaseProviderType="RSA REGISTERED APPRENTICESHIP TRAINING:
PURCHASED SERVICE PROVIDER TYPE"
ratVRTitleIFundsExpended="RSA REGISTERED APPRENTICESHIP TRAINING: AMOUNT
OF VR FUNDS EXPENDED FOR SERVICE (TITLE I)"
ratSETitleVIFundsExpended="RSA REGISTERED APPRENTICESHIP TRAINING:
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AMOUNT OF SE FUNDS EXPENDED FOR SERVICE (TITLE VI)"
ratCompServiceProvider="RSA REGISTERED APPRENTICESHIP TRAINING: SERVICE
PROVIDED BY COMPARABLE SERVICES AND BENEFITS PROVIDERS"
ratCompServiceProviderType="RSA REGISTERED APPRENTICESHIP TRAINING:
COMPARABLE SERVICES AND BENEFITS PROVIDER TYPE"
barltVRAgencyStaff="RSA BASIC ACADEMIC REMEDIAL OR LITERACY TRAINING:
SERVICE PROVIDED BY VR AGENCY STAFF (IN-HOUSE)"
barltVRAgencyPurchase="RSA BASIC ACADEMIC REMEDIAL OR LITERACY TRAINING:
SERVICE PROVIDED THROUGH VR AGENCY PURCHASE"
barltPurchaseProviderType="RSA BASIC ACADEMIC REMEDIAL OR LITERACY
TRAINING: PURCHASED SERVICE PROVIDER TYPE"
barltVRTitleIFundsExpended="RSA BASIC ACADEMIC REMEDIAL OR LITERACY
TRAINING: AMOUNT OF VR FUNDS EXPENDED FOR SERVICE (TITLE I)"
barltSETitleVIFundsExpended="RSA BASIC ACADEMIC REMEDIAL OR LITERACY
TRAINING: AMOUNT OF SE FUNDS EXPENDED FOR SERVICE (TITLE VI)"
barltCompServiceProvider="RSA BASIC ACADEMIC REMEDIAL OR LITERACY
TRAINING: SERVICE PROVIDED BY COMPARABLE SERVICES AND BENEFITS
PROVIDERS"
barltCompServiceProviderType="RSA BASIC ACADEMIC REMEDIAL OR LITERACY
TRAINING: COMPARABLE SERVICES AND BENEFITS PROVIDER TYPE"
jrtVRAgencyStaff="RSA JOB READINESS TRAINING: SERVICE PROVIDED BY VR
AGENCY STAFF (IN-HOUSE)"
jrtVRAgencyPurchase="RSA JOB READINESS TRAINING: SERVICE PROVIDED
THROUGH VR AGENCY PURCHASE"
jrtPurchaseProviderType="RSA JOB READINESS TRAINING: PURCHASED SERVICE
PROVIDER TYPE"
jrtVRTitleIFundsExpended="RSA JOB READINESS TRAINING: AMOUNT OF VR FUNDS
EXPENDED FOR SERVICE (TITLE I)"
jrtSETitleVIFundsExpended="RSA JOB READINESS TRAINING: AMOUNT OF SE
FUNDS EXPENDED FOR SERVICE (TITLE VI)"
jrtCompServiceProvider="RSA JOB READINESS TRAINING: SERVICE PROVIDED BY
COMPARABLE SERVICES AND BENEFITS PROVIDERS"
jrtCompServiceProviderType="RSA JOB READINESS TRAINING: COMPARABLE
SERVICES AND BENEFITS PROVIDER TYPE"
drstVRAgencyStaff="RSA DISABILITY RELATED SKILLS TRAINING: SERVICE
PROVIDED BY VR AGENCY STAFF (IN-HOUSE)"
drstVRAgencyPurchase="RSA DISABILITY RELATED SKILLS TRAINING: SERVICE
PROVIDED THROUGH VR AGENCY PURCHASE"
drstPurchaseProviderType="RSA DISABILITY RELATED SKILLS TRAINING:
COMPARABLE SERVICES AND BENEFITS PROVIDER TYPE"
drstVRTitleIFundsExpended="RSA DISABILITY RELATED SKILLS TRAINING:
AMOUNT OF VR FUNDS EXPENDED FOR SERVICE (TITLE I)"
drstSETitleVIFundsExpended="RSA DISABILITY RELATED SKILLS TRAINING:
AMOUNT OF SE FUNDS EXPENDED FOR SERVICE (TITLE VI)"
drstCompServiceProvider="RSA DISABILITY RELATED SKILLS TRAINING: SERVICE
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PROVIDED BY COMPARABLE SERVICES AND BENEFITS PROVIDERS"
drstCompServiceProviderType="RSA DISABILITY RELATED SKILLS TRAINING:
COMPARABLE SERVICES AND BENEFITS PROVIDER TYPE"
mtVRAgencyStaff="RSA MISCELLANEOUS TRAINING: SERVICE PROVIDED BY VR
AGENCY STAFF (IN-HOUSE)"
mtVRAgencyPurchase="RSA MISCELLANEOUS TRAINING: SERVICE PROVIDED THROUGH
VR AGENCY PURCHASE"
mtPurchaseProviderType="RSA MISCELLANEOUS TRAINING: PURCHASED SERVICE
PROVIDER TYPE"
mtVRTitleIFundsExpended="RSA MISCELLANEOUS TRAINING: AMOUNT OF VR FUNDS
EXPENDED FOR SERVICE (TITLE I)"
mtSETitleVIFundsExpended="RSA MISCELLANEOUS TRAINING: AMOUNT OF SE FUNDS
EXPENDED FOR SERVICE (TITLE VI)"
mtCompServiceProvider="RSA MISCELLANEOUS TRAINING: SERVICE PROVIDED BY
COMPARABLE SERVICES AND BENEFITS PROVIDERS"
mtCompServiceProviderType="RSA MISCELLANEOUS TRAINING: COMPARABLE
SERVICES AND BENEFITS PROVIDER TYPE"
rsetVRAgencyStaff="RSA RANDOLPH-SHEPPARD ENTREPRENEURIAL TRAINING:
SERVICE PROVIDED BY VR AGENCY STAFF (IN-HOUSE)"
rsetVRAgencyPurchase="RSA RANDOLPH-SHEPPARD ENTREPRENEURIAL TRAINING:
SERVICE PROVIDED THROUGH VR AGENCY PURCHASE"
rsetPurchaseProviderType="RSA RANDOLPH-SHEPPARD ENTREPRENEURIAL
TRAINING: PURCHASED SERVICE PROVIDER TYPE"
rsetVRTitleIFundsExpended="RSA RANDOLPH-SHEPPARD ENTREPRENEURIAL
TRAINING: AMOUNT OF VR FUNDS EXPENDED FOR SERVICE (TITLE I)"
rsetSETitleVIFundsExpended="RSA RANDOLPH-SHEPPARD ENTREPRENEURIAL
TRAINING: AMOUNT OF SE FUNDS EXPENDED FOR SERVICE (TITLE VI)"
rsetCompServiceProvider="RSA RANDOLPH-SHEPPARD ENTREPRENEURIAL TRAINING:
SERVICE PROVIDED BY COMPARABLE SERVICES AND BENEFITS PROVIDERS"
rsetCompServiceProviderType="RSA RANDOLPH-SHEPPARD ENTREPRENEURIAL
TRAINING: COMPARABLE SERVICES AND BENEFITS PROVIDER TYPE"
ctVRAgencyStaff="RSA CUSTOMIZED TRAINING: SERVICE PROVIDED BY VR AGENCY
STAFF (IN-HOUSE)"
ctVRAgencyPurchase="RSA CUSTOMIZED TRAINING: SERVICE PROVIDED THROUGH VR
AGENCY PURCHASE"
ctPurchaseProviderType="RSA CUSTOMIZED TRAINING: PURCHASED SERVICE
PROVIDER TYPE"
ctVRTitleIFundsExpended="RSA CUSTOMIZED TRAINING: AMOUNT OF VR FUNDS
EXPENDED FOR SERVICE (TITLE I)"
ctSETitleVIFundsExpended="RSA CUSTOMIZED TRAINING: AMOUNT OF SE FUNDS
EXPENDED FOR SERVICE (TITLE VI)"
ctCompServiceProvider="RSA CUSTOMIZED TRAINING: SERVICE PROVIDED BY
COMPARABLE SERVICES AND BENEFITS PROVIDERS"
ctCompServiceProviderType="RSA CUSTOMIZED TRAINING: COMPARABLE SERVICES
AND BENEFITS PROVIDER TYPE"
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assVRAgencyStaff="RSA ASSESSMENT: SERVICE PROVIDED BY VR AGENCY STAFF
(IN-HOUSE)"
assVRAgencyPurchase="RSA ASSESSMENT: SERVICE PROVIDED THROUGH VR AGENCY
PURCHASE"
assPurchaseProviderType="RSA ASSESSMENT: PURCHASED SERVICE PROVIDER
TYPE"
assVRTitleIFundsExpended="RSA ASSESSMENT: AMOUNT OF VR FUNDS EXPENDED
FOR SERVICE (TITLE I)"
assSETitleVIFundsExpended="RSA ASSESSMENT: AMOUNT OF SE FUNDS EXPENDED
FOR SERVICE (TITLE VI)"
assCompServiceProvider="RSA ASSESSMENT: SERVICE PROVIDED BY COMPARABLE
SERVICES AND BENEFITS PROVIDERS"
assCompServiceProviderType="RSA ASSESSMENT: COMPARABLE SERVICES AND
BENEFITS PROVIDER TYPE"
dtiVRAgencyStaff="RSA DIAGNOSIS AND TREATMENT OF IMPAIRMENTS: SERVICE
PROVIDED BY VR AGENCY STAFF (IN-HOUSE)"
dtiVRAgencyPurchase="RSA DIAGNOSIS AND TREATMENT OF IMPAIRMENTS: SERVICE
PROVIDED THROUGH VR AGENCY PURCHASE"
dtiPurchaseProviderType="RSA DIAGNOSIS AND TREATMENT OF IMPAIRMENTS:
PURCHASED SERVICE PROVIDER TYPE"
dtiVRTitleIFundsExpended="RSA DIAGNOSIS AND TREATMENT OF IMPAIRMENTS:
AMOUNT OF VR FUNDS EXPENDED FOR SERVICE (TITLE I)"
dtiSETitleVIFundsExpended="RSA DIAGNOSIS AND TREATMENT OF IMPAIRMENTS:
AMOUNT OF SE FUNDS EXPENDED FOR SERVICE (TITLE VI)"
dtiCompServiceProvider="RSA DIAGNOSIS AND TREATMENT OF IMPAIRMENTS:
SERVICE PROVIDED BY COMPARABLE SERVICES AND BENEFITS PROVIDERS"
dtiCompServiceProviderType="RSA DIAGNOSIS AND TREATMENT OF IMPAIRMENTS:
COMPARABLE SERVICES AND BENEFITS PROVIDER TYPE"
vrcgVRAgencyStaff="RSA VOCATIONAL REHABILITATION COUNSELING AND
GUIDANCE: SERVICE PROVIDED BY VR AGENCY STAFF (IN-HOUSE)"
vrcgVRAgencyPurchase="RSA VOCATIONAL REHABILITATION COUNSELING AND
GUIDANCE: SERVICE PROVIDED THROUGH VR AGENCY PURCHASE"
vrcgPurchaseProviderType="RSA VOCATIONAL REHABILITATION COUNSELING AND
GUIDANCE: PURCHASED SERVICE PROVIDER TYPE"
vrcgVRTitleIFundsExpended="RSA VOCATIONAL REHABILITATION COUNSELING AND
GUIDANCE: AMOUNT OF VR FUNDS EXPENDED FOR SERVICE (TITLE I)"
vrcgSETitleVIFundsExpended="RSA VOCATIONAL REHABILITATION COUNSELING AND
GUIDANCE: AMOUNT OF SE FUNDS EXPENDED FOR SERVICE (TITLE VI)"
vrcgCompServiceProvider="RSA VOCATIONAL REHABILITATION COUNSELING AND
GUIDANCE: SERVICE PROVIDED BY COMPARABLE SERVICES AND BENEFITS
PROVIDERS"
vrcgCompServiceProviderType="RSA VOCATIONAL REHABILITATION COUNSELING
AND GUIDANCE: COMPARABLE SERVICES AND BENEFITS PROVIDER TYPE"
jsaVRAgencyStaff="RSA JOB SEARCH ASSISTANCE: SERVICE PROVIDED BY VR
AGENCY STAFF (IN-HOUSE)"
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jsaVRAgencyPurchase="RSA JOB SEARCH ASSISTANCE: SERVICE PROVIDED THROUGH
VR AGENCY PURCHASE"
jsaPurchaseProviderType="RSA JOB SEARCH ASSISTANCE: PURCHASED SERVICE
PROVIDER TYPE"
jsaVRTitleIFundsExpended="RSA JOB SEARCH ASSISTANCE: AMOUNT OF VR FUNDS
EXPENDED FOR SERVICE (TITLE I)"
jsaSETitleVIFundsExpended="RSA JOB SEARCH ASSISTANCE: AMOUNT OF SE FUNDS
EXPENDED FOR SERVICE (TITLE VI)"
jsaCompServiceProvider="RSA JOB SEARCH ASSISTANCE: SERVICE PROVIDED BY
COMPARABLE SERVICES AND BENEFITS PROVIDERS"
jsaCompServiceProviderType="RSA JOB SEARCH ASSISTANCE: COMPARABLE
SERVICES AND BENEFITS PROVIDER TYPE"
jpaVRAgencyStaff="RSA JOB PLACEMENT ASSISTANCE: SERVICE PROVIDED BY VR
AGENCY STAFF (IN-HOUSE)"
jpaVRAgencyPurchase="RSA JOB PLACEMENT ASSISTANCE: SERVICE PROVIDED
THROUGH VR AGENCY PURCHASE"
jpaPurchaseProviderType="RSA JOB PLACEMENT ASSISTANCE: PURCHASED SERVICE
PROVIDER TYPE"
jpaVRTitleIFundsExpended="RSA JOB PLACEMENT ASSISTANCE: AMOUNT OF VR
FUNDS EXPENDED FOR SERVICE (TITLE I)"
jpaSETitleVIFundsExpended="RSA JOB PLACEMENT ASSISTANCE: AMOUNT OF SE
FUNDS EXPENDED FOR SERVICE (TITLE VI)"
jpaCompServiceProvider="RSA JOB PLACEMENT ASSISTANCE: SERVICE PROVIDED
BY COMPARABLE SERVICES AND BENEFITS PROVIDERS"
stjsVRAgencyStaff="RSA SHORT TERM JOB SUPPORTS: SERVICE PROVIDED BY VR
AGENCY STAFF (IN-HOUSE)"
stjsVRAgencyPurchase="RSA SHORT TERM JOB SUPPORTS: SERVICE PROVIDED
THROUGH VR AGENCY PURCHASE"
stjsPurchaseProviderType="RSA SHORT TERM JOB SUPPORTS: PURCHASED SERVICE
PROVIDER TYPE"
stjsVRTitleIFundsExpended="RSA SHORT TERM JOB SUPPORTS: AMOUNT OF VR
FUNDS EXPENDED FOR SERVICE (TITLE I)"
stjsSETitleVIFundsExpended="RSA SHORT TERM JOB SUPPORTS: AMOUNT OF SE
FUNDS EXPENDED FOR SERVICE (TITLE VI)"
stjsCompServiceProvider="RSA SHORT TERM JOB SUPPORTS: SERVICE PROVIDED
BY COMPARABLE SERVICES AND BENEFITS PROVIDERS"
stjsCompServiceProviderType="RSA SHORT TERM JOB SUPPORTS: COMPARABLE
SERVICES AND BENEFITS PROVIDER TYPE"
sesVRAgencyStaff="RSA SUPPORTED EMPLOYMENT SERVICES: SERVICE PROVIDED BY
VR AGENCY STAFF (IN-HOUSE)"
sesVRAgencyPurchase="RSA SUPPORTED EMPLOYMENT SERVICES: SERVICE PROVIDED
THROUGH VR AGENCY PURCHASE"
sesPurchaseProviderType="RSA SUPPORTED EMPLOYMENT SERVICES: PURCHASED
SERVICE PROVIDER TYPE"
sesVRTitleIFundsExpended="RSA SUPPORTED EMPLOYMENT SERVICES: AMOUNT OF
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VR FUNDS EXPENDED FOR SERVICE (TITLE I)"
sesSETitleVIFundsExpended="RSA SUPPORTED EMPLOYMENT SERVICES: AMOUNT OF
SE FUNDS EXPENDED FOR SERVICE (TITLE VI)"
sesCompServiceProvider="RSA SUPPORTED EMPLOYMENT SERVICES: SERVICE
PROVIDED BY COMPARABLE SERVICES AND BENEFITS PROVIDERS"
sesCompServiceProviderType="RSA SUPPORTED EMPLOYMENT SERVICES:
COMPARABLE SERVICES AND BENEFITS PROVIDER TYPE"
irsVRAgencyStaff="RSA INFORMATION AND REFERRAL SERVICES: SERVICE
PROVIDED BY VR AGENCY STAFF (IN-HOUSE)"
irsVRAgencyPurchase="RSA INFORMATION AND REFERRAL SERVICES: SERVICE
PROVIDED THROUGH VR AGENCY PURCHASE"
irsPurchaseProviderType="RSA INFORMATION AND REFERRAL SERVICES:
PURCHASED SERVICE PROVIDER TYPE"
irsVRTitleIFundsExpended="RSA INFORMATION AND REFERRAL SERVICES: AMOUNT
OF VR FUNDS EXPENDED FOR SERVICE (TITLE I)"
irsSETitleVIFundsExpended="RSA INFORMATION AND REFERRAL SERVICES: AMOUNT
OF SE FUNDS EXPENDED FOR SERVICE (TITLE VI)"
irsCompServiceProvider="RSA INFORMATION AND REFERRAL SERVICES: SERVICE
PROVIDED BY COMPARABLE SERVICES AND BENEFITS PROVIDERS"
irsCompServiceProviderType="RSA INFORMATION AND REFERRAL SERVICES:
COMPARABLE SERVICES AND BENEFITS PROVIDER TYPE"
bcVRAgencyStaff="RSA BENEFITS COUNSELING: SERVICE PROVIDED BY VR AGENCY
STAFF (IN-HOUSE)"
bcVRAgencyPurchase="RSA BENEFITS COUNSELING: SERVICE PROVIDED THROUGH VR
AGENCY PURCHASE"
bcPurchaseProviderType="RSA BENEFITS COUNSELING: PURCHASED SERVICE
PROVIDER TYPE"
bcVRTitleIFundsExpended="RSA BENEFITS COUNSELING: AMOUNT OF VR FUNDS
EXPENDED FOR SERVICE (TITLE I)"
bcSETitleVIFundsExpended="RSA BENEFITS COUNSELING: AMOUNT OF SE FUNDS
EXPENDED FOR SERVICE (TITLE VI)"
bcCompServiceProvider="RSA BENEFITS COUNSELING: SERVICE PROVIDED BY
COMPARABLE SERVICES AND BENEFITS PROVIDERS"
bcCompServiceProviderType="RSA BENEFITS COUNSELING: COMPARABLE SERVICES
AND BENEFITS PROVIDER TYPE"
cesVRAgencyStaff="RSA CUSTOMIZED EMPLOYMENT SERVICES: SERVICE PROVIDED
BY VR AGENCY STAFF (IN-HOUSE)"
cesVRAgencyPurchase="RSA CUSTOMIZED EMPLOYMENT SERVICES: SERVICE
PROVIDED THROUGH VR AGENCY PURCHASE"
cesPurchaseProviderType="RSA CUSTOMIZED EMPLOYMENT SERVICES: PURCHASED
SERVICE PROVIDER TYPE"
cesVRTitleIFundsExpended="RSA CUSTOMIZED EMPLOYMENT SERVICES: AMOUNT OF
VR FUNDS EXPENDED FOR SERVICE (TITLE I)"
cesSETitleVIFundsExpended="RSA CUSTOMIZED EMPLOYMENT SERVICES: AMOUNT OF
SE FUNDS EXPENDED FOR SERVICE (TITLE VI)"
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cesCompServiceProvider="RSA CUSTOMIZED EMPLOYMENT SERVICES: SERVICE
PROVIDED BY COMPARABLE SERVICES AND BENEFITS PROVIDERS"
cesCompServiceProviderType="RSA CUSTOMIZED EMPLOYMENT SERVICES:
COMPARABLE SERVICES AND BENEFITS PROVIDER TYPE"
esVRAgencyStaff="RSA EXTENDED SERVICES: SERVICE PROVIDED BY VR AGENCY
STAFF (IN-HOUSE)"
esVRAgencyPurchase="RSA EXTENDED SERVICES: SERVICE PROVIDED THROUGH VR
AGENCY PURCHASE"
esPurchaseProviderType="RSA EXTENDED SERVICES: PURCHASED SERVICE
PROVIDER TYPE"
esVRTitleIFundsExpended="RSA EXTENDED SERVICES: AMOUNT OF VR FUNDS
EXPENDED FOR SERVICE (TITLE I)"
esSETitleVIFundsExpended="RSA EXTENDED SERVICES: AMOUNT OF SE FUNDS
EXPENDED FOR SERVICE (TITLE VI)"
tranVRAgencyStaff="RSA TRANSPORTATION: SERVICE PROVIDED BY VR AGENCY
STAFF (IN-HOUSE)"
tranVRAgencyPurchase="RSA TRANSPORTATION: SERVICE PROVIDED THROUGH VR
AGENCY PURCHASE"
tranPurchaseProviderType="RSA TRANSPORTATION: PURCHASED SERVICE PROVIDER
TYPE"
tranVRTitleIFundsExpended="RSA TRANSPORTATION: AMOUNT OF VR FUNDS
EXPENDED FOR SERVICE (TITLE I)"
tranSETitleVIFundsExpended="RSA TRANSPORTATION: AMOUNT OF SE FUNDS
EXPENDED FOR SERVICE (TITLE VI)"
tranCompServiceProvider="RSA TRANSPORTATION: SERVICE PROVIDED BY
COMPARABLE SERVICES AND BENEFITS PROVIDERS"
tranCompServiceProviderType="RSA TRANSPORTATION: COMPARABLE SERVICES AND
BENEFITS PROVIDER TYPE"
mntVRAgencyStaff="RSA MAINTENANCE: SERVICE PROVIDED BY VR AGENCY STAFF
(IN-HOUSE)"
mntVRAgencyPurchase="RSA MAINTENANCE: SERVICE PROVIDED THROUGH VR AGENCY
PURCHASE"
mntPurchaseProviderType="RSA MAINTENANCE: PURCHASED SERVICE PROVIDER
TYPE"
mntVRTitleIFundsExpended="RSA MAINTENANCE: AMOUNT OF VR FUNDS EXPENDED
FOR SERVICE (TITLE I)"
mntSETitleVIFundsExpended="RSA MAINTENANCE: AMOUNT OF SE FUNDS EXPENDED
FOR SERVICE (TITLE VI)"
mntCompServiceProvider="RSA MAINTENANCE: SERVICE PROVIDED BY COMPARABLE
SERVICES AND BENEFITS PROVIDERS"
mntCompServiceProviderType="RSA MAINTENANCE: COMPARABLE SERVICES AND
BENEFITS PROVIDER TYPE"
rtVRAgencyStaff="RSA REHABILITATION TECHNOLOGY: SERVICE PROVIDED BY VR
AGENCY STAFF (IN-HOUSE)"
rtVRAgencyPurchase="RSA REHABILITATION TECHNOLOGY: SERVICE PROVIDED
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THROUGH VR AGENCY PURCHASE"
rtPurchaseProviderType="RSA REHABILITATION TECHNOLOGY: PURCHASED SERVICE
PROVIDER TYPE"
rtVRTitleIFundsExpended="RSA REHABILITATION TECHNOLOGY: AMOUNT OF VR
FUNDS EXPENDED FOR SERVICE (TITLE I)"
rtSETitleVIFundsExpended="RSA REHABILITATION TECHNOLOGY: AMOUNT OF SE
FUNDS EXPENDED FOR SERVICE (TITLE VI)"
rtCompServiceProvider="RSA REHABILITATION TECHNOLOGY: SERVICE PROVIDED
BY COMPARABLE SERVICES AND BENEFITS PROVIDERS"
rtCompServiceProviderType="RSA REHABILITATION TECHNOLOGY: COMPARABLE
SERVICES AND BENEFITS PROVIDER TYPE"
pasVRAgencyStaff="RSA PERSONAL ASSISTANCE SERVICES: SERVICE PROVIDED BY
VR AGENCY STAFF (IN-HOUSE)"
pasVRAgencyPurchase="RSA PERSONAL ASSISTANCE SERVICES: SERVICE PROVIDED
THROUGH VR AGENCY PURCHASE"
pasPurchaseProviderType="RSA PERSONAL ASSISTANCE SERVICES: PURCHASED
SERVICE PROVIDER TYPE"
pasVRTitleIFundsExpended="RSA PERSONAL ASSISTANCE SERVICES: AMOUNT OF VR
FUNDS EXPENDED FOR SERVICE (TITLE I)"
pasSETitleVIFundsExpended="RSA PERSONAL ASSISTANCE SERVICES: AMOUNT OF
SE FUNDS EXPENDED FOR SERVICE (TITLE VI)"
pasCompServiceProvider="RSA PERSONAL ASSISTANCE SERVICES: SERVICE
PROVIDED BY COMPARABLE SERVICES AND BENEFITS PROVIDERS"
pasCompServiceProviderType="RSA PERSONAL ASSISTANCE SERVICES: COMPARABLE
SERVICES AND BENEFITS PROVIDER TYPE"
tasVRAgencyStaff="RSA TECHNICAL ASSISTANCE SERVICES INCLUDING
SELF-EMPLOYMENT: SERVICE PROVIDED BY VR AGENCY STAFF (IN-HOUSE)"
tasVRAgencyPurchase="RSA TECHNICAL ASSISTANCE SERVICES INCLUDING
SELF-EMPLOYMENT: SERVICE PROVIDED THROUGH VR AGENCY PURCHASE"
tasPurchaseProviderType="RSA TECHNICAL ASSISTANCE SERVICES INCLUDING
SELF-EMPLOYMENT: PURCHASED SERVICE PROVIDER TYPE"
tasVRTitleIFundsExpended="RSA TECHNICAL ASSISTANCE SERVICES INCLUDING
SELF-EMPLOYMENT: AMOUNT OF VR FUNDS EXPENDED FOR SERVICE (TITLE I)"
tasSETitleVIFundsExpended="RSA TECHNICAL ASSISTANCE SERVICES INCLUDING
SELF-EMPLOYMENT: AMOUNT OF SE FUNDS EXPENDED FOR SERVICE (TITLE VI)"
tasCompServiceProvider="RSA TECHNICAL ASSISTANCE SERVICES INCLUDING
SELF-EMPLOYMENT: SERVICE PROVIDED BY COMPARABLE SERVICES AND BENEFITS
PROVIDERS"
tasCompServiceProviderType="RSA TECHNICAL ASSISTANCE SERVICES INCLUDING
SELF-EMPLOYMENT: COMPARABLE SERVICES AND BENEFITS PROVIDER TYPE"
rsVRAgencyStaff="RSA READER SERVICES: SERVICE PROVIDED BY VR AGENCY
STAFF (IN-HOUSE)"
rsVRAgencyPurchase="RSA READER SERVICES: SERVICE PROVIDED THROUGH VR
AGENCY PURCHASE"
rsPurchaseProviderType="RSA READER SERVICES: PURCHASED SERVICE PROVIDER
```

Appendix A.202
JCL/SAS Code: RSALABEL

```
TYPE"
rsVRTitleIFundsExpended="RSA READER SERVICES: AMOUNT OF VR FUNDS
EXPENDED FOR SERVICE (TITLE I)"
rsSETitleVIFundsExpended="RSA READER SERVICES: AMOUNT OF SE FUNDS
EXPENDED FOR SERVICE (TITLE VI)"
rsCompServiceProvider="RSA READER SERVICES: SERVICE PROVIDED BY
COMPARABLE SERVICES AND BENEFITS PROVIDERS"
rsCompServiceProviderType="RSA READER SERVICES: COMPARABLE SERVICES AND
BENEFITS PROVIDER TYPE"
isVRAgencyStaff="RSA INTERPRETER SERVICES: SERVICE PROVIDED BY VR AGENCY
STAFF (IN-HOUSE)"
isVRAgencyPurchase="RSA INTERPRETER SERVICES: SERVICE PROVIDED THROUGH
VR AGENCY PURCHASE"
isPurchaseProviderType="RSA INTERPRETER SERVICES: PURCHASED SERVICE
PROVIDER TYPE"
isVRTitleIFundsExpended="RSA INTERPRETER SERVICES: AMOUNT OF VR FUNDS
EXPENDED FOR SERVICE (TITLE I)"
isSETitleVIFundsExpended="RSA INTERPRETER SERVICES: AMOUNT OF SE FUNDS
EXPENDED FOR SERVICE (TITLE VI)"
isCompServiceProvider="RSA INTERPRETER SERVICES: SERVICE PROVIDED BY
COMPARABLE SERVICES AND BENEFITS PROVIDERS"
isCompServiceProviderType="RSA INTERPRETER SERVICES: COMPARABLE SERVICES
AND BENEFITS PROVIDER TYPE"
osVRAgencyStaff="RSA OTHER SERVICES: SERVICE PROVIDED BY VR AGENCY STAFF
(IN-HOUSE)"
osVRAgencyPurchase="RSA OTHER SERVICES: SERVICE PROVIDED THROUGH VR
AGENCY PURCHASE"
osPurchaseProviderType="RSA OTHER SERVICES: PURCHASED SERVICE PROVIDER
TYPE"
osVRTitleIFundsExpended="RSA OTHER SERVICES: AMOUNT OF VR FUNDS EXPENDED
FOR SERVICE (TITLE I)"
osSETitleVIFundsExpended="RSA OTHER SERVICES: AMOUNT OF SE FUNDS
EXPENDED FOR SERVICE (TITLE VI)"
osCompServiceProvider="RSA OTHER SERVICES: SERVICE PROVIDED BY
COMPARABLE SERVICES AND BENEFITS PROVIDERS"
osCompServiceProviderType="RSA OTHER SERVICES: COMPARABLE SERVICES AND
BENEFITS PROVIDER TYPE"
EdFuncLevelDate="RSA DATE OF MOST RECENT MEASURABLE SKILL GAIN:
EDUCATIONAL FUNCTIONING LEVEL (EFL)"
SecondaryDate="RSA DATE OF MOST RECENT MEASURABLE SKILL GAIN: SECONDARY"
PostsecTransReportCardDate="RSA DATE OF MOST RECENT MEASURABLE SKILL
GAIN: POSTSECONDARY TRANSCRIPT/REPORT CARD"
TrainingMilestoneDate="RSA DATE OF MOST RECENT MEASURABLE SKILL GAIN:
TRAINING MILESTONE"
SkillGainSkillsProgDate="RSA DATE OF MOST RECENT MEASURABLE SKILL GAIN:
```

Appendix A.202
JCL/SAS Code: RSALABEL

```
SKILLS PROGRESSION"
EmpOutcome="RSA EMPLOYMENT OUTCOME"
eoPrimOccupation="RSA PRIMARY OCCUPATION AT EMPLOYMENT OUTCOME"
eoPrimOccupationStartDate="RSA START DATE OF EMPLOYMENT IN PRIMARY
OCCUPATION"
eoHourlyWage="RSA HOURLY WAGE AT EMPLOYMENT"
eoHoursWorkedPerWeek="RSA HOURS WORKED IN A WEEK AT EMPLOYMENT OUTCOME"
exitDate="RSA DATE OF VR EXIT"
exitType="RSA TYPE OF VR EXIT"
exitReason="RSA REASON FOR VR EXIT"
exitEmpOutcome="RSA EMPLOYMENT OUTCOME AT VR EXIT"
exitPrimOccupation="RSA PRIMARY OCCUPATION AT VR EXIT"
exitPrimOccStartDate="RSA START DATE OF EMPLOYMENT IN PRIMARY OCCUPATION
AT VR EXIT"
exitHourlyWage="RSA HOURLY WAGE AT VR EXIT"
exitWeeklyHoursWorked="RSA HOURS WORKED IN A WEEK AT EXIT"
exitSSDI="RSA SOCIAL SECURITY DISABILITY INSURANCE (SSDI) AT VR EXIT"
exitSSI="RSA SUPPLEMENTAL SECURITY INCOME (SSI) FOR THE AGED, BLIND, OR
DISABLED AT VR EXIT"
exitTANF="RSA TEMPORARY ASSISTANCE FOR NEEDY FAMILIES (TANF) AT VR EXIT"
exitGenAssistance="RSA GENERAL ASSISTANCE (STATE OR LOCAL GOVERNMENT) AT
VR EXIT"
exitVeteransDisability="RSA VETERANS' DISABILITY BENEFITS AT VR EXIT"
exitWorkersComp="RSA WORKERS' COMPENSATION AT VR EXIT"
exitOtherSupport="RSA OTHER PUBLIC SUPPORT AT VR EXIT"
exitPrimSupportCode="RSA PRIMARY SOURCE OF SUPPORT AT VR EXIT"
exitMedicaid="RSA MEDICAID AT VR EXIT"
exitMedicare="RSA MEDICARE AT VR EXIT"
exitACAExchange="RSA STATE OR FEDERAL AFFORDABLE CARE ACT EXCHANGE AT VR
EXIT"
exitOtherPublicIns="RSA PUBLIC INSURANCE FROM OTHER SOURCES AT VR EXIT"
exitEmployerIns="RSA PRIVATE INSURANCE THROUGH EMPLOYER AT VR EXIT"
exitEmployerInsNYE="RSA NOT YET ELIGIBLE FOR PRIVATE INSURANCE THROUGH
EMPLOYER AT VR EXIT"
exitOtherPrivateIns="RSA PRIVATE INSURANCE THROUGH OTHER MEANS AT EXIT"
peCredProgramEnrollDate="RSA DATE ENROLLED IN POST-EXIT EDUCATION OR
TRAINING PROGRAM LEADING TO A RECOGNIZED A.POSTSECONDARY CREDENTIAL"
peCredAttainmentDate="RSA DATE OF ATTAINMENT OF POST-EXIT RECOGNIZED
CREDENTIAL"
peCredentialType="RSA TYPE OF RECOGNIZED CREDENTIAL ATTAINED POST-EXIT"
q1aeEmpStatus="RSA EMPLOYMENT - FIRST QUARTER AFTER EXIT QUARTER"
q1aeEmpMatchType="RSA TYPE OF EMPLOYMENT MATCH –- FIRST QUARTER AFTER
EXIT QUARTER"
q1aeWages="RSA WAGES –- FIRST QUARTER AFTER EXIT QUARTER"
q2aeEmpRelatedToTraining="RSA EMPLOYMENT RELATED TO TRAINING –- SECOND
```

Appendix A.202
JCL/SAS Code: RSALABEL

```
QUARTER AFTER EXIT QUARTER"
q2aeEmpStatus="RSA EMPLOYMENT - SECOND QUARTER AFTER EXIT QUARTER"
q2aeEmpMatchType="RSA TYPE OF EMPLOYMENT MATCH –- SECOND QUARTER AFTER
EXIT QUARTER"
q2aeWages="RSA WAGES –- SECOND QUARTER AFTER EXIT QUARTER"
q3aeEmpStatus="RSA EMPLOYMENT - THIRD QUARTER AFTER EXIT QUARTER"
q3aeEmpMatchType="RSA TYPE OF EMPLOYMENT MATCH –- THIRD QUARTER AFTER
EXIT QUARTER"
q3aeWages="RSA WAGES –- THIRD QUARTER AFTER EXIT QUARTER"
q4aeEmpStatus="RSA EMPLOYMENT - FOURTH QUARTER AFTER EXIT QUARTER"
q4aeEmpMatchType="RSA TYPE OF EMPLOYMENT MATCH –- FOURTH QUARTER AFTER
EXIT QUARTER"
q4aeWages="RSA WAGES –- FOURTH QUARTER AFTER EXIT QUARTER"
q4aeRetentionQ2AndQ4="RSA RETENTION WITH THE SAME EMPLOYER IN THE SECOND
QUARTER AND THE FOURTH QUARTER –— FOURTH QUARTERAFTER EXIT QUARTER"
appOtherSupport="RSA SUPPORT: OTHER PUBLIC SUPPORT AT APPLICATION"
ImportAgency="RSA IMPORTAGENCY"
Report_Through="RSA REPORT_THROUGH"
SSN="SOCIAL SECURITY NUMBER"
;
```

Appendix A.203
JCL/SAS Code: RSASSNLT

```
//$4671SSN  JOB (12510000,T715,,SAS,,ITC9FL),DAWN-PHELPS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: RSA-DAF MATCHED EXTRACT FOR DOE
//* PROJECT DIRECTOR:    JODY SCHIMMEL HYDE
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(RSASSNLT)
//* DESCRIPTION: CREATES LIST OF ALL DAF18 SSNS TO BE PINNED
//*****************************************************************
//*
//*****************************************************************
//* DAF DEMO EXTRACT
//*****************************************************************
//DEMO      EXEC SAS9,
//         WORK='120000,60000'
//*
//DEMO   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.DMG,DISP=SHR
//RSA    DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.RSAEVS.SA.V1,DISP=SHR
//TKTBS  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.TICKETBS,DISP=SHR
//VRRMS  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.VRRMS,DISP=SHR
//VRRMSH DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.VRRMS.HIST,DISP=SHR
//ENPAY  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.ENPAY,DISP=SHR
//OUT    DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.SSNLIST.SA.V1,
//         DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//TEMP1  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP2  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP3  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP4  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP5  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP6  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN   DD *

OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN OBS=MAX;

DATA TEMP1.DMG;
   SET DEMO.DMG (KEEP=SSN);
   BY SSN;
RUN;
```

Appendix A.203
JCL/SAS Code: RSASSNLT

```
PROC SORT DATA=RSA.RSAEVS (KEEP=SSN) NODUPKEY
   OUT=TEMP2.RSA ;
   BY SSN;
RUN;

PROC SORT DATA=TKTBS.TICKETBS (KEEP=SSN) NODUPKEY
        OUT=TEMP3.TKTBS;
   BY SSN;
RUN;

PROC SORT DATA=VRRMS.VRRMS (KEEP=SSN) NODUPKEY
        OUT=TEMP4.VRRMS ;
   BY SSN;
RUN;

PROC SORT DATA=VRRMSH.VRRMS (KEEP=SSN) NODUPKEY
        OUT=TEMP5.VRRMSH ;
   BY SSN;
RUN;

PROC SORT DATA=ENPAY.ENPAY_FINAL (KEEP=SSN) NODUPKEY
        OUT=TEMP6.ENPAY ;
   BY SSN;
RUN;

* MERGE FILES BY SSN KEEPING ANY SSN THAT APPEARS IN ANY FILES;
DATA OUT.SSNLIST;
   MERGE TEMP1.DMG
        TEMP2.RSA
        TEMP3.TKTBS
        TEMP4.VRRMS
        TEMP5.VRRMSH
        TEMP6.ENPAY
        ;
   BY SSN;
RUN;

PROC CONTENTS DATA=OUT.SSNLIST; RUN;

PROC SORT DATA=OUT.SSNLIST NODUPKEY;
BY SSN;
RUN;

//**************************************************
```

Appendix A.203
JCL/SAS Code: RSASSNLT

```
//* SENDING EMAIL FROM HOST USING IEBGENER
//**************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<DPHELPS@MATHEMATICA-MPR.COM>
RCPT TO:<DPHELPS@MATHEMATICA-MPR.COM>
DATA
FROM:   <DPHELPS@MATHEMATICA-MPR.COM>
TO:     <DPHELPS@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 RSASSNLT IS COMPLETE
```

Appendix A.204
JCL/SAS Code: JCLPIN

```
//$7400PIN JOB (12510000,T715,,SAS,,ITC9FL),PAUL-OLEARY,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$7400
//*****************************************************************
//* PROJECT: RSA-DAF MATCHED EXTRACT FOR DOE
//* PROJECT NUMBER: 50214
//* PROJECT DIRECTOR: JODY SCHIMMEL HYDE
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(JCLPIN)
//* DESCRIPTION: CREATES ALL THE RSA-DAF MATCHED EXTRACTS WITH PIN
//* DATE:        01/28/20 DAWN PHELPS
//*****************************************************************
//*
//*****************************************************************
//*NEW PIN CREATION
//*****************************************************************
//PIN     EXEC SAS9,
//        WORK='120000,60000',
//        PARM='SYSPARM="2018"'
//*
//PREVPIN DD DSN=OPDR.TG.PRD.RTWR.DAF17P.ALLPINS.FORTRF17,DISP=SHR
//TRFSSNS DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.SSNLIST.SA.V1,DISP=SHR
//OUT     DD DSN=OPDR.TG.PRD.RTWR.DAF18P.ALLPINS.FORTRF18,
//           DISP=(NEW,CATLG,DELETE),
//           UNIT=TSILO,VOL=(,,,10)
//TEMP1    DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),
//          UNIT=TSILO,VOL=(,,,10)
//TEMP2    DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),
//          UNIT=TSILO,VOL=(,,,10)
//TEMP3    DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),
//          UNIT=TSILO,VOL=(,,,10)
//TEMP4    DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),
//          UNIT=TSILO,VOL=(,,,10)
//TEMP5    DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),
//          UNIT=TSILO,VOL=(,,,10)
//TEMP6    DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),
//          UNIT=TSILO,VOL=(,,,10)
//*SYSIN  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(CRPIN),
//*        DISP=(SHR,PASS,KEEP)
//*
//*****************************************************************
//* DAF DEMO EXTRACT
//*****************************************************************
//DEMO     EXEC SAS9,
//        WORK='120000,60000',
//        PARM='SYSPARM="2018DMG"'
```

Appendix A.204
JCL/SAS Code: JCLPIN

```
//*
//PIN    DD DSN=OPDR.TG.PRD.RTWR.DAF18P.ALLPINS.FORTRF18,DISP=SHR
//IN    DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.DMG,DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.RSAVER.DAF18.DMG.PIN,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//TEMP  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(APPIN),
//         DISP=(SHR,PASS,KEEP)
//*
//*************************************************************
//*DAF ANNUALS EXTRACT
//*************************************************************
//ANNPROC  PROC
//ANN      EXEC SAS9,
//        WORK='120000,60000',
//        PARM='SYSPARM="2018Y&YR"'
//*
//PIN    DD DSN=OPDR.TG.PRD.RTWR.DAF18P.ALLPINS.FORTRF18,DISP=SHR
//IN    DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.Y&YR.,DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.RSAVER.DAF18.Y&YR..PIN,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//TEMP  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(APPIN),
//          DISP=(SHR,PASS,KEEP)
//        PEND
//*
//ANNRUN18  EXEC ANNPROC,YR=2018
//ANNRUN17  EXEC ANNPROC,YR=2017
//ANNRUN16  EXEC ANNPROC,YR=2016
//ANNRUN15  EXEC ANNPROC,YR=2015
//ANNRUN14  EXEC ANNPROC,YR=2014
//ANNRUN13  EXEC ANNPROC,YR=2013
//ANNRUN12  EXEC ANNPROC,YR=2012
//ANNRUN11  EXEC ANNPROC,YR=2011
//ANNRUN10  EXEC ANNPROC,YR=2010
//ANNRUN09  EXEC ANNPROC,YR=2009
//ANNRUN08  EXEC ANNPROC,YR=2008
//ANNRUN07  EXEC ANNPROC,YR=2007
//ANNRUN06  EXEC ANNPROC,YR=2006
//ANNRUN05  EXEC ANNPROC,YR=2005
//ANNRUN04  EXEC ANNPROC,YR=2004
```

Appendix A.204
JCL/SAS Code: JCLPIN

```
//ANNRUN03  EXEC ANNPROC,YR=2003
//ANNRUN02  EXEC ANNPROC,YR=2002
//ANNRUN01  EXEC ANNPROC,YR=2001
//ANNRUN00  EXEC ANNPROC,YR=2000
//ANNRUN99  EXEC ANNPROC,YR=1999
//ANNRUN98  EXEC ANNPROC,YR=1998
//ANNRUN97  EXEC ANNPROC,YR=1997
//ANNRUN96  EXEC ANNPROC,YR=1996
//ANNRUN95  EXEC ANNPROC,YR=1995
//ANNRUN94  EXEC ANNPROC,YR=1994
//*
//*****************************************************************
//* DAF ANNUAL LAUS/SAIPE EXTRACT
//*****************************************************************
//LAUPROC  PROC
//LAU      EXEC SAS9,
//         WORK='120000,60000',
//         PARM='SYSPARM="2018L&YR"'
//*
//PIN    DD DSN=OPDR.TG.PRD.RTWR.DAF18P.ALLPINS.FORTRF18,DISP=SHR
//IN    DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.L&YR.,DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.RSAVER.DAF18.L&YR..PIN,
//         DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//TEMP  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(APPIN),
//           DISP=(SHR,PASS,KEEP)
//         PEND
//*
//LAURUN18  EXEC LAUPROC,YR=2018
//LAURUN17  EXEC LAUPROC,YR=2017
//LAURUN16  EXEC LAUPROC,YR=2016
//LAURUN15  EXEC LAUPROC,YR=2015
//LAURUN14  EXEC LAUPROC,YR=2014
//LAURUN13  EXEC LAUPROC,YR=2013
//LAURUN12  EXEC LAUPROC,YR=2012
//LAURUN11  EXEC LAUPROC,YR=2011
//LAURUN10  EXEC LAUPROC,YR=2010
//LAURUN09  EXEC LAUPROC,YR=2009
//LAURUN08  EXEC LAUPROC,YR=2008
//LAURUN07  EXEC LAUPROC,YR=2007
//LAURUN06  EXEC LAUPROC,YR=2006
//LAURUN05  EXEC LAUPROC,YR=2005
//LAURUN04  EXEC LAUPROC,YR=2004
```

Appendix A.204
JCL/SAS Code: JCLPIN

```
//LAURUN03  EXEC LAUPROC,YR=2003
//LAURUN02  EXEC LAUPROC,YR=2002
//LAURUN01  EXEC LAUPROC,YR=2001
//LAURUN00  EXEC LAUPROC,YR=2000
//LAURUN99  EXEC LAUPROC,YR=1999
//LAURUN98  EXEC LAUPROC,YR=1998
//LAURUN97  EXEC LAUPROC,YR=1997
//LAURUN96  EXEC LAUPROC,YR=1996
//LAURUN95  EXEC LAUPROC,YR=1995
//LAURUN94  EXEC LAUPROC,YR=1994
//*
//*****************************************************************
//* DAF TKT BASE EXTRACT
//*****************************************************************
//TKTBSE    EXEC SAS9,
//         WORK='120000,60000',
//         PARM='SYSPARM="2018TKTBASE"'
//*
//PIN     DD DSN=OPDR.TG.PRD.RTWR.DAF18P.ALLPINS.FORTRF18,DISP=SHR
//IN      DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.TKTBS,DISP=SHR
//OUT    DD DSN=OPDR.TG.PRD.ETTW.RSAVER.DAF18.TKTBASE.PIN,
//         DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//TEMP    DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//          SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(APPIN),
//          DISP=(SHR,PASS,KEEP)
//*
//****************************************************************
//* DAF TKT ANNUALS EXTRACT
//*****************************************************************
//TKTPROC   PROC
//TKTANN    EXEC SAS9,
//         WORK='120000,60000',
//         PARM='SYSPARM="2018TKT20&YR"'
//*
//PIN     DD DSN=OPDR.TG.PRD.RTWR.DAF18P.ALLPINS.FORTRF18,DISP=SHR
//IN    DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.TKT&YR.,DISP=SHR
//OUT    DD DSN=OPDR.TG.PRD.ETTW.RSAVER.DAF18.TKT&YR..PIN,
//         DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//TEMP    DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//          SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(APPIN),
//          DISP=(SHR,PASS,KEEP)
```

Appendix A.204
JCL/SAS Code: JCLPIN

```
//        PEND
//*
//TKTRUN18  EXEC TKTPROC,YR=18
//TKTRUN17  EXEC TKTPROC,YR=17
//TKTRUN16  EXEC TKTPROC,YR=16
//TKTRUN15  EXEC TKTPROC,YR=15
//TKTRUN14  EXEC TKTPROC,YR=14
//TKTRUN13  EXEC TKTPROC,YR=13
//TKTRUN12  EXEC TKTPROC,YR=12
//TKTRUN11  EXEC TKTPROC,YR=11
//TKTRUN10  EXEC TKTPROC,YR=10
//TKTRUN09  EXEC TKTPROC,YR=09
//TKTRUN08  EXEC TKTPROC,YR=08
//TKTRUN07  EXEC TKTPROC,YR=07
//TKTRUN06  EXEC TKTPROC,YR=06
//TKTRUN05  EXEC TKTPROC,YR=05
//TKTRUN04  EXEC TKTPROC,YR=04
//TKTRUN03  EXEC TKTPROC,YR=03
//TKTRUN02  EXEC TKTPROC,YR=02
//*
//*****************************************************************
//* RSA EXTRACT FILES
//*****************************************************************
//RSAPROC1 PROC
//RSA1     EXEC SAS9,
//        WORK='120000,60000',
//        PARM='SYSPARM="2018RSA&YR"'
//*
//PIN   DD DSN=OPDR.TG.PRD.RTWR.DAF18P.ALLPINS.FORTRF18,DISP=SHR
//IN    DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.RSA&YR.,DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.RSAVER.DAF18.RSA&YR..PIN,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//TEMP   DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(APPIN),
//          DISP=(SHR,PASS,KEEP)
//        PEND
//*
//RSARUN98  EXEC RSAPROC1,YR=98
//RSARUN99  EXEC RSAPROC1,YR=99
//RSARUN00  EXEC RSAPROC1,YR=00
//RSARUN01  EXEC RSAPROC1,YR=01
//RSARUN02  EXEC RSAPROC1,YR=02
//RSARUN03  EXEC RSAPROC1,YR=03
```

Appendix A.204
JCL/SAS Code: JCLPIN

```
//RSARUN04  EXEC RSAPROC1,YR=04
//RSARUN05  EXEC RSAPROC1,YR=05
//RSARUN06  EXEC RSAPROC1,YR=06
//RSARUN07  EXEC RSAPROC1,YR=07
//RSARUN08  EXEC RSAPROC1,YR=08
//RSARUN09  EXEC RSAPROC1,YR=09
//RSARUN10  EXEC RSAPROC1,YR=10
//RSARUN11  EXEC RSAPROC1,YR=11
//RSARUN12  EXEC RSAPROC1,YR=12
//RSARUN13  EXEC RSAPROC1,YR=13
//RSARUN14  EXEC RSAPROC1,YR=14
//RSARUN15  EXEC RSAPROC1,YR=15
//RSARUN16  EXEC RSAPROC1,YR=16
//RSARUN17  EXEC RSAPROC1,YR=17
//RSARUN18  EXEC RSAPROC1,YR=18
//*
//*****************************************************************
//* RSA LINKABLE FILES
//*****************************************************************
//RSALINK  EXEC SAS9,
//        WORK='120000,60000',
//        PARM='SYSPARM="2018RSAFLAT"'
//PIN    DD DSN=OPDR.TG.PRD.RTWR.DAF18P.ALLPINS.FORTRF18,DISP=SHR
//IN     DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.RSAFLAT,DISP=SHR
//TEMP  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//OUT    DD DSN=OPDR.TG.PRD.ETTW.RSAVER.DAF18P.RSAFLAT.PIN,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(APPIN),
//         DISP=(SHR,PASS,KEEP)
//*
//RSAOLD   EXEC SAS9,
//        WORK='120000,60000',
//        PARM='SYSPARM="2018RSAFLAT"'
//PIN    DD DSN=OPDR.TG.PRD.RTWR.DAF18P.ALLPINS.FORTRF18,DISP=SHR
//IN     DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.RSAFLAOF,DISP=SHR
//TEMP  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//OUT    DD DSN=OPDR.TG.PRD.ETTW.RSAVER.DAF18P.RSAFLAOF.PIN,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(APPIN),
//         DISP=(SHR,PASS,KEEP)
//*****************************************************************
```

Appendix A.204
JCL/SAS Code: JCLPIN

```
//* VRRMS EXTRACT
//*****************************************************************
//VRMS     EXEC SAS9,
//        WORK='120000,60000',
//        PARM='SYSPARM="2018VRRMS"'
//*
//PIN    DD DSN=OPDR.TG.PRD.RTWR.DAF18P.ALLPINS.FORTRF18,DISP=SHR
//IN    DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.VRRMS,DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.RSAVER.DAF18.VRRMS.PIN,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//TEMP   DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(APPIN),
//         DISP=(SHR,PASS,KEEP)
//*
//*****************************************************************
//* VRRMS EXTRACT HISTORICAL
//*****************************************************************
//VRMS     EXEC SAS9,
//        WORK='120000,60000',
//        PARM='SYSPARM="2018VRRMS"'
//*
//PIN    DD DSN=OPDR.TG.PRD.RTWR.DAF18P.ALLPINS.FORTRF18,DISP=SHR
//IN    DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.VRRMS.HIST,DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.RSAVER.DAF18.VRRMS.HIST.PIN,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//TEMP   DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(APPIN),
//         DISP=(SHR,PASS,KEEP)
//*
//*****************************************************************
//* ENPAY HORIZONTAL EXTRACT
//*****************************************************************
//ENPA     EXEC SAS9,
//        WORK='120000,60000',
//        PARM='SYSPARM="2018ENPAY"'
//*
//PIN    DD DSN=OPDR.TG.PRD.RTWR.DAF18P.ALLPINS.FORTRF18,DISP=SHR
//IN    DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.ENPAY,DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.RSAVER.DAF18.ENPAY.PIN,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
```

Appendix A.204
JCL/SAS Code: JCLPIN

```
//TEMP   DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(APPIN),
//         DISP=(SHR,PASS,KEEP)
//*
//*****************************************************************
//* ENPAY VERTICAL EXTRACT
//*****************************************************************
//ENPV     EXEC SAS9,
//        WORK='120000,60000',
//        PARM='SYSPARM="2018ENPAYVER"'
//*
//PIN    DD DSN=OPDR.TG.PRD.RTWR.DAF18P.ALLPINS.FORTRF18,DISP=SHR
//IN    DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.ENPAV,DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.RSAVER.DAF18.ENPAV.PIN,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//TEMP   DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(APPIN),
//         DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<DPHELPS@MATHEMATICA-MPR.COM>
RCPT TO:<DPHELPS@MATHEMATICA-MPR.COM>
DATA
FROM:   <DPHELPS@MATHEMATICA-MPR.COM>
TO:     <DPHELPS@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 RSA JCLPIN IS COMPLETE
```

Appendix A.205
JCL/SAS Code: JCLPIN2

```
//$7400PIN JOB (12510000,T715,,SAS,,ITC9FL),PAUL-OLEARY,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$7400
//*****************************************************************
//* PROJECT: RSA-DAF MATCHED EXTRACT FOR DOE
//* PROJECT NUMBER: 50214
//* PROJECT DIRECTOR: JODY SCHIMMEL HYDE
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(JCLPIN)
//* DESCRIPTION: CREATES ALL THE RSA-DAF MATCHED EXTRACTS WITH PIN
//* DATE:       01/28/20 DAWN PHELPS
//*****************************************************************
//*
//*
//******************************************************************
//* RSA LINKABLE FILES
//******************************************************************
//RSALINK  EXEC SAS9,
//        WORK='120000,60000',
//        PARM='SYSPARM="2018RSAFLAT"'
//PIN    DD DSN=OPDR.TG.PRD.RTWR.DAF18P.ALLPINS.FORTRF18,DISP=SHR
//IN     DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.RSAFLAT,DISP=SHR
//TEMP  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//OUT    DD DSN=OPDR.TG.PRD.ETTW.RSAVER.DAF18P.RSAFLAT.PIN,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(APPIN),
//         DISP=(SHR,PASS,KEEP)
//*
//RSAOLD   EXEC SAS9,
//        WORK='120000,60000',
//        PARM='SYSPARM="2018RSAFLAT"'
//PIN    DD DSN=OPDR.TG.PRD.RTWR.DAF18P.ALLPINS.FORTRF18,DISP=SHR
//IN     DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.RSAFLAOF,DISP=SHR
//TEMP  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//OUT    DD DSN=OPDR.TG.PRD.ETTW.RSAVER.DAF18P.RSAFLAOF.PIN,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(APPIN),
//         DISP=(SHR,PASS,KEEP)
//*
//******************************************************************
//* ENPAY HORIZONTAL EXTRACT
//******************************************************************
```

Appendix A.205
JCL/SAS Code: JCLPIN2

```
//ENPA     EXEC SAS9,
//        WORK='120000,60000',
//        PARM='SYSPARM="2018ENPAY"'
//*
//PIN    DD DSN=OPDR.TG.PRD.RTWR.DAF18P.ALLPINS.FORTRF18,DISP=SHR
//IN    DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.ENPAY,DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.RSAVER.DAF18.ENPAY.PIN,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//TEMP   DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(APPIN),
//         DISP=(SHR,PASS,KEEP)
//*
//*****************************************************************
//* ENPAY VERTICAL EXTRACT
//*****************************************************************
//ENPV     EXEC SAS9,
//        WORK='120000,60000',
//        PARM='SYSPARM="2018ENPAYVER"'
//*
//PIN    DD DSN=OPDR.TG.PRD.RTWR.DAF18P.ALLPINS.FORTRF18,DISP=SHR
//IN    DD DSN=OPDR.TG.PRD.ETTW.FINAL.RSA.DAF18.ENPAV,DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.RSAVER.DAF18.ENPAV.PIN,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//TEMP   DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(APPIN),
//         DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<DPHELPS@MATHEMATICA-MPR.COM>
RCPT TO:<DPHELPS@MATHEMATICA-MPR.COM>
DATA
FROM:   <DPHELPS@MATHEMATICA-MPR.COM>
TO:     <DPHELPS@MATHEMATICA-MPR.COM>
```

Appendix A.205
JCL/SAS Code: JCLPIN2

SUBJECT: DAF18 RSA JCLPIN IS COMPLETE

Appendix A.206
JCL/SAS Code: CRPIN

```
OPTIONS LS=132 COMPRESS=YES MPRINT MACROGEN OBS=MAX;

%MACRO DOIT;

* SYSPARM MACRO VARIABLE COMES IN FROM THE JCL;

* SET MACRO VARIABLE TO 2 DIGIT YEAR;
%LET YR=%SUBSTR(&SYSPARM.,3,2);
%PUT YR=&YR.;

* SET MACRO VARIABLE TO PRIOR YEAR;
%LET PYEAR=%EVAL(&SYSPARM.-1);
%PUT PYEAR=&PYEAR.;

* SET MACRO VARIABLE TO 2 DIGIT PRIOR YEAR;
%LET PYR=%SUBSTR(&PYEAR.,3,2);
%PUT PYR=&PYR.;

***********  GET THE HIGHEST PIN NUMBER FOR PREVIOUS PIN FILE *********;
PROC SORT DATA=PREVPIN.ALL_TRF&PYR._DEMO_PINS OUT=TEMP1.PREVPINS;
   BY DESCENDING PIN;
RUN;

DATA _NULL_;
   SET TEMP1.PREVPINS(FIRSTOBS=1 OBS=1);
   CALL SYMPUTX('HIGHPIN',PIN);
RUN;
%PUT HIGHPIN=&HIGHPIN.;

************** DETERMINE NEW SSNS THAT NEED PINS **********************;
PROC SORT DATA=PREVPIN.ALL_TRF&PYR._DEMO_PINS OUT=TEMP2.PREVPINS;
   BY SSN;
RUN;

DATA TEMP3.NEWSSNS;
   MERGE TEMP2.PREVPINS(IN=PREV)
        TRFSSNS.SSNLIST(IN=TRF KEEP=SSN)
        ;
   BY SSN;
   IF TRF AND NOT PREV;
   IF SSN='' THEN DELETE;
   IF SSN='000000000' THEN DELETE;
   IF NOTDIGIT(SSN)>0 THEN DELETE;
```

Appendix A.206
JCL/SAS Code: CRPIN

```
    * GENERATE RANDOM NUMBER FOR SORTING;
    RAND_NUM=RANUNI(0);

    IF MISSING(SSN) THEN MISSSSN=1;
    ELSE MISSSSN=0;
    IF MISSING(PIN) THEN MISSPIN=1;
    ELSE MISSPIN=0;
RUN;

TITLE1 'FREQ OF MISSING PINS & SSNS FROM NEW LIST OF SSNS TO PIN';
TITLE2 'NO SSNS SHOULD BE MISSING';
TITLE3 'ALL PINS SHOULD BE MISSING';
PROC FREQ DATA=TEMP3.NEWSSNS;
    TABLE MISSSSN / MISSING;
    TABLE MISSPIN / MISSING;
RUN;

******************** ASSIGN NEW PINS **********************************;
* SORT BY RANDOM NUMBER;
PROC SORT DATA=TEMP3.NEWSSNS OUT=TEMP4.NEWSSNS;
    BY RAND_NUM;
RUN;

* ADD THE OBSERVATION NUMBER TO THE PREVIOUS HIGHEST PIN TO CREATE PIN
  FOR NEW SSN;
DATA TEMP5.NEWPINS;
    SET TEMP4.NEWSSNS;
    NEWPIN=_n_+&HIGHPIN.;
    PIN=PUT(NEWPIN, 8.);

    IF MISSING(SSN) THEN MISSSSN=1;
    ELSE MISSSSN=0;
    IF MISSING(PIN) THEN MISSPIN=1;
    ELSE MISSPIN=0;

    DROP NEWPIN
        RAND_NUM
        ;

RUN;

TITLE1 'FREQ OF MISSING PINS & SSNS AFTER ASSIGNING PINS TO NEW SSNS';
TITLE2 'NO SSNS SHOULD BE MISSING';
TITLE3 'NO PINS SHOULD BE MISSING';
```

Appendix A.206
JCL/SAS Code: CRPIN

```
PROC FREQ DATA=TEMP5.NEWPINS;
   TABLE MISSSSN / MISSING;
   TABLE MISSPIN / MISSING;
RUN;

****************** ADD NEW PINS TO PREVIOUS PINS **********************;
PROC SORT DATA=TEMP5.NEWPINS OUT=TEMP6.NEWPINS;
   BY SSN;
RUN;

DATA OUT.ALL_TRF&YR._DEMO_PINS;
   SET TEMP2.PREVPINS(IN=A)
      TEMP6.NEWPINS(IN=B)
      ;
   BY SSN;

   IF MISSING(SSN) THEN MISSSSN=1;
   ELSE MISSSSN=0;
   IF MISSING(PIN) THEN MISSPIN=1;
   ELSE MISSPIN=0;
RUN;

TITLE1 'MISSING PINS & SSNS AFTER COMBINING OLD PINS WITH NEW PINS';
TITLE2 'NO SSNS SHOULD BE MISSING';
TITLE3 'NO PINS SHOULD BE MISSING';
PROC FREQ DATA=OUT.ALL_TRF&YR._DEMO_PINS;
   TABLE MISSSSN / MISSING;
   TABLE MISSPIN / MISSING;
RUN;

%MEND DOIT;
%DOIT;
```

Appendix A.207
JCL/SAS Code: APPIN

```
* EXECUTED BY OPDR.TG.PRD.ETTW.$4671.DAF18.RSADAF.PRDLIB(JCLPIN);
* THIS PROGRAM ADDS THE PINS TO DAF DATA FOR VERIFIED RSA RECORDS;

OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN OBS=MAX;

%LET YEAR=%SUBSTR(&SYSPARM.,1,4);
%LET YR=%SUBSTR(&SYSPARM.,3,2);
%LET MEM=%SUBSTR(&SYSPARM.,5);

%MACRO DOIT;
DATA TEMP.&MEM.(DROP=SSN);
   MERGE IN.&MEM.(IN=A )
        PIN.ALL_TRF&YR._DEMO_PINS(IN=P)
           ;
   BY SSN;
   IF A;
   IF P THEN INPIN=1;
   ELSE INPIN=0;
RUN;

PROC SORT DATA = TEMP.&MEM. OUT = OUT.&MEM.;
BY PIN;
RUN;

TITLE1 'AFTER PINNING DATA';
TITLE2 'ALL OBSERVATION SHOULD BE IN THE PIN FILE';
PROC FREQ DATA=OUT.&MEM.;
   TABLE INPIN / MISSING;
RUN;

TITLE1;
TITLE2;
PROC CONTENTS DATA=OUT.&MEM.;
RUN;
%MEND DOIT;
%DOIT;
ENDSAS;
```

Appendix A.208
JCL/SAS Code: MEFFNDR

```
//#6502MEF  JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT: BUILD DAF17
//* PROJECT
//* DIRECTOR:    JODY SCHIMMEL HYDE
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.RSADAF.PRDLIB(MEFFNDR)
//*
//* DESCRIPTION: MERGES VERIFIED RSA RECORDS WITH DAF MASTER FINDER
//*              TO BUILD THE MEF FINDER FILE
//* DATE:        2/11/20 ALEX BRYCE
//*****************************************************************
//*
//RSA       EXEC SAS9,
//          WORK='120000,60000'
//*
//* INPUT FILE 1
//* EVS-VERIFIED RSA FILE
//IN1   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.RSAEVSR.SA.V1,DISP=SHR
//* INPUT FILE 2
//* DAF18 MASTER FINDER FILE
//IN2   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.MASTFIND.SA.V1,DISP=SHR
//*
//*OUTPUT FILE - MEF FINDER FILE WITH ONLY SSN
//FIN   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MEFFIND.SA.V1,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//TEMP1  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//       SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//*
//SYSIN  DD *

 *KEEP ONLY EVS-VERIFIED SSNS;
DATA TEMP1.RSAEVS_VERIFIED;
   SET IN1.MPR_EVS4 (KEEP = SSN VER_CODE
   WHERE=(VER_CODE = 'Y'));
   BY SSN;
RUN;

 PROC FREQ DATA = TEMP1.RSAEVS_VERIFIED;
 TABLES VER_CODE / LIST MISSING;
 RUN;
```

Appendix A.208
JCL/SAS Code: MEFFNDR

```
 *CREATING SAS FINDER FILE FOR MEF;
DATA FIN.MEF_FINDER;
   MERGE TEMP1.RSAEVS_VERIFIED (KEEP = SSN IN=INA)
        IN2.MASTFIND (KEEP = SSN IN=INB);
       ;
   BY SSN;
   *KEEP ANY SSN THAT SHOWS UP IN EITHER INPUT FILES;
   IF INA OR INB;
   *WE ONLY NEED ONE RECORD FOR EACH DISTINCT SSN;
   IF LAST.SSN;
RUN;

PROC CONTENTS DATA=FIN.MEF_FINDER; RUN;
```

Appendix A.209
JCL/SAS Code: LAUS_FORMAT

```
/*************************************************************************
PROGRAM: LAUS FORMATS
AUTHOR:  PATSY LLOYD
PURPOSE: TO CREATE LAUS FORMATS
DATE: 10/25/2013
UPDATED: 11/22/2013 PL -- TO RUN AT SSA
UPDATED: 10/08/2014 JM -- FOR DAF13
UPDATED: 01/07/2016 JM -- FOR DAF14
UPDATED: 12/09/2016 KJ -- FOR DAF15
UPDATED: 12/19/2017 MMS -- FOR DAF16
UPDATED: 12/14/2018 BBC -- FOR DAF17
UPDATED: 12/13/2019 SL -- FOR DAF18
*************************************************************************/
%let  todaydt = %sysfunc(today());
%let  todaydt = %sysfunc(putn(&todaydt,yymmdd10.));
%put &todaydt;

options obs=MAX;

%let root=M:\DAF18\TASK 18 Create LAUS-SAIPE Formats;

proc printto
    log = "&root.\Programs\LAUS_FORMAT_&todaydt..log"
   new
    print = "&root.\Programs\LAUS_FORMAT_&todaydt..lst";
run;

%LET RAWDIR=&root.\Raw Data;

LIBNAME OUTPUT "&root.\Output";

%LET BEGYR=1994;
%LET ENDYR=2018;

* FROM DP: Read the LAUS Area code variable from the text file
  M:\DAF16\Task 18 - LAUS-SAIPE Processing\Raw Data\laucntycur14.txt into SAS;

PROC IMPORT OUT= OUTPUT.LAUCNTYCUR14
         DATAFILE= "&RAWDIR.\laucntycur14.txt"
         DBMS=DLM REPLACE;
    DELIMITER='7C'x;
    GETNAMES=YES;
    DATAROW=7;  /* Brittany Colip -- changed to 7 instead of 8 in DAF17 */
                     /**/
```

Appendix A.209
JCL/SAS Code: LAUS_FORMAT

```
    GUESSINGROWS=45000;
  RUN;

  DATA OUTPUT.LAUCNTYCUR14;
   SET OUTPUT.LAUCNTYCUR14;

   RENAME Labor_force_data_by_county__not=LAC;
   LABEL  Labor_force_data_by_county__not="LAUS AREA CODE";

   *DELETE IF STATE FIPS CODE IS MISSING;
   *IF VAR2=. THEN DELETE;*UPDATED TO WHERE;
   WHERE VAR2^=.;

   FIPS=TRIM(PUT(VAR2,Z2.)||PUT(VAR3,Z3.));

   *ONLY KEEP COUNTY LEVEL RECORDS;

   *IF SUBSTR(Labor_force_data_by_county__not,1,2) in ("CN","PA");

   *ONLY NEED TO KEEP THE LAC VARIABLE;

   KEEP Labor_force_data_by_county__not FIPS;
   RUN;

  *FROM DP: Sort the resulting SAS file from Step1 by the LAUS Area code;
  PROC SORT DATA=OUTPUT.LAUCNTYCUR14 NODUPKEY; BY LAC;RUN;

  *FROM DP: SAS load the monthly county employment rate files
  M:\DAF13\Task 20 - LAUS - SAIPE\LAUS\Raw Data\la.data.0.CurrentUyy-yy
  We only need unemployment rates from Jan 1994 through Dec 2013.  ;

  *CHANGED TO KEYWORD PARAMETERS IN DAF13;
  %MACRO IMPORT(INPUT=,OUTPUT=);

  PROC IMPORT OUT= OUTPUT.&OUTPUT.
          DATAFILE= "&INPUT"
          DBMS=TAB REPLACE;
     GETNAMES=YES;
    GUESSINGROWS=MAX;
  RUN;

  DATA OUTPUT.&OUTPUT.;
    SET OUTPUT.&OUTPUT.;
    LENGTH LAC $ 15;
    LAC=SUBSTR(SERIES_ID,4);
```

Appendix A.209
JCL/SAS Code: LAUS_FORMAT

```
  WHERE SUBSTR(SERIES_ID,LENGTH(SERIES_ID)-1,2) = "03" AND /*GETTING IDS ENDING WITH 03*/
      PERIOD NE "M13" AND /*M13 SPECIFIES THE AVERAGE, WHICH WE DO
                          NOT NEED*/
      1994<=YEAR<=&ENDYR;   /*WE ONLY NEED UNEMPLOYMENT RATES BETWEEN
                          JAN 1994 - DEC of the current DAF year*/
  RUN;

PROC SORT DATA=OUTPUT.&OUTPUT.; BY LAC;RUN;
%MEND;
%IMPORT(INPUT=&RAWDIR.\la.data.0.CurrentU90-94.txt, OUTPUT=MER_90_94);
%IMPORT(INPUT=&RAWDIR.\la.data.0.CurrentU95-99.txt, OUTPUT=MER_95_99);
%IMPORT(INPUT=&RAWDIR.\la.data.0.CurrentU00-04.txt, OUTPUT=MER_00_04);
%IMPORT(INPUT=&RAWDIR.\la.data.0.CurrentU05-09.txt, OUTPUT=MER_05_09);
%IMPORT(INPUT=&RAWDIR.\la.data.0.CurrentU10-14.txt, OUTPUT=MER_10_14);
%IMPORT(INPUT=&RAWDIR.\la.data.0.CurrentU15-19.txt, OUTPUT=MER_15_19);


/*THE VARIABLE "VALUE" WAS IMPORTED AS A CHARACTER FIELD, SO
 I AM CONVERTING TO NUMERIC SINCE IT THIS IS THE FORMAT OF THIS
 VARIABLE IN THE OTHER DATASETS*/
DATA OUTPUT.MER_05_09;
  SET OUTPUT.MER_05_09;
  IF _______value="-" THEN _______value=.;
  _______value1=_______value+0;
  DROP _______value;
  RENAME _______value1=_______value;
  LABEL _______value1=_______value;
  RUN;


*MERGE COUNTY LEVEL LACs FILE WITH MONTHLY EMPLOYMENT RATES;

DATA STEP1;
 SET
       OUTPUT.MER_00_04
       OUTPUT.MER_05_09
       OUTPUT.MER_10_14
       OUTPUT.MER_90_94
       OUTPUT.MER_95_99
         OUTPUT.MER_15_19
;
   BY LAC;
RUN;

PROC MEANS DATA=STEP1;
```

Appendix A.209
JCL/SAS Code: LAUS_FORMAT

```
CLASS YEAR;
VAR _______value;
RUN;


DATA OUTPUT.LAUS;
   MERGE OUTPUT.LAUCNTYCUR14 (IN=A)
       STEP1 (rename=(_______value=VALUE));

   BY LAC;
   IF A;

  * CREATE A FIPS/YR/MO VARIABLE;

        FIPSYRMO=TRIM(FIPS||SUBSTR(PUT(YEAR,$4.),3,2)||SUBSTR(PERIOD,2,2));

   * IN ORDER TO CREATE THE FORMAT THE VARIABLE CONTAINING THE VALUE
     TO BE FORMATTED MUST BE NAMED "START" AND THE VARIABLE CONTAINING
     THE FORMATTED VALUE MUST BE NAME "LABEL";

   START=FIPSYRMO;
   LABEL=VALUE;

   * A VARIABLE NAMED FMTNAME MUST BE CREATED TO STORE THE NAME OF THE
     FORMAT --- THE NAME USED TO REFERENCE THE FORMAT;
   FMTNAME='$LAUS';

   OUTPUT;

RUN;

* CREATE THE FORMAT FROM THE FILE CREATED IN PREVIOUS DATASTEP;
PROC FORMAT CNTLIN=OUTPUT.LAUS LIBRARY=OUTPUT ; RUN;

* CHECK THAT THE FORMAT IS WORKING CORRECTLY BY PRINTING THE FORMATED
  VALUE OF "START" FROM THE CNTLIN FILE AND THE VALUE OF "LABEL".  IF
  THE FORMAT CREATION WAS SUCCESSFULL THESE VALUES WILL BE THE SAME;

OPTIONS FMTSEARCH = (OUTPUT);
PROC PRINT DATA=OUTPUT.LAUS (OBS=100);
   VAR FIPSYRMO START LABEL;
   FORMAT START $LAUS.;
RUN;
```

Appendix A.210
JCL/SAS Code: Upload LAUS Data

```
*****************************************************************
* PROJECT: Evaluation of the Ticket to Work Program-Part A
*        Evaluation Implementation (6979) TRF12
* PROJECT
* DIRECTOR:    LESLEY HILDEBRAND
*
* PROGRAM:     M:\DAF12\TKT\Upload LAUS SAIPE Data.sas
*
*
* DESCRIPTION: UPLOADS LAUSE SAIPE DATA TO CREATE FORMATS
*
* DATE:       01/13/2016 JOE MASTRIANNI
* UPDATED:     12/20/2019 ALEX BRYCE FOR DAF18
***************************************************************** ;
options comamid=tcp; %let SY56=SY56.sspf.ssa.gov; %let tcpsec=_prompt_; options remote=sy56.spawner; run;
libname local 'M:\DAF18\TASK 18 Create LAUS-SAIPE Formats\Output';

SIGNON ;

rsubmit;

%LET ENDYR=2018; *UPDATE ACCORDINGLY;
TITLE1 "DAF18 LAUS FORMATS"; *UPDATE ACCORDINGLY;

libname LAUS 'OPDR.TG.PRD.ETTW.#6502.DAF18P.FRMTLAUS.SA.V1' ;

option compress=binary;

proc upload data=local.LAUS  OUT=LAUS.FRMTLAUS (compress=binary);RUN;

endrsubmit;
signoff;
```

Appendix A.211
JCL/SAS Code: LAUS

```
//#6502FOR JOB (12510000,T715,,SAS,,ITC9TH),ALEX-BRYCE,CLASS=T,
// MSGCLASS=1,MSGLEVEL=(1,1),REGION=4096K,NOTIFY=#6502
/*SSAMAIN SASBASIC
//*****************************************************************
//* PROJECT: DAF
//*
//* PROJECT
//* DIRECTOR:    LAURA KOSAR
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.<ID>.DAFYY.LAUS.PRDLIB(LAUS)
//*
//* DESCRIPTION: CREATE FORMAT LIBRARY FOR LAUS AND SAIPE
//* UPDATED 12/20/2019 FOR DAF18
//*
//* EMAIL:      ABRYCE@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//        WORK='120000,60000'
//*
//LAUS    DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.FRMTLAUS.SA.V1,DISP=SHR
//LIBLASA DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.LAUS.FMTLIB,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(4000,4000),RLSE)
//SYSIN   DD *
OPTIONS NOCENTER FMTSEARCH = (LIBLASA) MPRINT SYMBOLGEN;

%LET ENDYR=2018; *UPDATE ACCORDINGLY;
 TITLE1 "DAF18 LAUS/SAIPE FORMATS"; *UPDATE ACCORDINGLY;
 %MACRO READYRS();
 %DO YEAR=1994 %TO &ENDYR. ;

      /*KEEP ONLY LAST TWO DIGITS OF THE YEAR*/
      %LET YRS=%SUBSTR(&YEAR,3,2);

     DATA LAUS&YRS;
       SET LAUS.FRMTLAUS (WHERE=(YEAR=&YEAR.) DROP=FMTNAME);
       LENGTH FMTNAME $20;
       FMTNAME="$LAUS&YRS.F";
     RUN;

       /*USE CNTLIN TO ADD $LAUS&YRS.F FORMAT.
         TO THE FORMAT LIBRARY */
     PROC FORMAT CNTLIN=LAUS&YRS LIBRARY=LIBLASA ; RUN;
```

Appendix A.211
JCL/SAS Code: LAUS

```
  PROC PRINT DATA=LAUS&YRS. (OBS=100);
  TITLE2 "CHECK THAT FORMATS WERE CREATED CORRECTLY, YEAR: &YEAR.";
  TITLE3 "START SHOULD EQUAL LABEL";
     VAR FIPSYRMO START LABEL;
     FORMAT START $LAUS&YRS.F.;
  RUN;

%END;
%MEND;
%READYRS();
```

Appendix A.212
JCL/SAS Code: SAIPE_FORMAT

```
/*************************************************************************
PROGRAM: SAIPE FORMATS
PURPOSE: TO CREATE SAIPE FORMATS

SPECS:

1.      Read the SAIPE files estyyall.txtLAUS in
N:\Shared-DC1\06979_TRF\Common\DAF12\Data Processing\SAIPED into SAS;
use the accompanying READMEyy files to determine positions of the FIPSCODE
and "Estimated percent of people of all ages in poverty" and "Estimate of
median household income".  2012 data is not yet available but was suppose
to be this month (October) --- we will have to add this data when it
becomes available.  NOTE:  there are no 1994 values and there is no 1996
file with county data; we will address the 1996 State values in the documentation.

2.      Create a 2 formats from the dataset created in Step 1 call them $SAIPEPOV
and $SAIPEINC.  The value should be the 5 digit FIPS concatenated with the yymm
(like you did with the LAUS format) and the formatted value should be the poverty
rate or the median household income.

*************************************************************************/
%let  todaydt = %sysfunc(today());
%let  todaydt = %sysfunc(putn(&todaydt,yymmdd10.));
%put &todaydt;

%let root=M:\DAF18\TASK 18 Create LAUS-SAIPE Formats;

proc printto
      log = "&root.\Programs\SAIPE_FORMAT_&todaydt..log"
   new
    print = "&root.\Programs\SAIPE_FORMAT_&todaydt..lst";
run;

OPTIONS OBS=MAX; *FOR TESTING;

%LET ENDYR=2018; *UPDATE ACCORDINGLY;
%LET YY=%SUBSTR(&ENDYR,3);
%PUT DAF&ENDYR -> DAF&YY;

TITLE1 "DAF&YY SAIPE FORMATS"; *UPDATE ACCORDINGLY;

LIBNAME OUTPUT "&ROOT.\OUTPUT";

%MACRO READYRS;
```

Appendix A.212
JCL/SAS Code: SAIPE_FORMAT

```
%DO YEAR=1995 %TO &ENDYR. ;
 /*NOTE FROM DP: there are no 1994 values and there is no 1996
  file with county data;

  USE %GOTO TO END THE LOOP*/

 %IF &YEAR=1996 %THEN %GOTO OUT;
 %LET YRS=%SUBSTR(&YEAR,3,2); *KEEP ONLY LAST TWO DIGITS OF THE YEAR;

/*READ IN DATA*/
 DATA OUTPUT.EST&YRS.ALL;
   LENGTH FIPS $7.;
   KEEP FIPS_ST FIPS_CTY PCT_POV MED_INC FIPS FMTNAME START LABEL;
   INFILE "&ROOT.\Raw Data\est&YRS.all.txt"
   FIRSTOBS=1 lrecl=3400;
   INPUT @1       FIPS_ST       2.0
        @4     FIPS_CTY       3.0
        @35    PCT_POV        4.2
        @134   MED_INC        6.0;

   FIPS=TRIM(PUT(FIPS_ST,Z2.)||PUT(FIPS_CTY,Z3.)||LEFT(PUT(&YRS.,Z2.)));
   START=FIPS;
   LABEL=PCT_POV;

  /*A VARIABLE NAMED FMTNAME MUST BE CREATED TO STORE
    THE NAME OF THE FORMAT --- THE NAME USED TO
    REFERENCE THE FORMAT*/

    FMTNAME="$SAIPEPOV&YRS.F";
   OUTPUT;
 RUN;

 /*USE CNTLIN TO ADD $SAIPEPOV FORMAT. TO THE FORMAT
  LIBRARY */

 PROC FORMAT CNTLIN=OUTPUT.EST&YRS.ALL LIBRARY=OUTPUT ; RUN;

 /*RENAME START AND LABEL TO MED_INC TO ASSOCIATE
  THE FORMAT WITH THIS VARIABLE*/

 DATA OUTPUT.EST&YRS.ALL;
   SET OUTPUT.EST&YRS.ALL;
   LABEL=MED_INC;
   FMTNAME="$SAIPEINC&YRS.F";
```

Appendix A.212
JCL/SAS Code: SAIPE_FORMAT

```
    OUTPUT;
  RUN;

/*USE CNTLIN TO ADD $SAIPEINC FORMAT.
  TO THE FORMAT LIBRARY */

  PROC FORMAT CNTLIN=OUTPUT.EST&YRS.ALL LIBRARY=OUTPUT ; RUN;

  OPTIONS FMTSEARCH = (OUTPUT);

/*PRODUCE A PRINT TO CHECK THAT THE FORMAT
  WAS CREATED CORRECTLY*/
  PROC PRINT DATA=OUTPUT.EST&YRS.ALL (OBS=100);
    TITLE2 "CHECK THAT FORMATS WERE CREATED CORRECTLY, YEAR: &YEAR.";
    TITLE3 "FIPS SHOULD EQUAL PCT_POV, AND START SHOULD EQUAL MED_INC";
    VAR FIPS PCT_POV START MED_INC;
    FORMAT START $SAIPEINC&YRS.F. FIPS $SAIPEPOV&YRS.F.;
RUN;

%OUT:
%END;
%MEND;

%READYRS;
```

Appendix A.213
JCL/SAS Code: Upload SAIPE Data

```
*****************************************************************
* PROJECT:     DAF
* PROJECT
* DIRECTOR:    LAURA KOSAR
* PROGRAM:     Upload SAIPE Data.sas
* DESCRIPTION: UPLOADS LAUSE SAIPE DATA TO CREATE FORMATS
***************************************************************** ;
options comamid=tcp; %let SY56=SY56.sspf.ssa.gov; %let tcpsec=_prompt_; options remote=sy56.spawner; run;
LIBNAME OUT 'M:\DAF18\TASK 18 Create LAUS-SAIPE Formats\Output';

SIGNON ;
libname local 'M:\DAF18\TASK 18 Create LAUS-SAIPE Formats\Output';
rsubmit;

%LET ENDYR=2018; *UPDATE ACCORDINGLY;
%LET YY=%SUBSTR(&ENDYR,3);
%PUT DAF&ENDYR -> DAF&YY;
TITLE1 "DAF&YY. SAIPE FORMATS"; *UPDATE ACCORDINGLY;

*Not using &yy in libname because you'll probably copy and paste the entire dsn;
libname LAUSDATA 'OPDR.TG.PRD.ETTW.#6502.DAF18P.FRMTSAIP.SA.V1' ;

%MACRO LIBS();
option compress=binary;

%DO YEAR=1995 %TO &ENDYR. ;
  /*NOTE FROM DP: there are no 1994 values and there is no 1996
   file with county data;

   USE %GOTO TO END THE LOOP*/

  %IF &YEAR=1996 %THEN %GOTO OUT;
  %LET YRS=%SUBSTR(&YEAR,3,2); *KEEP ONLY LAST TWO DIGITS OF THE YEAR;

  proc upload data=local.est&YRS.all  OUT=LAUSDATA.est&YRS.all (compress=binary);RUN;
  %OUT:
%END;
%MEND;
%LIBS;

endrsubmit;
signoff;
```

Appendix A.214
JCL/SAS Code: SAIPE

```
//#6502FRS JOB (12510000,T715,,SAS,,ITC9TH),ALEX-BRYCE,CLASS=T,
// MSGCLASS=1,MSGLEVEL=(1,1),REGION=4096K,NOTIFY=#6502
/*SSAMAIN SASBASIC
//*****************************************************************
//* PROJECT: DAF
//*
//* PROJECT
//* DIRECTOR:    LAURA KOSAR
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.<ID>.DAFYY.LAUS.PRDLIB(SAIPE)
//*
//* DESCRIPTION: CREATE FORMAT LIBRARY FOR SAIPE
//* UPDATED:     12/20/2019 FOR DAF17
//* EMAIL:       BCOLIP@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//JS010   EXEC SAS9,
//        WORK='120000,60000'
//*
//SAIPE   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.FRMTSAIP.SA.V1,DISP=SHR
//LIBLASA DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.SAIPE.FMTLIB,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(4000,4000),RLSE)
//SYSIN   DD *
OPTIONS NOCENTER FMTSEARCH = (LIBLASA) MPRINT SYMBOLGEN;

%LET ENDYR=2018; *UPDATE ACCORDINGLY;
%LET YY=%SUBSTR(&ENDYR,3);
%PUT DAF&ENDYR -> DAF&YY;
 TITLE1 "DAF&YY. SAIPE FORMATS";
 %MACRO READYRS;
 %DO YEAR=1995 %TO &ENDYR. ;

  /*NOTE FROM DP: THERE ARE NO 1994 VALUES AND THERE IS NO 1996
    FILE WITH COUNTY DATA USE %GOTO TO END THE LOOP */

      %IF &YEAR=1996 %THEN %GOTO OUT;
      /*KEEP ONLY LAST TWO DIGITS OF THE YEAR*/
      %LET YRS=%SUBSTR(&YEAR,3,2);

  /***          CREATING MED_INC FORMATS          ***/
      /*RENAME START AND LABEL TO MED_INC TO ASSOCIATE
        THE FORMAT WITH THIS VARIABLE*/
     DATA EST&YRS.ALL;
```

Appendix A.214
JCL/SAS Code: SAIPE

```
        SET SAIPE.EST&YRS.ALL (DROP=FMTNAME);
        LENGTH FMTNAME $ 20;
        LABEL=MED_INC;
        FMTNAME="$SAIPEINC&YRS.F";
      RUN;

    /*USE CNTLIN TO ADD $SAIPEINC FORMAT TO THE FORMAT LIBRARY*/
      PROC FORMAT CNTLIN=EST&YRS.ALL LIBRARY=LIBLASA ; RUN;

  /***          CREATING POVERTY FORMATS          ***/
      DATA EST&YRS.ALL2;
        SET SAIPE.EST&YRS.ALL (DROP=FMTNAME);
        LENGTH FMTNAME $20;
        LABEL=PCT_POV;
        FMTNAME="$SAIPEPOV&YRS.F";
        OUTPUT;
      RUN;

  /*USE CNTLIN TO ADD $SAIPEPOV FORMAT TO THE FORMAT LIBRARY*/

  PROC FORMAT CNTLIN=EST&YRS.ALL2 LIBRARY=LIBLASA ; RUN;

    /*PRODUCE A PRINT TO CHECK THAT THE FORMAT
    WAS CREATED CORRECTLY*/

  PROC PRINT DATA=SAIPE.EST&YRS.ALL(OBS=100);
    TITLE2 "CHECK THAT FORMATS WERE CREATED CORRECTLY, YEAR: &YEAR.";
    TITLE3 "FIPS SHOULD EQUAL PCT_POV, AND START SHOULD EQUAL MED_INC";
    VAR FIPS PCT_POV START MED_INC;
    FORMAT START $SAIPEINC&YRS.F. FIPS $SAIPEPOV&YRS.F.;
  RUN;


%OUT:
%END;
%MEND;
%READYRS;
```

Appendix A.215
JCL/SAS Code: SSIBEN

```
//$4671SIB  JOB (12510000,T715,,SAS,,ITC9FL),DAWN-PHELPS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT:     50214 DAF
//* PROJECT
//* DIRECTOR:    LAURA KOSAR
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF17.VAL.PRDLIB(SSIBEN)
//* DESCRIPTION: CREATE BENCHMARKING
//*
//* INPUT:      ANNUAL FILES
//*            OPDR.TG.PRD.ETTW.<ID>.DAF<YY>I.Y20<YY>.SA.V<V>
//*
//*            DEMOGRAPHIC FILE
//*            OPDR.TG.PRD.ETTW.<ID>.DAF<YY>I.DEMO.SA.V<V>
//*
//* OUTPUT:     OPDR.TG.PRD.ETTW.<ID>.VAL<YY>P.SSIBENES.SA.V<V>
//*
//* PURPOSE: CREATE TABLES FOR BENCHMARKING
//*****************************************************************
//*
//SAS       EXEC SAS9,
//         WORK='120000,60000'
//*
//DEM  DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.DMG,DISP=SHR
//DEM2 DD  DSN=OPDR.TG.PRD.ETTW.#7429.DAF18I.DMG.SA.V1,DISP=SHR
//ANN  DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2018E,DISP=SHR
//OUT  DD  DSN=OPDR.TG.PRD.ETTW.$4671.VAL18P.SSIBENES.SA.V1,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//TEMP1  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN  DD *

OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN  OBS=MAX;

TITLE1 "BENCHMARKING";
TITLE2 "SSI BENEFICARIES";

%LET YR=18;
%LET DATE = '31DEC2018'D;

%MACRO GETDATA;
DATA OUT.Y20&YR.;
  MERGE ANN.Y20&YR.(IN=ANNX KEEP=SSN PSTA&YR.12 PST&YR.12
```

Appendix A.215
JCL/SAS Code: SSIBEN

```
                    PAYS&YR.12 DUES&YR.12)
      DEM.DMG(IN=DEMX KEEP=SSN SEX DOBBEST BIC TOC1 DOEI DOEC ELG_RD
                  MINFRSTP DOBSSR SSIELIG_FIRST
                  SSIELIG_ADULT
                  DXPRI_SSI DXPRIBEST)
      /* STATECD_ENDYR DROPPED IN THE DMG FINALIZATION PROGRAM.
        GET THIS VARIABLE FROM THE DMG INTERMEDIATE FILE */
      DEM2.DMG(KEEP=SSN STATECD_ENDYR);
  BY SSN;

  IF DEMX AND ANNX;

  AGE&YR.=INTCK('MONTHS',DOBSSR,&DATE)/12;
  AGE&YR.MPR=INTCK('MONTHS',DOBBEST,&DATE)/12;

  *** FLAG SSI BENES IN CURRENT PAY STATUS AS OF DEC;
  SSIBENE=0;
  IF PSTA&YR.12 IN ('C01','M01','M02') THEN SSIBENE=1;
RUN;

%MEND GETDATA;
%GETDATA;

PROC FREQ DATA=OUT.Y20&YR.;
   TABLES SSIBENE  / LIST MISSING;
RUN;

PROC PRINT DATA=OUT.Y20&YR.(OBS=500);
   WHERE AGE&YR. NE AGE&YR.MPR;
   VAR AGE&YR. AGE&YR.MPR DOBSSR DOBBEST;
RUN;

//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<DPHELPS@MATHEMATICA-MPR.COM>
RCPT TO:<DPHELPS@MATHEMATICA-MPR.COM>
DATA
FROM:   <DPHELPS@MATHEMATICA-MPR.COM>
```

Appendix A.215
JCL/SAS Code: SSIBEN

TO: <DPHELPS@MATHEMATICA-MPR.COM>
SUBJECT: SSIBEN IS COMPLETE.

Appendix A.216
JCL/SAS Code: SSIVALT

```
//$4671SIB  JOB (12510000,T715,,SAS,,ITC9FL),DAWN-PHELPS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT:     50214 DAF
//* PROJECT DIRECTOR:    JODY SCHIMMEL HYDE
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF18.VAL.PRDLIB(SSIVALT)
//*
//* DESCRIPTION: CREATE BENCHMARKING SSI TABLE 10
//*
//* PURPOSE: CREATE TABLES FOR BENCHMARKING
//*
//* PROGRAMMER:  DAWN PHELPS
//*             DPHELPS@MATHEMATICA-MPR.COM
//*             202-554-7556
//*****************************************************************
//*
//SAS       EXEC SAS9,
//         WORK='120000,60000'
//*
//IN   DD  DSN=OPDR.TG.PRD.ETTW.$4671.VAL18P.SSIBENES.SA.V1,
//        DISP=SHR
//OUT  DD  DSN=OPDR.TG.PRD.ETTW.$4671.VAL18P.SSIVALT.SA.V1,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//TEMP1  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN  DD *

OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN  OBS=MAX;


TITLE1 "BENCHMARKING";
TITLE2 "SSI BENEFICARIES";
TITLE3 "SSI TABLE 5, 10, & 36";

PROC FORMAT;
   VALUE AGEGRP 18-<65 = '1' .='.' OTHER='0'
              ;
RUN;

%MACRO YEAR(YR=,TYR=);
   DATA Y&YR.;
      SET IN.Y&YR.(KEEP=SEX SSIBENE AGE&TYR. PST&TYR.12
                   STATECD_ENDYR DXPRIBEST PAYS&TYR.12);
```

Appendix A.216
JCL/SAS Code: SSIVALT

```
    AGEGRP=PUT(AGE&TYR.,AGEGRP.);*ALL TABLES;
    *IF PAYS&TYR.12>0 THEN ALLPAY=1;*TABLE 5 & 36;
RUN;

PROC FREQ DATA=Y&YR;
  TABLES AGE&TYR.*AGEGRP / LIST MISSING;
RUN;

PROC SORT DATA=Y&YR.(WHERE=(SSIBENE=1))
        OUT=SSIPOP;
  BY SEX;
RUN;

*CREATING DATASETS FOR TABLE 5;
PROC FREQ DATA=SSIPOP;
  WHERE SEX IN ('M','F') AND AGEGRP='1';
  *TABLES ALLPAY / OUT=OUT.ALLP&YR.;
  TABLE SSIBENE / OUT=OUT.ALLP&YR;
RUN;

PROC FREQ DATA=SSIPOP;
  WHERE SEX IN ('M','F') AND AGEGRP='1';
  BY SEX;
  *TABLE ALLPAY / OUT=OUT.GENP&YR.;
  TABLE SSIBENE / OUT=OUT.GENP&YR;
RUN;

PROC MEANS DATA=SSIPOP SUM;
  WHERE SSIBENE=1 AND SEX IN ('M','F') AND AGEGRP='1';
  VAR PAYS&TYR.12;
  OUTPUT OUT=OUT.TOTPAY&TYR. SUM=SUMTOT&TYR.;
RUN;

PROC MEANS DATA=SSIPOP SUM;
  WHERE SSIBENE=1 AND SEX IN ('M','F') AND AGEGRP='1';
  VAR PAYS&TYR.12;
  BY SEX;
  OUTPUT OUT=OUT.PAYGEN&TYR. SUM=SUMGEN&TYR.;
RUN;
*END TABLE 5 DATASETS;

*CREATING DATASETS FOR TABLE 10;
PROC FREQ DATA=SSIPOP ORDER=FORMATTED;
  BY SEX;
  TABLE PST&TYR.12*AGEGRP / OUT=OUT.ST20&TYR.;
```

Appendix A.216
JCL/SAS Code: SSIVALT

```
    RUN;

    PROC FREQ DATA=SSIPOP ORDER=FORMATTED;
      BY SEX;
      TABLE STATECD_ENDYR *AGEGRP / OUT=OUT.PAYS20&TYR.;
    RUN;
    *END TABLE 10 DATASETS;

    *CREATE DATASETS FOR TABLE 36;
    PROC FREQ DATA=SSIPOP;
      WHERE /*ALLPAY=1 AND*/ SEX IN ('M','F');
      TABLES DXPRIBEST / OUT=OUT.DIAG&YR.;
    RUN;

    PROC FREQ DATA=SSIPOP;
      WHERE /*ALLPAY=1 AND*/ SEX IN ('M','F');
      TABLES DXPRIBEST*AGEGRP / OUT=OUT.AGED&YR.;
    RUN;

    PROC FREQ DATA=SSIPOP ORDER=FORMATTED;
      *WHERE ALLPAY=1;
      BY SEX;
      TABLE DXPRIBEST*AGEGRP / OUT=OUT.DGEN20&TYR.;
    RUN;
    *END TABLE 36 DATASETS;

%MEND YEAR;

%YEAR(YR=2018,TYR=18);

//**************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<DPHELPS@MATHEMATICA-MPR.COM>
RCPT TO:<DPHELPS@MATHEMATICA-MPR.COM>
DATA
FROM:   <DPHELPS@MATHEMATICA-MPR.COM>
TO:     <DPHELPS@MATHEMATICA-MPR.COM>
SUBJECT: SSIVALT IS COMPLETE
```

Appendix A.217
JCL/SAS Code: CPORT2

```
//$4671CPO JOB (12510000,T715,,SAS,,ITC919DC),PHELPS-DAWN,
// MSGCLASS=Q,MSGLEVEL=(1,1),REGION=7168K,NOTIFY=$4671
//*
//STEP1 EXEC SAS9
//SYSPRINT DD SYSOUT=*
//IN1 DD DSN=OPDR.TG.PRD.ETTW.$4671.VAL18P.SSIVALT.SA.V1,DISP=SHR
//OUT1 DD DSN=$4671.XPORT.SSI.ALLP2018,
//     DISP=(NEW,CATLG,DELETE),SPACE=(CYL,(100,50),RLSE),
//     DCB=(RECFM=FB,LRECL=80,BLKSIZE=8000,DSORG=PS)
//OUT2 DD DSN=$4671.XPORT.SSI.GENP2018,
//     DISP=(NEW,CATLG,DELETE),SPACE=(CYL,(100,50),RLSE),
//     DCB=(RECFM=FB,LRECL=80,BLKSIZE=8000,DSORG=PS)
//OUT3 DD DSN=$4671.XPORT.SSI.TOTPAY18,
//     DISP=(NEW,CATLG,DELETE),SPACE=(CYL,(100,50),RLSE),
//     DCB=(RECFM=FB,LRECL=80,BLKSIZE=8000,DSORG=PS)
//OUT4 DD DSN=$4671.XPORT.SSI.PAYGEN18,
//     DISP=(NEW,CATLG,DELETE),SPACE=(CYL,(100,50),RLSE),
//     DCB=(RECFM=FB,LRECL=80,BLKSIZE=8000,DSORG=PS)
//OUT5 DD DSN=$4671.XPORT.SSI.ST2018,
//     DISP=(NEW,CATLG,DELETE),SPACE=(CYL,(100,50),RLSE),
//     DCB=(RECFM=FB,LRECL=80,BLKSIZE=8000,DSORG=PS)
//OUT6 DD DSN=$4671.XPORT.SSI.PAYS2018,
//     DISP=(NEW,CATLG,DELETE),SPACE=(CYL,(100,50),RLSE),
//     DCB=(RECFM=FB,LRECL=80,BLKSIZE=8000,DSORG=PS)
//OUT7 DD DSN=$4671.XPORT.SSI.DIAG2018,
//     DISP=(NEW,CATLG,DELETE),SPACE=(CYL,(100,50),RLSE),
//     DCB=(RECFM=FB,LRECL=80,BLKSIZE=8000,DSORG=PS)
//OUT8 DD DSN=$4671.XPORT.SSI.AGED2018,
//     DISP=(NEW,CATLG,DELETE),SPACE=(CYL,(100,50),RLSE),
//     DCB=(RECFM=FB,LRECL=80,BLKSIZE=8000,DSORG=PS)
//OUT9 DD DSN=$4671.XPORT.SSI.DGEN2018,
//     DISP=(NEW,CATLG,DELETE),SPACE=(CYL,(100,50),RLSE),
//     DCB=(RECFM=FB,LRECL=80,BLKSIZE=8000,DSORG=PS)
OPTIONS NOCENTER;

PROC CPORT DATA=IN1.ALLP2018 FILE=OUT1;
RUN;
PROC CPORT DATA=IN1.GENP2018 FILE=OUT2;
RUN;
PROC CPORT DATA=IN1.TOTPAY18 FILE=OUT3;
RUN;
PROC CPORT DATA=IN1.PAYGEN18 FILE=OUT4;
RUN;
PROC CPORT DATA=IN1.ST2018 FILE=OUT5;
```

Appendix A.217
JCL/SAS Code: CPORT2

```
RUN;
PROC CPORT DATA=IN1.PAYS2018 FILE=OUT6;
RUN;
PROC CPORT DATA=IN1.DIAG2018 FILE=OUT7;
RUN;
PROC CPORT DATA=IN1.AGED2018 FILE=OUT8;
RUN;
PROC CPORT DATA=IN1.DGEN2018 FILE=OUT9;
RUN;
```

Appendix A.218
JCL/SAS Code: Download_Tables

```
LIBNAME IN 'M:\DAF18\Validation\SSI\Data';

/*TABLE 36*/
FILENAME DIAG2018 'M:\DAF18\Validation\SSI\Data\DIAG2018.XPT';
PROC CIMPORT LIBRARY=IN  INFILE=DIAG2018;
RUN;
FILENAME AGED2018 'M:\DAF18\Validation\SSI\Data\AGED2018.XPT';
PROC CIMPORT LIBRARY=IN  INFILE=AGED2018;
RUN;
FILENAME DGEN2018 'M:\DAF18\Validation\SSI\Data\DGEN2018.XPT';
PROC CIMPORT LIBRARY=IN  INFILE=DGEN2018;
RUN;

/*TABLE 5*/
FILENAME ALLP2018 'M:\DAF18\Validation\SSI\Data\ALLP2018.XPT';
PROC CIMPORT LIBRARY=IN  INFILE=ALLP2018;
RUN;
FILENAME GENP2018 'M:\DAF18\Validation\SSI\Data\GENP2018.XPT';
PROC CIMPORT LIBRARY=IN  INFILE=GENP2018;
RUN;
FILENAME TOTPAY17 'M:\DAF18\Validation\SSI\Data\TOTPAY18.XPT';
PROC CIMPORT LIBRARY=IN  INFILE=TOTPAY17;
RUN;
FILENAME PAYGEN17 'M:\DAF18\Validation\SSI\Data\PAYGEN18.XPT';
PROC CIMPORT LIBRARY=IN  INFILE=PAYGEN17;
RUN;

/*TABLE 10*/
FILENAME ST2018 'M:\DAF18\Validation\SSI\Data\ST2018.XPT';
PROC CIMPORT LIBRARY=IN  INFILE=ST2018;
RUN;
FILENAME PAYS2018 'M:\DAF18\Validation\SSI\Data\PAYS2018.XPT';
PROC CIMPORT LIBRARY=IN  INFILE=PAYS2018;
RUN;
```

Appendix A.219
JCL/SAS Code: Table5_SSI

```
/*********************************************************************/
/* PROGRAM: TABLE5SSI.SAS                                            */
/* PURPOSE: TO READ DATA FOR 2018 INTO AN EXCEL SHELL FOR            */
/*        COMPARISON TO TABLE 5 OF THE SSA SSI TABLES                */
/*********************************************************************/

%let year=2018;
%let yr=18;


LIBNAME IN 'M:\DAF18\Validation\SSI\Data';

DATA ALLP&year;
  SET IN.ALLP&year;
  IF SSIBENE=1;
RUN;

PROC PRINT DATA=ALLP&year; RUN;

FILENAME SSIVAL DDE "EXCEL|Table5!R6C2:R6C2";

DATA _NULL_;
  SET ALLP&year;
  FILE SSIVAL NOTAB LRECL=200;
  PUT COUNT;
RUN;

DATA TEMP_M;
 SET IN.GENP&year;
 IF SEX='M' AND SSIBENE=1;
RUN;

PROC PRINT DATA=TEMP_M; RUN;

FILENAME SSIVAL DDE "EXCEL|Table5!R7C2:R7C2";

DATA _NULL_;
  SET TEMP_M;
  FILE SSIVAL NOTAB LRECL=200;
  PUT COUNT;
RUN;

DATA TEMP_F;
 SET IN.GENP&year;
```

Appendix A.219
JCL/SAS Code: Table5_SSI

```
  IF SEX='F' AND SSIBENE=1;
RUN;

PROC PRINT DATA=TEMP_F; RUN;

FILENAME SSIVAL DDE "EXCEL|Table5!R8C2:R8C2";

DATA _NULL_;
   SET TEMP_F;
   FILE SSIVAL NOTAB LRECL=200;
   PUT COUNT;
RUN;

DATA TOTPAY&yr;
   SET IN.TOTPAY&yr;
RUN;

PROC PRINT DATA=TOTPAY&yr; RUN;

FILENAME SSIVAL DDE "EXCEL|Table5!R12C3:R12C3";

DATA _NULL_;
   SET TOTPAY&yr;
   FILE SSIVAL NOTAB LRECL=200;
   PUT SUMTOT&yr;
RUN;

DATA PAYGEN&yr._M;
  SET IN.PAYGEN&yr;
  IF SEX='M';
RUN;

PROC PRINT DATA=PAYGEN&yr._M; RUN;

FILENAME SSIVAL DDE "EXCEL|Table5!R13C3:R13C3";

DATA _NULL_;
   SET PAYGEN&yr._M;
   FILE SSIVAL NOTAB LRECL=200;
   PUT SUMGEN&yr;
RUN;

DATA PAYGEN&yr._F;
  SET IN.PAYGEN&yr;
  IF SEX='F';
```

Appendix A.219
JCL/SAS Code: Table5_SSI

```
RUN;

PROC PRINT DATA=PAYGEN&yr._F; RUN;

FILENAME SSIVAL DDE "EXCEL|Table5!R14C3:R14C3";

DATA _NULL_;
  SET PAYGEN&yr._F;
  FILE SSIVAL NOTAB LRECL=200;
  PUT SUMGEN&yr;
RUN;
```

Appendix A.220
JCL/SAS Code: Table10_PST

```
/*********************************************************************/
/* PROGRAM: TABLE10_PST.SAS                                          */
/* PURPOSE: TO READ DATA FOR 2014 INTO AN EXCEL SHELL FOR            */
/*        COMPARISON TO TABLE 10 OF THE SSA SSI TABLES               */
/*********************************************************************/

LIBNAME IN 'M:\DAF18\Validation\SSI\Data';

%let yr=18;



DATA TEMP;
  SET IN.ST20&yr;
  WHERE ^MISSING(SEX) AND AGEGRP='1';

  IF PST&yr.12='AL' THEN ROW=1;
   ELSE IF PST&yr.12='AK' THEN ROW=2;
   ELSE IF PST&yr.12='AZ' THEN ROW=3;
   ELSE IF PST&yr.12='AR' THEN ROW=4;
   ELSE IF PST&yr.12='CA' THEN ROW=5;
   ELSE IF PST&yr.12='CO' THEN ROW=6;
   ELSE IF PST&yr.12='CT' THEN ROW=7;
   ELSE IF PST&yr.12='DE' THEN ROW=8;
   ELSE IF PST&yr.12='DC' THEN ROW=9;
   ELSE IF PST&yr.12='FL' THEN ROW=10;
   ELSE IF PST&yr.12='GA' THEN ROW=11;
   ELSE IF PST&yr.12='HI' THEN ROW=12;
   ELSE IF PST&yr.12='ID' THEN ROW=13;
   ELSE IF PST&yr.12='IL' THEN ROW=14;
   ELSE IF PST&yr.12='IN' THEN ROW=15;
   ELSE IF PST&yr.12='IA' THEN ROW=16;
   ELSE IF PST&yr.12='KS' THEN ROW=17;
   ELSE IF PST&yr.12='KY' THEN ROW=18;
   ELSE IF PST&yr.12='LA' THEN ROW=19;
   ELSE IF PST&yr.12='ME' THEN ROW=20;
   ELSE IF PST&yr.12='MD' THEN ROW=21;
   ELSE IF PST&yr.12='MA' THEN ROW=22;
   ELSE IF PST&yr.12='MI' THEN ROW=23;
   ELSE IF PST&yr.12='MN' THEN ROW=24;
   ELSE IF PST&yr.12='MS' THEN ROW=25;
   ELSE IF PST&yr.12='MO' THEN ROW=26;
   ELSE IF PST&yr.12='MT' THEN ROW=27;
   ELSE IF PST&yr.12='NE' THEN ROW=28;
```

Appendix A.220
JCL/SAS Code: Table10_PST

```
        ELSE IF PST&yr.12='NV' THEN ROW=29;
        ELSE IF PST&yr.12='NH' THEN ROW=30;
        ELSE IF PST&yr.12='NJ' THEN ROW=31;
        ELSE IF PST&yr.12='NM' THEN ROW=32;
        ELSE IF PST&yr.12='NY' THEN ROW=33;
        ELSE IF PST&yr.12='NC' THEN ROW=34;
        ELSE IF PST&yr.12='ND' THEN ROW=35;
        ELSE IF PST&yr.12='OH' THEN ROW=36;
        ELSE IF PST&yr.12='OK' THEN ROW=37;
        ELSE IF PST&yr.12='OR' THEN ROW=38;
        ELSE IF PST&yr.12='PA' THEN ROW=39;
        ELSE IF PST&yr.12='RI' THEN ROW=40;
        ELSE IF PST&yr.12='SC' THEN ROW=41;
        ELSE IF PST&yr.12='SD' THEN ROW=42;
        ELSE IF PST&yr.12='TN' THEN ROW=43;
        ELSE IF PST&yr.12='TX' THEN ROW=44;
        ELSE IF PST&yr.12='UT' THEN ROW=45;
        ELSE IF PST&yr.12='VT' THEN ROW=46;
        ELSE IF PST&yr.12='VA' THEN ROW=47;
        ELSE IF PST&yr.12='WA' THEN ROW=48;
        ELSE IF PST&yr.12='WV' THEN ROW=49;
        ELSE IF PST&yr.12='WI' THEN ROW=50;
        ELSE IF PST&yr.12='WY' THEN ROW=51;
        ELSE IF PST&yr.12='GU' THEN ROW=54;
        ELSE IF PST&yr.12='MP' THEN ROW=55;
        ELSE IF PST&yr.12='PR' THEN ROW=56;
        ELSE IF PST&yr.12='VI' THEN ROW=57;
        ELSE IF PST&yr.12='MH' THEN ROW=58;*NEW FOR DAF12 - MARSHALL ISLANDS;
        ELSE IF PST&yr.12='  ' THEN ROW=59;
    RUN;

    PROC SORT DATA=TEMP;
       BY SEX ROW;
    RUN;

    /*NEW FOR DAF12 - CODE ENSURES ROW VALUES 1-59 ARE PRESENT IN DATASET.  THIS IS FOR A CLEAN LINK TO
EXCEL VIA DDE*/
    DATA TEMP;
    SET TEMP;
    BY SEX ROW;
    RETAIN X1;
    IF FIRST.SEX THEN X1=1;
    IF LAST.SEX THEN END=59;
    ELSE END=ROW;
```

```
DO X1=X1 TO END;
```

Appendix A.220
JCL/SAS Code: Table10_PST

```
    IF X1 NE ROW THEN X2=.;
    ELSE X2=ROW;
    OUTPUT;
  END;

  RUN;

  DATA TEMP;
  SET TEMP;
  IF ROW^=X1 THEN DO;
    COUNT=0;
    PERCENT=.;
    ROW=X1;
  END;

  KEEP SEX PST&YR.12 AGEGRP COUNT PERCENT ROW;

  RUN;

  PROC SORT DATA=TEMP(WHERE=(SEX="F")) OUT=TEMP_F;
    BY ROW;
  RUN;

  PROC SUMMARY DATA=TEMP_F SUM;
    BY ROW;
    VAR COUNT;
    OUTPUT OUT=OUT_F SUM=SUM;
  RUN;

  PROC PRINT DATA=OUT_F; RUN;

  FILENAME SSIVAL DDE "EXCEL|Table10 PST!R126C2:R176C2";

  DATA _NULL_;
    SET OUT_F;
    FILE SSIVAL NOTAB LRECL=200;
    IF 1 <= ROW <= 51;
    PUT SUM;
  RUN;

  FILENAME SSIVAL DDE "EXCEL|Table10 PST!R178C2:R183C2";

  DATA _NULL_;
    SET OUT_F;
    FILE SSIVAL NOTAB LRECL=200;
```

Appendix A.220
JCL/SAS Code: Table10_PST

```
  WHERE 54 <= ROW <= 59;
  PUT SUM;
RUN;

PROC SORT DATA=TEMP(WHERE=(SEX="M")) OUT=TEMP_M;
  BY ROW;
RUN;

PROC SUMMARY DATA=TEMP_M SUM;
  BY ROW;
  VAR COUNT;
  OUTPUT OUT=OUT_M SUM=SUM;
RUN;

PROC PRINT DATA=OUT_M; RUN;

FILENAME SSIVAL DDE "EXCEL|Table10 PST!R66C2:R116C2";

DATA _NULL_;
  SET OUT_M;
  FILE SSIVAL NOTAB LRECL=200;
  IF 1 <= ROW <= 51;
  PUT SUM;
RUN;

FILENAME SSIVAL DDE "EXCEL|Table10 PST!R118C2:R123C2";

DATA _NULL_;
  SET OUT_M;
  FILE SSIVAL NOTAB LRECL=200;
  IF 54 <= ROW <= 59;
  PUT SUM;
RUN;
```

Appendix A.221
JCL/SAS Code: Table36_SSI (DXPRIBEST)

```
/*********************************************************************/
/* PROGRAM: TABLE36.SAS                                              */
/* PURPOSE: TO READ DATA FOR 2018 INTO AN EXCEL SHELL FOR            */
/*        COMPARISON TO TABLE 36 OF THE SSA SSI TABLES               */
/*********************************************************************/

LIBNAME IN 'M:\DAF18\Validation\SSI\Data';

***This program formats the diagnostic groups and regroups them into the ***;
***categories used in the benchmark table ***;

PROC FORMAT;
  VALUE DIAG
    1=CONGEN_ANOM
    2=ENDOCRINE
    3=INFECTIOUS
    4=INJURIES
    5=AUTISTIC
   6=DEVELOPMENT
   7=CHILDHOOD
   8=INT_DIS
   9=MOOD
   10=ORGANIC
   11=SCHIZOPHREN
    12=MENTAL_OTHER
    13=NEOPLASMS
    14=BLOOD
    15=CIRCULATORY
    16=DIGESTIVE
    17=GENITO
    18=MUSCULO
    19=NERVOUS
    20=RESPIRATORY
    21=SKIN
    22=OTHER
    23=MISSING;
RUN;


%MACRO DIAGYR(YEAR = ,YRDIG = ,ROWYEAR = ,RESTRICT = ,FILE = );
DATA TEMP&YRDIG;
  SET IN.&FILE.&YEAR;

  IF &RESTRICT;
```

Appendix A.221
JCL/SAS Code: Table36_SSI (DXPRIBEST)

```
*THE CODE FROM SSA;

  *** INFECTIOUS/PARASITIC DISEASES ***;
  IF DXPRIBEST>='0020' AND DXPRIBEST<='0189' THEN GROUP=3;
 ELSE IF DXPRIBEST>='0200' AND DXPRIBEST<='0279' THEN GROUP=3;
 ELSE IF DXPRIBEST>='0300' AND DXPRIBEST<='0419' THEN GROUP=3;
 ELSE IF DXPRIBEST>='0430' AND DXPRIBEST<='0579' THEN GROUP=3;
 ELSE IF DXPRIBEST>='0600' AND DXPRIBEST<='0669' THEN GROUP=3;
 ELSE IF DXPRIBEST>='0700' AND DXPRIBEST<='0889' THEN GROUP=3;
 ELSE IF DXPRIBEST>='0900' AND DXPRIBEST<='1049' THEN GROUP=3;
 ELSE IF DXPRIBEST>='1100' AND DXPRIBEST<='1189' THEN GROUP=3;
 ELSE IF DXPRIBEST>='1200' AND DXPRIBEST<='1359' THEN GROUP=3;
 ELSE IF DXPRIBEST>='1370' AND DXPRIBEST<='1399' THEN GROUP=3;
  ELSE IF DXPRIBEST>='7710' AND DXPRIBEST<='7719' THEN GROUP=3;

 *** NEOPLASMS ***;
  ELSE IF DXPRIBEST>='0420' AND DXPRIBEST<='0429' THEN GROUP=13;
  ELSE IF DXPRIBEST>='1400' AND DXPRIBEST<='1659' THEN GROUP=13;
 ELSE IF DXPRIBEST>='1700' AND DXPRIBEST<='1769' THEN GROUP=13;
 ELSE IF DXPRIBEST>='1780' AND DXPRIBEST<='2089' THEN GROUP=13;
 ELSE IF DXPRIBEST>='2100' AND DXPRIBEST<='2399' THEN GROUP=13;

 *** ENDOCRINE ***;
  ELSE IF DXPRIBEST>='2400' AND DXPRIBEST<='2469' THEN GROUP=2;
  ELSE IF DXPRIBEST>='2500' AND DXPRIBEST<='2539' THEN GROUP=2;
  ELSE IF DXPRIBEST>='2550' AND DXPRIBEST<='2559' THEN GROUP=2;
  ELSE IF DXPRIBEST>='2600' AND DXPRIBEST<='2799' THEN GROUP=2;

  *** DISEASES OF THE BLOOD ***;
  ELSE IF DXPRIBEST>='2800' AND DXPRIBEST<='2899' THEN GROUP=14;
  ELSE IF DXPRIBEST>='7720' AND DXPRIBEST<='7739' THEN GROUP=14;
  ELSE IF DXPRIBEST>='7760' AND DXPRIBEST<='7769' THEN GROUP=14;

  *** AUTISM ***;
  ELSE IF DXPRIBEST>='2990' AND DXPRIBEST<='2999' THEN GROUP=5;

  *** DEVELOPMENTAL DISORDERS ***;
  ELSE IF DXPRIBEST>='3150' AND DXPRIBEST<='3159' THEN GROUP=6;

  *** CHILDHOOD/ADOLESCENT DISORDERS ***;
  ELSE IF DXPRIBEST>='3120' AND DXPRIBEST<='3149' THEN GROUP=7;

  *** INTELLECTUAL DISABILITY ***;
  ELSE IF DXPRIBEST>='3170' AND DXPRIBEST<='3194' THEN GROUP=8;
```

Appendix A.221
JCL/SAS Code: Table36_SSI (DXPRIBEST)

```
ELSE IF DXPRIBEST>='3196' AND DXPRIBEST<='3199' THEN GROUP=8;

*** MOOD DISORDERS ***;
ELSE IF DXPRIBEST>='2960' AND DXPRIBEST<='2969' THEN GROUP=9;
ELSE IF DXPRIBEST>='3110' AND DXPRIBEST<='3119' THEN GROUP=9;

*** ORGANIC MENTAL DISORDERS ***;
ELSE IF DXPRIBEST>='2900' AND DXPRIBEST<='2909' THEN GROUP=10;
ELSE IF DXPRIBEST>='2940' AND DXPRIBEST<='2949' THEN GROUP=10;
ELSE IF DXPRIBEST>='3100' AND DXPRIBEST<='3109' THEN GROUP=10;

*** SCHIZOPHRENIC ***;
ELSE IF DXPRIBEST>='2950' AND DXPRIBEST<='2959' THEN GROUP=11;
ELSE IF DXPRIBEST>='2970' AND DXPRIBEST<='2989' THEN GROUP=11;

*** OTHER MENTAL DISORDERS ***;
ELSE IF DXPRIBEST>='2910' AND DXPRIBEST<='2939' THEN GROUP=12;
ELSE IF DXPRIBEST>='3000' AND DXPRIBEST<='3099' THEN GROUP=12;
ELSE IF DXPRIBEST>='3160' AND DXPRIBEST<='3169' THEN GROUP=12;
ELSE IF DXPRIBEST='3195' THEN GROUP=12;

*** NERVOUS SYSTEM ***;
ELSE IF DXPRIBEST>='3200' AND DXPRIBEST<='3269' THEN GROUP=19;
ELSE IF DXPRIBEST>='3290' AND DXPRIBEST<='3379' THEN GROUP=19;
ELSE IF DXPRIBEST>='3400' AND DXPRIBEST<='3749' THEN GROUP=19;
ELSE IF DXPRIBEST>='3760' AND DXPRIBEST<='3899' THEN GROUP=19;

*** CIRCULATORY ***;
ELSE IF DXPRIBEST>='3750' AND DXPRIBEST<='3759' THEN GROUP=15;
ELSE IF DXPRIBEST>='3900' AND DXPRIBEST<='3989' THEN GROUP=15;
ELSE IF DXPRIBEST>='4010' AND DXPRIBEST<='4059' THEN GROUP=15;
ELSE IF DXPRIBEST>='4100' AND DXPRIBEST<='4179' THEN GROUP=15;
ELSE IF DXPRIBEST>='4200' AND DXPRIBEST<='4389' THEN GROUP=15;
ELSE IF DXPRIBEST>='4400' AND DXPRIBEST<='4449' THEN GROUP=15;
ELSE IF DXPRIBEST>='4460' AND DXPRIBEST<='4489' THEN GROUP=15;
ELSE IF DXPRIBEST>='4510' AND DXPRIBEST<='4599' THEN GROUP=15;

*** RESPIRATORY ***;
ELSE IF DXPRIBEST>='4600' AND DXPRIBEST<='4669' THEN GROUP=20;
ELSE IF DXPRIBEST>='4700' AND DXPRIBEST<='4789' THEN GROUP=20;
ELSE IF DXPRIBEST>='4800' AND DXPRIBEST<='4879' THEN GROUP=20;
ELSE IF DXPRIBEST>='4900' AND DXPRIBEST<='4969' THEN GROUP=20;
ELSE IF DXPRIBEST>='5000' AND DXPRIBEST<='5089' THEN GROUP=20;
ELSE IF DXPRIBEST>='5100' AND DXPRIBEST<='5199' THEN GROUP=20;
ELSE IF DXPRIBEST>='7680' AND DXPRIBEST<='7709' THEN GROUP=20;
```

Appendix A.221
JCL/SAS Code: Table36_SSI (DXPRIBEST)

```
*** DIGESTIVE ***;
ELSE IF DXPRIBEST>='5200' AND DXPRIBEST<='5379' THEN GROUP=16;
ELSE IF DXPRIBEST>='5400' AND DXPRIBEST<='5439' THEN GROUP=16;
ELSE IF DXPRIBEST>='5500' AND DXPRIBEST<='5539' THEN GROUP=16;
ELSE IF DXPRIBEST>='5550' AND DXPRIBEST<='5589' THEN GROUP=16;
ELSE IF DXPRIBEST>='5600' AND DXPRIBEST<='5609' THEN GROUP=16;
ELSE IF DXPRIBEST>='5620' AND DXPRIBEST<='5629' THEN GROUP=16;
ELSE IF DXPRIBEST>='5640' AND DXPRIBEST<='5799' THEN GROUP=16;
ELSE IF DXPRIBEST>='7770' AND DXPRIBEST<='7779' THEN GROUP=16;

*** GENITOURINARY ***;
ELSE IF DXPRIBEST>='5800' AND DXPRIBEST<='6089' THEN GROUP=17;
ELSE IF DXPRIBEST>='6100' AND DXPRIBEST<='6119' THEN GROUP=17;
ELSE IF DXPRIBEST>='6140' AND DXPRIBEST<='6299' THEN GROUP=17;

*** SKIN ***;
ELSE IF DXPRIBEST>='6800' AND DXPRIBEST<='6869' THEN GROUP=21;
ELSE IF DXPRIBEST>='6900' AND DXPRIBEST<='6989' THEN GROUP=21;
ELSE IF DXPRIBEST>='7000' AND DXPRIBEST<='7099' THEN GROUP=21;
ELSE IF DXPRIBEST>='7780' AND DXPRIBEST<='7789' THEN GROUP=21;

*** MUSCULOSKELETAL ***;
ELSE IF DXPRIBEST>='7100' AND DXPRIBEST<='7399' THEN GROUP=18;

*** CONGENITAL ***;
ELSE IF DXPRIBEST>='7400' AND DXPRIBEST<='7599' THEN GROUP=1;

*** INJURIES ***;
ELSE IF DXPRIBEST>='8000' AND DXPRIBEST<='8489' THEN GROUP=4;
ELSE IF DXPRIBEST>='8500' AND DXPRIBEST<='8549' THEN GROUP=4;
ELSE IF DXPRIBEST>='8600' AND DXPRIBEST<='8879' THEN GROUP=4;
ELSE IF DXPRIBEST>='8900' AND DXPRIBEST<='8979' THEN GROUP=4;
ELSE IF DXPRIBEST>='9000' AND DXPRIBEST<='9059' THEN GROUP=4;
ELSE IF DXPRIBEST>='9070' AND DXPRIBEST<='9099' THEN GROUP=4;
ELSE IF DXPRIBEST>='9200' AND DXPRIBEST<='9299' THEN GROUP=4;
ELSE IF DXPRIBEST>='9400' AND DXPRIBEST<='9599' THEN GROUP=4;

*** OTHER ***;
ELSE IF DXPRIBEST>='7600' AND DXPRIBEST<='7609' THEN GROUP=22;
ELSE IF DXPRIBEST>='7640' AND DXPRIBEST<='7669' THEN GROUP=22;
ELSE IF DXPRIBEST>='7800' AND DXPRIBEST<='7809' THEN GROUP=22;
ELSE IF DXPRIBEST>='7830' AND DXPRIBEST<='7849' THEN GROUP=22;
ELSE IF DXPRIBEST='9330' THEN GROUP=22;
```

Appendix A.221
JCL/SAS Code: Table36_SSI (DXPRIBEST)

```
*** UNKNOWN ***;
ELSE IF DXPRIBEST='' THEN GROUP=23;
ELSE IF DXPRIBEST>='0000' AND DXPRIBEST<='0019' THEN GROUP=23;
ELSE IF DXPRIBEST>='0190' AND DXPRIBEST<='0199' THEN GROUP=23;
ELSE IF DXPRIBEST>='0280' AND DXPRIBEST<='0299' THEN GROUP=23;
ELSE IF DXPRIBEST>='0580' AND DXPRIBEST<='0599' THEN GROUP=23;
ELSE IF DXPRIBEST>='0670' AND DXPRIBEST<='0699' THEN GROUP=23;
ELSE IF DXPRIBEST>='0890' AND DXPRIBEST<='0899' THEN GROUP=23;
ELSE IF DXPRIBEST>='1050' AND DXPRIBEST<='1099' THEN GROUP=23;
ELSE IF DXPRIBEST>='1190' AND DXPRIBEST<='1199' THEN GROUP=23;
ELSE IF DXPRIBEST>='1360' AND DXPRIBEST<='1369' THEN GROUP=23;
ELSE IF DXPRIBEST>='1660' AND DXPRIBEST<='1699' THEN GROUP=23;
ELSE IF DXPRIBEST>='1770' AND DXPRIBEST<='1779' THEN GROUP=23;
ELSE IF DXPRIBEST>='2090' AND DXPRIBEST<='2099' THEN GROUP=23;
ELSE IF DXPRIBEST>='2470' AND DXPRIBEST<='2499' THEN GROUP=23;
ELSE IF DXPRIBEST>='2540' AND DXPRIBEST<='2549' THEN GROUP=23;
ELSE IF DXPRIBEST>='2560' AND DXPRIBEST<='2599' THEN GROUP=23;
ELSE IF DXPRIBEST>='3270' AND DXPRIBEST<='3289' THEN GROUP=23;
ELSE IF DXPRIBEST>='3380' AND DXPRIBEST<='3399' THEN GROUP=23;
ELSE IF DXPRIBEST>='3990' AND DXPRIBEST<='4009' THEN GROUP=23;
ELSE IF DXPRIBEST>='4060' AND DXPRIBEST<='4099' THEN GROUP=23;
ELSE IF DXPRIBEST>='4180' AND DXPRIBEST<='4199' THEN GROUP=23;
ELSE IF DXPRIBEST>='4390' AND DXPRIBEST<='4399' THEN GROUP=23;
ELSE IF DXPRIBEST>='4450' AND DXPRIBEST<='4459' THEN GROUP=23;
ELSE IF DXPRIBEST>='4490' AND DXPRIBEST<='4509' THEN GROUP=23;
ELSE IF DXPRIBEST>='4670' AND DXPRIBEST<='4699' THEN GROUP=23;
ELSE IF DXPRIBEST>='4790' AND DXPRIBEST<='4799' THEN GROUP=23;
ELSE IF DXPRIBEST>='4880' AND DXPRIBEST<='4899' THEN GROUP=23;
ELSE IF DXPRIBEST>='4970' AND DXPRIBEST<='4999' THEN GROUP=23;
ELSE IF DXPRIBEST>='5090' AND DXPRIBEST<='5099' THEN GROUP=23;
ELSE IF DXPRIBEST>='5380' AND DXPRIBEST<='5399' THEN GROUP=23;
ELSE IF DXPRIBEST>='5440' AND DXPRIBEST<='5499' THEN GROUP=23;
ELSE IF DXPRIBEST>='5540' AND DXPRIBEST<='5549' THEN GROUP=23;
ELSE IF DXPRIBEST>='5590' AND DXPRIBEST<='5599' THEN GROUP=23;
ELSE IF DXPRIBEST>='5610' AND DXPRIBEST<='5619' THEN GROUP=23;
ELSE IF DXPRIBEST>='5630' AND DXPRIBEST<='5639' THEN GROUP=23;
ELSE IF DXPRIBEST>='6090' AND DXPRIBEST<='6099' THEN GROUP=23;
ELSE IF DXPRIBEST>='6120' AND DXPRIBEST<='6139' THEN GROUP=23;
ELSE IF DXPRIBEST>='6300' AND DXPRIBEST<='6799' THEN GROUP=23;
ELSE IF DXPRIBEST>='6870' AND DXPRIBEST<='6899' THEN GROUP=23;
ELSE IF DXPRIBEST>='6990' AND DXPRIBEST<='6999' THEN GROUP=23;
ELSE IF DXPRIBEST>='7610' AND DXPRIBEST<='7639' THEN GROUP=23;
ELSE IF DXPRIBEST>='7670' AND DXPRIBEST<='7679' THEN GROUP=23;
ELSE IF DXPRIBEST>='7790' AND DXPRIBEST<='7799' THEN GROUP=23;
ELSE IF DXPRIBEST>='7810' AND DXPRIBEST<='7829' THEN GROUP=23;
```

Appendix A.221
JCL/SAS Code: Table36_SSI (DXPRIBEST)

```
      ELSE IF DXPRIBEST>='7850' AND DXPRIBEST<='7999' THEN GROUP=23;
      ELSE IF DXPRIBEST>='8490' AND DXPRIBEST<='8499' THEN GROUP=23;
      ELSE IF DXPRIBEST>='8550' AND DXPRIBEST<='8599' THEN GROUP=23;
      ELSE IF DXPRIBEST>='8880' AND DXPRIBEST<='8899' THEN GROUP=23;
      ELSE IF DXPRIBEST>='8980' AND DXPRIBEST<='8999' THEN GROUP=23;
      ELSE IF DXPRIBEST>='9060' AND DXPRIBEST<='9069' THEN GROUP=23;
      ELSE IF DXPRIBEST>='9100' AND DXPRIBEST<='9199' THEN GROUP=23;
      ELSE IF DXPRIBEST>='9300' AND DXPRIBEST<='9329' THEN GROUP=23;
      ELSE IF DXPRIBEST>='9331' AND DXPRIBEST<='9399' THEN GROUP=23;
      ELSE IF DXPRIBEST>='9600' AND DXPRIBEST<='9999' THEN GROUP=23;
      ELSE GROUP=23;
   FORMAT GROUP DIAG.;
RUN;

TITLE "FREQUENCY OF DIG CODES WITHIN UNKNOWN/MISSING GROUP";
TITLE2 "&FILE FILE, &RESTRICT RESTRICTION";
PROC FREQ DATA= TEMP&YRDIG;
   TABLES DXPRIBEST*GROUP*COUNT/LIST MISSING;
   WHERE GROUP=23 or GROUP=. and &RESTRICT;
RUN;


PROC SORT DATA=TEMP&YRDIG;
   BY GROUP;
RUN;

PROC FREQ DATA=TEMP&YRDIG;
   TABLES GROUP / LIST MISSING;
   TITLE "DIAGNOSTIC GROUPS &YEAR";
RUN;

PROC SUMMARY DATA=TEMP&YRDIG SUM;
   BY GROUP;
   VAR COUNT;
   OUTPUT OUT=OUT&YRDIG SUM=SUM;
RUN;

PROC PRINT DATA=OUT&YRDIG;
RUN;

PROC TRANSPOSE DATA=OUT&YRDIG OUT=OUT&ROWYEAR;
   VAR SUM;
   ID GROUP;
RUN;
```

Appendix A.221
JCL/SAS Code: Table36_SSI (DXPRIBEST)

```
PROC PRINT DATA=OUT&YRDIG;
RUN;

FILENAME SSIVAL DDE "EXCEL|Table36!R&ROWYEAR.C3:R&ROWYEAR.C25";

DATA _NULL_;
  SET OUT&ROWYEAR;
  FILE SSIVAL NOTAB LRECL=200;
  PUT CONGEN_ANOM '09'X ENDOCRINE '09'X INFECTIOUS '09'X INJURIES '09'X AUTISTIC '09'X DEVELOPMENT '09'X
     CHILDHOOD '09'X INT_DIS '09'X MOOD '09'X ORGANIC '09'X SCHIZOPHREN '09'X MENTAL_OTHER '09'X
     NEOPLASMS '09'X BLOOD '09'X CIRCULATORY '09'X DIGESTIVE '09'X GENITO '09'X MUSCULO '09'X NERVOUS '09'X
     RESPIRATORY '09'X SKIN '09'X OTHER '09'X MISSING;
RUN;
%MEND;

/*really don't need yrdig... could drop it and leave the dataset name non-year specific*/
%DIAGYR(YEAR = 2018,YRDIG =18,ROWYEAR = 6,RESTRICT = AGEGRP = '1', FILE = AGED)
%DIAGYR(YEAR = 2018,YRDIG =18,ROWYEAR = 9,RESTRICT = AGEGRP = '1' AND SEX='F', FILE = DGEN)
%DIAGYR(YEAR = 2018,YRDIG =18,ROWYEAR = 8,RESTRICT = AGEGRP = '1' AND SEX='M', FILE = DGEN)


endsas;
```

Appendix A.222
JCL/SAS Code: STEP1DI

```
//$4671DI1  JOB (12510000,T715,,SAS,,ITC9FL),PHELPS-DAWN,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT:     50214 DAF
//* PROJECT
//* DIRECTOR:    LAURA KOSAR
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF18.VAL.PRDLIB(STEP1DI)
//*
//* DESCRIPTION: CREATE BENCHMARKING FOR DI TABLES 19, 21, 27
//*
//* INPUT:      CURRENT DAF YEAR ANNUAL FILE
//*           OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2018
//*
//*           DEMOGRAPHIC FILE
//*           OPDR.TG.PRD.ETTW.FINAL.DAF18P.DMG
//*
//* OUTPUT:     OPDR.TG.PRD.ETTW.$4671.VAL18P.STEP1DI.SA.V1
//*           OPDR.TG.PRD.ETTW.$4671.VAL18P.DIVAL17.SA.V1
//*
//* UPDATED:    12/19/2019 DAWN PHELPS
//*
//* PURPOSE: CREATE TABLES FOR BENCHMARKING
//*****************************************************************
//*
//SAS  EXEC SAS9,
//     WORK='120000,60000'
//*
//DEM   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.DMG,DISP=SHR
//Y18   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2018E,DISP=SHR
//TEMP1 DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//OUT   DD DSN=OPDR.TG.PRD.ETTW.$4671.VAL18P.STEP1DI.SA.V1,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//OUT18 DD DSN=OPDR.TG.PRD.ETTW.$4671.VAL18P.DIVAL18.SA.V1,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//SYSIN DD *

OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN  OBS=MAX;

TITLE1 "BENCHMARKING";
TITLE2 "DI BENEFICARIES";
TITLE3;
```

Appendix A.222
JCL/SAS Code: STEP1DI

```
*** CHANGE FOR TRF09 ***;
*** TOC CHANGED TO TOC1 TO REFLECT ADDITION ***;
*** OF MULTIPLE TOC VARIABLES ***;
*** CHANGE FOR TRF10 ***;
*** TOC1 CHANGED TO FIND MOST RECENT TOC AND ***
*** USE THAT VALUE ***;

%LET YR=18;
%LET NEXTYR=19;
%LET DATE = '31DEC2018'D;

DATA OUT.STEP1DI;
 MERGE Y&YR..Y20&YR.(IN=ANN KEEP=SSN LAF: DXPRIBEST: DXSECBEST:
                        PST: FPMT: PROA: PROB:)
     DEM.DMG(IN=DEMO KEEP=SSN SEX DOBBEST BIC TOC: DOEI DOEC
            /* CHANGE TO REFLECT SSA RESTRICTIONS */
             WHERE=(BIC='A'))
     ;
 BY SSN;

 IF DEMO AND ANN;

 *** THIS CODE WAS USED TO CHECK THAT THE CALCULATIONS BELOW ***;
 *** WERE WORKING ***;
 IF TOC_START2 NE . AND (TOC_START1>TOC_START2) THEN DO;
   FLAG_START=1;
   FLAG_TOC1=TOC1;
   FLAG_TOC2=TOC2;
   FLAG_TOCSTART1=TOC_START1;
   FLAG_TOCSTART2=TOC_START2;
 END;

 IF TOC_NUM=. THEN TOC=' ';
    ELSE IF TOC_NUM=1 THEN TOC=TOC1;

 ARRAY TOCSTART(20) TOC_START1-TOC_START20;
 ARRAY TOCS(20) TOC1-TOC20;

 IF TOC_NUM > 1 THEN DO;
   DO I=1 TO (TOC_NUM-1);
     IF TOCSTART(I) >= TOCSTART(I+1) THEN DO;
       TOCS(I+1)=TOCS(I);
       TOCSTART(I+1)=TOCSTART(I);
       TOC=TOCS(I);
```

Appendix A.222
JCL/SAS Code: STEP1DI

```
      END;
      ELSE TOC=TOCS(I+1);
    END;
  END;

  IF TOC IN ('5','6');

  *** CHECK THAT DOEC IS BEFORE 12/31 OF CURRENT YEAR ***;
   IF DOEC < &DATE. THEN DOECFLAG=1;
  *** ADDED IN 2009 ***;
   IF DOEC NE .;

  * CALCULATE FULL RETIREMENT AGE (FRA) BASED ON SPECS IN TRF06
    USERS MANUAL;

  * ADJUST RETIREMENT DATE FOR BENEFICIARIES BORN ON JAN 1;
  IF MONTH(DOBBEST)=1 AND DAY(DOBBEST)=1 THEN
    DOBRETIRE=INTNX('DAY',DOBBEST,-1);
  ELSE DOBRETIRE=DOBBEST;

  * SET MONTHS TO NUMBER OF MONTHS UNTIL FRA;
  IF YEAR(DOBRETIRE)<=1937 THEN MONTHS=780;
  IF YEAR(DOBRETIRE)=1938 THEN MONTHS=782;
  IF YEAR(DOBRETIRE)=1939 THEN MONTHS=784;
  IF YEAR(DOBRETIRE)=1940 THEN MONTHS=786;
  IF YEAR(DOBRETIRE)=1941 THEN MONTHS=788;
  IF YEAR(DOBRETIRE)=1942 THEN MONTHS=790;
  IF 1943<=YEAR(DOBRETIRE)<=1954 THEN MONTHS=792;
  IF YEAR(DOBRETIRE)=1955 THEN MONTHS=794;
  IF YEAR(DOBRETIRE)=1956 THEN MONTHS=796;
  IF YEAR(DOBRETIRE)=1957 THEN MONTHS=798;
  IF YEAR(DOBRETIRE)=1958 THEN MONTHS=800;
  IF YEAR(DOBRETIRE)=1959 THEN MONTHS=802;
  IF YEAR(DOBRETIRE)>=1960 THEN MONTHS=804;

  RETIREDATE=INTNX('MONTH',DOBRETIRE,MONTHS,'SAMEDAY');

  FRA=YRDIF(DOBRETIRE,RETIREDATE,'SAMEDAY');

  *** ADD AGE CALCULATION TO MATCH SSA ***;
  SELDATEMM=1;
  SELDATEYY=20&NEXTYR.;
  SELDATEDD=1;
  SELDATE2=MDY(SELDATEMM, SELDATEDD, SELDATEYY);
  MONTHS=INTCK('MONTH',DOBBEST,SELDATE2);
```

Appendix A.222
JCL/SAS Code: STEP1DI

```
  DOBDD=DAY(DOBBEST);
  IF DOBDD>1 THEN MONTHS=MONTHS-1;
  AGE&YR.=INT(MONTHS/12);

  *** FLAG BENES WHOSE AGE IS GREATER THAN FRA ***;
  IF AGE&YR.>=FRA THEN DELETEFRA=1;

  *** FLAG DI BENES IN CURRENT PAY STATUS AS OF DEC;
  DIBENE=0;
  IF SUBSTR(LEFT(LAF&YR.12),1,1) IN ('C','E') THEN DIBENE=1;

RUN;

*** THIS CODE WAS FOR TESTING ONLY - CAN BE UNCOMMENTED FOR ***;
*** RETESTING ***;
*PROC FREQ DATA=OUT.STEP1DI;
*   TABLES FLAG_START;
*RUN;

*PROC PRINT DATA=OUT.STEP1DI;
*   WHERE FLAG_START=1;
*   VAR FLAG: TOC;
*RUN;

PROC FREQ DATA=OUT.STEP1DI;
  TABLES TOC_NUM TOC1 TOC2 TOC3 TOC4 TOC5 TOC6 TOC
       / LIST MISSING;
RUN;

PROC FREQ DATA=OUT.STEP1DI;
  TABLES DIBENE DELETEFRA DIBENE*DELETEFRA DOECFLAG/ LIST MISSING;
RUN;

PROC FREQ DATA=OUT.STEP1DI;
  TABLES AGE&YR.
       DELETEFRA*AGE&YR. / LIST MISSING;
RUN;

PROC FORMAT;
   VALUE AGEGRP LOW-<30= '1'
             30-<35 = '2'
             35-<40 = '3'
             40-<45 = '4'
             45-<50 = '5'
             50-<55 = '6'
```

Appendix A.222
JCL/SAS Code: STEP1DI

```
            55-<60 = '7'
            60-HIGH= '8';
    VALUE AGEGR LOW-<35='1'
            35-<40 ='2'
            40-<45 ='3'
            45-<50 ='4'
            50-<55 ='5'
            55-<60 ='6'
            60-65  ='7';
RUN;

DATA OUT&YR..Y20&YR.;
  SET OUT.STEP1DI(KEEP=SEX DIBENE AGE&YR. DXPRIBEST&YR.12 DOECFLAG
                PST&YR.12 DELETEFRA);
  AGEGRP=PUT(AGE&YR.,AGEGRP.);
  AGEGR=PUT(AGE&YR.,AGEGR.);
RUN;

PROC CONTENTS DATA=OUT&YR..Y20&YR;
RUN;

//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<DPHELPS@MATHEMATICA-MPR.COM>
RCPT TO:<DPHELPS@MATHEMATICA-MPR.COM>
DATA
FROM:   <DPHELPS@MATHEMATICA-MPR.COM>
TO:     <DPHELPS@MATHEMATICA-MPR.COM>
SUBJECT: STEP1DI IS COMPLETE
```

Appendix A.223
JCL/SAS Code: STEP2DI

```
//$4671DI2  JOB (12510000,T715,,SAS,,ITC9FL),DAWN-PHELPS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: 50214 DAF
//*
//* PROJECT
//* DIRECTOR:    LAURA KOSAR
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.VAL17.PRDLIB(STEP2DI)
//*
//* DESCRIPTION: CREATE BENCHMARKING
//*
//* INPUT:      OPDR.TG.PRD.ETTW.$4671.VAL17P.DIVAL17.SA.FX1
//*
//* OUTPUT:     OPDR.TG.PRD.ETTW.$4671.VAL17P.STEP2DI.SA.FX1
//*
//* PURPOSE: CREATE TABLES FOR BENCHMARKING
//*****************************************************************
//*
//SAS       EXEC SAS9,
//         WORK='120000,60000'
//* OPDR.TG.PRD.ETTW.$4671.VAL18P.STEP1DI.SA.V1
//IN    DD DSN=OPDR.TG.PRD.ETTW.$4671.VAL18P.DIVAL18.SA.V1,
//        DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.$4671.VAL18P.STEP2DI.SA.V1,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//TEMP  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//        SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN DD *

OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN  OBS=MAX;


TITLE1 "BENCHMARKING";
TITLE2 "DI BENEFICARIES";
TITLE3;

 %LET YR=18;

 *** RUN FREQUENCY OF GENDER BY AGE FOR TABLE 19 ***;
 PROC FREQ DATA=IN.Y20&YR. ORDER=FORMATTED;
   WHERE DIBENE=1 AND DOECFLAG=1 AND DELETEFRA NE 1;
   TABLE SEX*AGEGRP / OUT=OUT.YF20&YR.;
```

Appendix A.223
JCL/SAS Code: STEP2DI

```
RUN;

*** RUN MEAN AGE FOR TABLE 19 ***;
PROC MEANS DATA=IN.Y20&YR.;
  WHERE DIBENE=1 AND DOECFLAG=1 AND DELETEFRA NE 1;
  VAR AGE&YR.;
  OUTPUT OUT=OUT.MA20&YR. MEAN=MEANAGE;
RUN;

PROC SORT DATA=IN.Y20&YR. OUT=OUTY20&YR.;
  BY SEX;
RUN;

*** RUN MEAN AGE BY GENDER FOR TABLE 19 ***;
PROC MEANS DATA=OUTY20&YR.;
  WHERE DIBENE=1 AND DOECFLAG=1 AND DELETEFRA NE 1;
  VAR AGE&YR.;
  BY SEX;
  OUTPUT OUT=OUT.YM20&YR. MEAN=MEANAGE;
RUN;

*** RUN FREQUENCIES FOR TABLE 21 ***;
PROC FREQ DATA=IN.Y20&YR.;
  WHERE DIBENE=1 AND DOECFLAG=1 AND DELETEFRA NE 1 AND SEX IN
      ('M','F');
  TABLES DXPRIBEST&YR.12 / OUT=OUT.DIAG20&YR.;
RUN;

PROC FORMAT;
VALUE AGEGR
  LOW-<35='1'
  35-<40 ='2'
  40-<45 ='3'
  45-<50 ='4'
  50-<55 ='5'
  55-<60 ='6'
  60-65  ='7';
RUN;

*** RUN FREQUENCIES FOR TABLE 27 ***;
DATA Y20&YR.;
  SET IN.Y20&YR.;
  AGEGR=PUT(AGE&YR.,AGEGR.);
RUN;
```

Appendix A.223
JCL/SAS Code: STEP2DI

```
PROC SORT DATA=Y20&YR.;
  BY SEX;
RUN;

PROC FREQ DATA=Y20&YR. ORDER=FORMATTED;
  WHERE DIBENE=1 AND DOECFLAG=1 AND DELETEFRA NE 1;
  BY SEX;
  TABLE PST&YR.12*AGEGR / OUT=OUT.ST20&YR.;
RUN;
```

Appendix A.224
JCL/SAS Code: CPORT1

```
//$4671CPO JOB (12510000,T715,,SAS,,ITC919DC),PHELS-DAWN,
// MSGCLASS=Q,MSGLEVEL=(1,1),REGION=7168K,NOTIFY=$4671
//*
//STEP1 EXEC SAS9
//SYSPRINT DD SYSOUT=*
//IN1 DD DSN=OPDR.TG.PRD.ETTW.$4671.VAL18P.STEP2DI.SA.V1,DISP=SHR
//OUT1 DD DSN=$4671.XPORT.DIAG2018,
//     DISP=(NEW,CATLG,DELETE),SPACE=(CYL,(100,50),RLSE),
//     DCB=(RECFM=FB,LRECL=80,BLKSIZE=8000,DSORG=PS)
//OUT2 DD DSN=$4671.XPORT.MA2018,
//     DISP=(NEW,CATLG,DELETE),SPACE=(CYL,(100,50),RLSE),
//     DCB=(RECFM=FB,LRECL=80,BLKSIZE=8000,DSORG=PS)
//OUT3 DD DSN=$4671.XPORT.ST2018,
//     DISP=(NEW,CATLG,DELETE),SPACE=(CYL,(100,50),RLSE),
//     DCB=(RECFM=FB,LRECL=80,BLKSIZE=8000,DSORG=PS)
//OUT4 DD DSN=$4671.XPORT.YF2018,
//     DISP=(NEW,CATLG,DELETE),SPACE=(CYL,(100,50),RLSE),
//     DCB=(RECFM=FB,LRECL=80,BLKSIZE=8000,DSORG=PS)
//OUT5 DD DSN=$4671.XPORT.YM2018,
//     DISP=(NEW,CATLG,DELETE),SPACE=(CYL,(100,50),RLSE),
//     DCB=(RECFM=FB,LRECL=80,BLKSIZE=8000,DSORG=PS)
OPTIONS NOCENTER;

PROC CPORT DATA=IN1.DIAG2018 FILE=OUT1;
RUN;
PROC CPORT DATA=IN1.MA2018 FILE=OUT2;
RUN;
PROC CPORT DATA=IN1.ST2018 FILE=OUT3;
RUN;
PROC CPORT DATA=IN1.YF2018 FILE=OUT4;
RUN;
PROC CPORT DATA=IN1.YM2018 FILE=OUT5;
RUN;
```

Appendix A.225
JCL/SAS Code: Step3DI

```
LIBNAME IN 'M:\DAF18\Validation\SSdI\Data';

FILENAME YF2018 'M:\DAF18\Validation\SSDI\Data\YF2018.XPT';
PROC CIMPORT LIBRARY=IN  INFILE=YF2018;
RUN;

FILENAME MA2018 'M:\DAF18\Validation\SSDI\Data\MA2018.XPT';
PROC CIMPORT LIBRARY=IN  INFILE=MA2018;
RUN;

FILENAME YM2018 'M:\DAF18\Validation\SSDI\Data\YM2018.XPT';
PROC CIMPORT LIBRARY=IN  INFILE=YM2018;
RUN;

FILENAME DIAG2018 'M:\DAF18\Validation\SSDI\Data\DIAG2018.XPT';
PROC CIMPORT LIBRARY=IN  INFILE=DIAG2018;
RUN;

FILENAME ST2018 'M:\DAF18\Validation\SSDI\Data\ST2018.XPT';
PROC CIMPORT LIBRARY=IN  INFILE=ST2018;
RUN;
```

Appendix A.226
JCL/SAS Code: Table19up

```
/*********************************************************************/
/* PROGRAM: TABLE19.SAS                                              */
/* PURPOSE: TO READ DATA FOR 2018 INTO AN EXCEL SHELL FOR            */
/*          COMPARISON TO TABLE 19 OF THE SSA DI TABLES              */
/*********************************************************************/

options mprint macrogen;

LIBNAME IN 'M:\DAF18\Validation\SSDI\Data';

*** READ YEARLY DATA BY AGE INTO EXCEL ***;
*** SET MISSING AGEGROUP SO THAT THE NUMBER WILL RUN INTO EXCEL ***;
%MACRO RUNYEAR(YEAR=,ROWM=,ROWF=,ROWMMEAN=,ROWFMEAN=,ROWYEAR=);
DATA YF&YEAR;
  SET IN.YF&YEAR;
  IF AGEGRP NE "*" THEN DO;
    AGEGROUP=INPUT(AGEGRP,2.);
  END;
  ELSE IF AGEGRP="*" THEN AGEGROUP=9;
RUN;

PROC PRINT DATA=YF&YEAR;
RUN;

PROC SORT DATA=YF&YEAR;
  BY SEX AGEGROUP;
RUN;

PROC TRANSPOSE DATA=YF&YEAR OUT=OUT_YF&YEAR PREFIX=COL;
  BY SEX;
  ID AGEGROUP;
  VAR COUNT;
RUN;

*** RUN YEARLY DATA INTO EXCEL ***;
FILENAME SSDIVAL DDE "EXCEL|Table19!R&ROWM.C4:R&ROWM.C12";

DATA _NULL_;
  SET OUT_YF&YEAR;
  FILE SSDIVAL NOTAB LRECL=2000;
  WHERE SEX='M';
  PUT COL1 '09'X COL2 '09'X COL3 '09'X COL4 '09'X COL5 '09'X COL6 '09'X COL7 '09'X COL8;
RUN;
```

Appendix A.226
JCL/SAS Code: Table19up

```
FILENAME SSDIVAL DDE "EXCEL|Table19!R&ROWF.C4:R&ROWF.C12";

DATA _NULL_;
  SET OUT_YF&YEAR;
  FILE SSDIVAL NOTAB LRECL=2000;
  WHERE SEX='F';
  PUT COL1 '09'X COL2 '09'X COL3 '09'X COL4 '09'X COL5 '09'X COL6 '09'X COL7 '09'X COL8;
RUN;

*** RUN MEAN AGE DATA BY GENDER INTO EXCEL ***;
FILENAME SSDIVAL DDE "EXCEL|Table19!R&ROWMMEAN.C12:R&ROWMMEAN.C12";

DATA _NULL_;
  SET IN.YM&YEAR;
  FILE SSDIVAL NOTAB LRECL=200;
  WHERE SEX='M';
  PUT MEANAGE;
RUN;

FILENAME SSDIVAL DDE "EXCEL|Table19!R&ROWFMEAN.C12:R&ROWFMEAN.C12";

DATA _NULL_;
  SET IN.YM&YEAR;
  FILE SSDIVAL NOTAB LRECL=200;
  WHERE SEX='F';
  PUT MEANAGE;
RUN;

*** RUN MEAN AGE DATA OVERALL INTO EXCEL ***;
FILENAME SSDIVAL DDE "EXCEL|Table19!R&ROWYEAR.C12:R&ROWYEAR.C12";

DATA _NULL_;
  SET IN.MA&YEAR;
  FILE SSDIVAL NOTAB LRECL=200;
  PUT MEANAGE;
RUN;
%MEND RUNYEAR;

%RUNYEAR(YEAR=2018,ROWM=17,ROWF=19,ROWMMEAN=8,ROWFMEAN=10,ROWYEAR=6);
```

Appendix A.227
JCL/SAS Code: Table21up

```
/*********************************************************************/
/* PROGRAM: TABLE21.SAS                                              */
/* PURPOSE: TO READ DATA FOR 2010 INTO AN EXCEL SHELL FOR            */
/*        COMPARISON TO TABLE 21 OF THE SSA DI TABLES                */
/*********************************************************************/

LIBNAME IN 'M:\DAF18\Validation\SSDI\Data';

***This program formats the diagnostic groups and regroups them into the ***;
***categories used in the benchmark table ***;

PROC FORMAT;
  VALUE DIAG
    1=CONGEN_ANOM
    2=ENDOCRINE
    3=INFECTIOUS
    4=INJURIES
    5=MENTAL_RET
    6=MENTAL_OTHER
    7=NEOPLASMS
    8=BLOOD
    9=CIRCULATORY
    10=DIGESTIVE
    11=GENITO
    12=MUSCULO
    13=NERVOUS
    14=RESPIRATORY
    15=SKIN
    16=OTHER
    17=MISSING;
RUN;

%MACRO DIAGYR(YEAR,YRDIG,ROWYEAR);
DATA TEMP&YRDIG;
  SET IN.DIAG&YEAR;

IF DXPRIBEST&YRDIG.12>='0000' AND DXPRIBEST&YRDIG.12<='0009' THEN GROUP=17;
    ELSE IF DXPRIBEST&YRDIG.12>='0010' AND DXPRIBEST&YRDIG.12<='0019' THEN GROUP=17;
    ELSE IF DXPRIBEST&YRDIG.12>='0190' AND DXPRIBEST&YRDIG.12<='0199' THEN GROUP=17;
    ELSE IF DXPRIBEST&YRDIG.12>='0280' AND DXPRIBEST&YRDIG.12<='0289' THEN GROUP=17;
    ELSE IF DXPRIBEST&YRDIG.12>='0290' AND DXPRIBEST&YRDIG.12<='0299' THEN GROUP=17;
    ELSE IF DXPRIBEST&YRDIG.12>='0580' AND DXPRIBEST&YRDIG.12<='0589' THEN GROUP=17;
    ELSE IF DXPRIBEST&YRDIG.12>='0590' AND DXPRIBEST&YRDIG.12<='0599' THEN GROUP=17;
    ELSE IF DXPRIBEST&YRDIG.12>='0670' AND DXPRIBEST&YRDIG.12<='0679' THEN GROUP=17;
```

Appendix A.227
JCL/SAS Code: Table21up

```
ELSE IF DXPRIBEST&YRDIG.12>='0680' AND DXPRIBEST&YRDIG.12<='0689' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='0690' AND DXPRIBEST&YRDIG.12<='0699' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='0890' AND DXPRIBEST&YRDIG.12<='0899' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='1050' AND DXPRIBEST&YRDIG.12<='1059' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='1060' AND DXPRIBEST&YRDIG.12<='1069' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='1070' AND DXPRIBEST&YRDIG.12<='1079' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='1080' AND DXPRIBEST&YRDIG.12<='1089' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='1090' AND DXPRIBEST&YRDIG.12<='1099' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='1190' AND DXPRIBEST&YRDIG.12<='1199' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='1660' AND DXPRIBEST&YRDIG.12<='1669' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='1670' AND DXPRIBEST&YRDIG.12<='1679' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='1680' AND DXPRIBEST&YRDIG.12<='1689' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='1690' AND DXPRIBEST&YRDIG.12<='1699' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='1770' AND DXPRIBEST&YRDIG.12<='1779' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='2090' AND DXPRIBEST&YRDIG.12<='2099' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='2470' AND DXPRIBEST&YRDIG.12<='2479' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='2480' AND DXPRIBEST&YRDIG.12<='2489' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='2490' AND DXPRIBEST&YRDIG.12<='2499' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='2540' AND DXPRIBEST&YRDIG.12<='2549' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='2560' AND DXPRIBEST&YRDIG.12<='2569' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='2570' AND DXPRIBEST&YRDIG.12<='2579' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='2580' AND DXPRIBEST&YRDIG.12<='2589' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='2590' AND DXPRIBEST&YRDIG.12<='2599' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='3130' AND DXPRIBEST&YRDIG.12<='3139' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='3270' AND DXPRIBEST&YRDIG.12<='3279' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='3280' AND DXPRIBEST&YRDIG.12<='3289' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='3380' AND DXPRIBEST&YRDIG.12<='3389' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='3390' AND DXPRIBEST&YRDIG.12<='3399' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='3990' AND DXPRIBEST&YRDIG.12<='3999' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='4000' AND DXPRIBEST&YRDIG.12<='4009' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='4060' AND DXPRIBEST&YRDIG.12<='4069' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='4070' AND DXPRIBEST&YRDIG.12<='4079' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='4080' AND DXPRIBEST&YRDIG.12<='4089' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='4090' AND DXPRIBEST&YRDIG.12<='4099' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='4180' AND DXPRIBEST&YRDIG.12<='4189' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='4190' AND DXPRIBEST&YRDIG.12<='4199' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='4390' AND DXPRIBEST&YRDIG.12<='4399' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='4450' AND DXPRIBEST&YRDIG.12<='4459' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='4490' AND DXPRIBEST&YRDIG.12<='4499' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='4500' AND DXPRIBEST&YRDIG.12<='4509' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='4670' AND DXPRIBEST&YRDIG.12<='4679' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='4680' AND DXPRIBEST&YRDIG.12<='4689' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='4690' AND DXPRIBEST&YRDIG.12<='4699' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='4790' AND DXPRIBEST&YRDIG.12<='4799' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='4880' AND DXPRIBEST&YRDIG.12<='4889' THEN GROUP=17;
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Appendix A.227
JCL/SAS Code: Table21up

```
ELSE IF DXPRIBEST&YRDIG.12>='4890' AND DXPRIBEST&YRDIG.12<='4899' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='4970' AND DXPRIBEST&YRDIG.12<='4979' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='4980' AND DXPRIBEST&YRDIG.12<='4989' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='4990' AND DXPRIBEST&YRDIG.12<='4999' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='5090' AND DXPRIBEST&YRDIG.12<='5099' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='5380' AND DXPRIBEST&YRDIG.12<='5389' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='5390' AND DXPRIBEST&YRDIG.12<='5399' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='5440' AND DXPRIBEST&YRDIG.12<='5449' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='5450' AND DXPRIBEST&YRDIG.12<='5459' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='5460' AND DXPRIBEST&YRDIG.12<='5469' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='5470' AND DXPRIBEST&YRDIG.12<='5479' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='5480' AND DXPRIBEST&YRDIG.12<='5489' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='5490' AND DXPRIBEST&YRDIG.12<='5499' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='5540' AND DXPRIBEST&YRDIG.12<='5549' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='5590' AND DXPRIBEST&YRDIG.12<='5599' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='5610' AND DXPRIBEST&YRDIG.12<='5619' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='5630' AND DXPRIBEST&YRDIG.12<='5639' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6090' AND DXPRIBEST&YRDIG.12<='6099' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6120' AND DXPRIBEST&YRDIG.12<='6129' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6130' AND DXPRIBEST&YRDIG.12<='6139' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6300' AND DXPRIBEST&YRDIG.12<='6309' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6310' AND DXPRIBEST&YRDIG.12<='6319' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6320' AND DXPRIBEST&YRDIG.12<='6329' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6330' AND DXPRIBEST&YRDIG.12<='6339' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6340' AND DXPRIBEST&YRDIG.12<='6349' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6350' AND DXPRIBEST&YRDIG.12<='6359' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6360' AND DXPRIBEST&YRDIG.12<='6369' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6370' AND DXPRIBEST&YRDIG.12<='6379' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6380' AND DXPRIBEST&YRDIG.12<='6389' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6390' AND DXPRIBEST&YRDIG.12<='6399' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6400' AND DXPRIBEST&YRDIG.12<='6409' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6410' AND DXPRIBEST&YRDIG.12<='6419' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6420' AND DXPRIBEST&YRDIG.12<='6429' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6430' AND DXPRIBEST&YRDIG.12<='6439' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6440' AND DXPRIBEST&YRDIG.12<='6449' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6450' AND DXPRIBEST&YRDIG.12<='6459' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6460' AND DXPRIBEST&YRDIG.12<='6469' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6470' AND DXPRIBEST&YRDIG.12<='6479' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6480' AND DXPRIBEST&YRDIG.12<='6489' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6490' AND DXPRIBEST&YRDIG.12<='6499' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6500' AND DXPRIBEST&YRDIG.12<='6509' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6510' AND DXPRIBEST&YRDIG.12<='6519' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6520' AND DXPRIBEST&YRDIG.12<='6529' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6530' AND DXPRIBEST&YRDIG.12<='6539' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6540' AND DXPRIBEST&YRDIG.12<='6549' THEN GROUP=17;
```

Appendix A.227
JCL/SAS Code: Table21up

```
ELSE IF DXPRIBEST&YRDIG.12>='6550' AND DXPRIBEST&YRDIG.12<='6559' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6560' AND DXPRIBEST&YRDIG.12<='6569' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6570' AND DXPRIBEST&YRDIG.12<='6579' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6580' AND DXPRIBEST&YRDIG.12<='6589' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6590' AND DXPRIBEST&YRDIG.12<='6599' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6600' AND DXPRIBEST&YRDIG.12<='6609' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6610' AND DXPRIBEST&YRDIG.12<='6619' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6620' AND DXPRIBEST&YRDIG.12<='6629' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6630' AND DXPRIBEST&YRDIG.12<='6639' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6640' AND DXPRIBEST&YRDIG.12<='6649' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6650' AND DXPRIBEST&YRDIG.12<='6659' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6660' AND DXPRIBEST&YRDIG.12<='6669' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6670' AND DXPRIBEST&YRDIG.12<='6679' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6680' AND DXPRIBEST&YRDIG.12<='6689' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6690' AND DXPRIBEST&YRDIG.12<='6699' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6700' AND DXPRIBEST&YRDIG.12<='6709' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6710' AND DXPRIBEST&YRDIG.12<='6719' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6720' AND DXPRIBEST&YRDIG.12<='6729' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6730' AND DXPRIBEST&YRDIG.12<='6739' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6740' AND DXPRIBEST&YRDIG.12<='6749' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6750' AND DXPRIBEST&YRDIG.12<='6759' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6760' AND DXPRIBEST&YRDIG.12<='6769' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6770' AND DXPRIBEST&YRDIG.12<='6779' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6780' AND DXPRIBEST&YRDIG.12<='6789' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6790' AND DXPRIBEST&YRDIG.12<='6799' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6870' AND DXPRIBEST&YRDIG.12<='6879' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6880' AND DXPRIBEST&YRDIG.12<='6889' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6890' AND DXPRIBEST&YRDIG.12<='6899' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='6990' AND DXPRIBEST&YRDIG.12<='6999' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='7610' AND DXPRIBEST&YRDIG.12<='7619' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='7620' AND DXPRIBEST&YRDIG.12<='7629' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='7630' AND DXPRIBEST&YRDIG.12<='7639' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='7670' AND DXPRIBEST&YRDIG.12<='7679' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='7740' AND DXPRIBEST&YRDIG.12<='7749' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='7750' AND DXPRIBEST&YRDIG.12<='7759' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='7790' AND DXPRIBEST&YRDIG.12<='7799' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='7810' AND DXPRIBEST&YRDIG.12<='7819' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='7820' AND DXPRIBEST&YRDIG.12<='7829' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='7850' AND DXPRIBEST&YRDIG.12<='7859' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='7860' AND DXPRIBEST&YRDIG.12<='7869' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='7870' AND DXPRIBEST&YRDIG.12<='7879' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='7880' AND DXPRIBEST&YRDIG.12<='7889' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='7890' AND DXPRIBEST&YRDIG.12<='7899' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='7900' AND DXPRIBEST&YRDIG.12<='7909' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='7910' AND DXPRIBEST&YRDIG.12<='7919' THEN GROUP=17;
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Appendix A.227
JCL/SAS Code: Table21up

```
ELSE IF DXPRIBEST&YRDIG.12>='7920' AND DXPRIBEST&YRDIG.12<='7929' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='7930' AND DXPRIBEST&YRDIG.12<='7939' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='7940' AND DXPRIBEST&YRDIG.12<='7949' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='7950' AND DXPRIBEST&YRDIG.12<='7959' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='7960' AND DXPRIBEST&YRDIG.12<='7969' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='7970' AND DXPRIBEST&YRDIG.12<='7979' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='7980' AND DXPRIBEST&YRDIG.12<='7989' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='7990' AND DXPRIBEST&YRDIG.12<='7999' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='8490' AND DXPRIBEST&YRDIG.12<='8499' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='8550' AND DXPRIBEST&YRDIG.12<='8559' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='8560' AND DXPRIBEST&YRDIG.12<='8569' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='8570' AND DXPRIBEST&YRDIG.12<='8579' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='8580' AND DXPRIBEST&YRDIG.12<='8589' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='8590' AND DXPRIBEST&YRDIG.12<='8599' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='8880' AND DXPRIBEST&YRDIG.12<='8889' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='8890' AND DXPRIBEST&YRDIG.12<='8899' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='8980' AND DXPRIBEST&YRDIG.12<='8989' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='8990' AND DXPRIBEST&YRDIG.12<='8999' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9060' AND DXPRIBEST&YRDIG.12<='9069' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9100' AND DXPRIBEST&YRDIG.12<='9109' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9110' AND DXPRIBEST&YRDIG.12<='9119' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9120' AND DXPRIBEST&YRDIG.12<='9129' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9130' AND DXPRIBEST&YRDIG.12<='9139' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9140' AND DXPRIBEST&YRDIG.12<='9149' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9150' AND DXPRIBEST&YRDIG.12<='9159' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9160' AND DXPRIBEST&YRDIG.12<='9169' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9170' AND DXPRIBEST&YRDIG.12<='9179' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9180' AND DXPRIBEST&YRDIG.12<='9189' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9190' AND DXPRIBEST&YRDIG.12<='9199' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9300' AND DXPRIBEST&YRDIG.12<='9309' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9310' AND DXPRIBEST&YRDIG.12<='9319' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9320' AND DXPRIBEST&YRDIG.12<='9329' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9340' AND DXPRIBEST&YRDIG.12<='9349' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9350' AND DXPRIBEST&YRDIG.12<='9359' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9360' AND DXPRIBEST&YRDIG.12<='9369' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9370' AND DXPRIBEST&YRDIG.12<='9379' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9380' AND DXPRIBEST&YRDIG.12<='9389' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9390' AND DXPRIBEST&YRDIG.12<='9399' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9600' AND DXPRIBEST&YRDIG.12<='9609' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9610' AND DXPRIBEST&YRDIG.12<='9619' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9620' AND DXPRIBEST&YRDIG.12<='9629' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9630' AND DXPRIBEST&YRDIG.12<='9639' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9640' AND DXPRIBEST&YRDIG.12<='9649' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9650' AND DXPRIBEST&YRDIG.12<='9659' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9660' AND DXPRIBEST&YRDIG.12<='9669' THEN GROUP=17;
```

Appendix A.227
JCL/SAS Code: Table21up

```
ELSE IF DXPRIBEST&YRDIG.12>='9670' AND DXPRIBEST&YRDIG.12<='9679' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9680' AND DXPRIBEST&YRDIG.12<='9689' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9690' AND DXPRIBEST&YRDIG.12<='9699' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9700' AND DXPRIBEST&YRDIG.12<='9709' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9710' AND DXPRIBEST&YRDIG.12<='9719' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9720' AND DXPRIBEST&YRDIG.12<='9729' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9730' AND DXPRIBEST&YRDIG.12<='9739' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9740' AND DXPRIBEST&YRDIG.12<='9749' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9750' AND DXPRIBEST&YRDIG.12<='9759' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9760' AND DXPRIBEST&YRDIG.12<='9769' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9770' AND DXPRIBEST&YRDIG.12<='9779' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9780' AND DXPRIBEST&YRDIG.12<='9789' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9790' AND DXPRIBEST&YRDIG.12<='9799' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9800' AND DXPRIBEST&YRDIG.12<='9809' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9810' AND DXPRIBEST&YRDIG.12<='9819' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9820' AND DXPRIBEST&YRDIG.12<='9829' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9830' AND DXPRIBEST&YRDIG.12<='9839' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9840' AND DXPRIBEST&YRDIG.12<='9849' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9850' AND DXPRIBEST&YRDIG.12<='9859' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9860' AND DXPRIBEST&YRDIG.12<='9869' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9870' AND DXPRIBEST&YRDIG.12<='9879' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9880' AND DXPRIBEST&YRDIG.12<='9889' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9890' AND DXPRIBEST&YRDIG.12<='9899' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9900' AND DXPRIBEST&YRDIG.12<='9909' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9910' AND DXPRIBEST&YRDIG.12<='9919' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9920' AND DXPRIBEST&YRDIG.12<='9929' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9930' AND DXPRIBEST&YRDIG.12<='9939' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9940' AND DXPRIBEST&YRDIG.12<='9949' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9950' AND DXPRIBEST&YRDIG.12<='9959' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9960' AND DXPRIBEST&YRDIG.12<='9969' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9970' AND DXPRIBEST&YRDIG.12<='9979' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9980' AND DXPRIBEST&YRDIG.12<='9989' THEN GROUP=17;
ELSE IF DXPRIBEST&YRDIG.12>='9990' AND DXPRIBEST&YRDIG.12<='9999' THEN GROUP=17;

ELSE IF DXPRIBEST&YRDIG.12>='0020' AND DXPRIBEST&YRDIG.12<='1399' THEN GROUP=3;
ELSE IF DXPRIBEST&YRDIG.12>='7710' AND DXPRIBEST&YRDIG.12<='7719' THEN GROUP=3;

ELSE IF DXPRIBEST&YRDIG.12>='1400' AND DXPRIBEST&YRDIG.12<='2399' THEN GROUP=7;

ELSE IF DXPRIBEST&YRDIG.12>='2400' AND DXPRIBEST&YRDIG.12<='2799' THEN GROUP=2;

ELSE IF DXPRIBEST&YRDIG.12>='2800' AND DXPRIBEST&YRDIG.12<='2899' THEN GROUP=8;
ELSE IF (DXPRIBEST&YRDIG.12>='7720' AND DXPRIBEST&YRDIG.12<='7729') OR
    (DXPRIBEST&YRDIG.12>='7730' AND DXPRIBEST&YRDIG.12<='7739') OR
    (DXPRIBEST&YRDIG.12>='7760' AND DXPRIBEST&YRDIG.12<='7769') THEN GROUP=8;
```

Appendix A.227
JCL/SAS Code: Table21up

```
    ELSE IF DXPRIBEST&YRDIG.12 IN ('3138','3152','3153','3195') THEN GROUP=6;
    ELSE IF DXPRIBEST&YRDIG.12>='2900' AND DXPRIBEST&YRDIG.12<='3169' THEN GROUP=6;

    ELSE IF DXPRIBEST&YRDIG.12>='3170' AND DXPRIBEST&YRDIG.12<='3199' THEN GROUP=5;

    ELSE IF DXPRIBEST&YRDIG.12>='3200' AND DXPRIBEST&YRDIG.12<='3749' THEN GROUP=13;
    ELSE IF DXPRIBEST&YRDIG.12>='3760' AND DXPRIBEST&YRDIG.12<='3899' THEN GROUP=13;

    ELSE IF DXPRIBEST&YRDIG.12>='3750' AND DXPRIBEST&YRDIG.12<='3759' THEN GROUP=9;
    ELSE IF DXPRIBEST&YRDIG.12>='3900' AND DXPRIBEST&YRDIG.12<='4599' THEN GROUP=9;

    ELSE IF DXPRIBEST&YRDIG.12>='4600' AND DXPRIBEST&YRDIG.12<='5199' THEN GROUP=14;
    ELSE IF DXPRIBEST&YRDIG.12>='7680' AND DXPRIBEST&YRDIG.12<='7709' THEN GROUP=14;

    ELSE IF DXPRIBEST&YRDIG.12>='5200' AND DXPRIBEST&YRDIG.12<='5799' THEN GROUP=10;
    ELSE IF DXPRIBEST&YRDIG.12>='7770' AND DXPRIBEST&YRDIG.12<='7779' THEN GROUP=10;

    ELSE IF DXPRIBEST&YRDIG.12>='5800' AND DXPRIBEST&YRDIG.12<='6299' THEN GROUP=11;

    ELSE IF DXPRIBEST&YRDIG.12>='6800' AND DXPRIBEST&YRDIG.12<='7099' THEN GROUP=15;
    ELSE IF DXPRIBEST&YRDIG.12>='7780' AND DXPRIBEST&YRDIG.12<='7789' THEN GROUP=15;

    ELSE IF DXPRIBEST&YRDIG.12>='7100' AND DXPRIBEST&YRDIG.12<='7399' THEN GROUP=12;

    ELSE IF DXPRIBEST&YRDIG.12>='7400' AND DXPRIBEST&YRDIG.12<='7599' THEN GROUP=1;

    ELSE IF DXPRIBEST&YRDIG.12>='7600' AND DXPRIBEST&YRDIG.12<='7849' THEN GROUP=16;
    ELSE IF DXPRIBEST&YRDIG.12='9330' THEN GROUP=16;

    ELSE IF DXPRIBEST&YRDIG.12>='8000' AND DXPRIBEST&YRDIG.12<='9989' THEN GROUP=4;


    ELSE GROUP=17;
  FORMAT GROUP DIAG.;
RUN;


PROC SORT DATA=TEMP&YRDIG;
  BY GROUP;
RUN;

PROC FREQ DATA=TEMP&YRDIG;
  TABLES GROUP / LIST MISSING;
  TITLE "DIAGNOSTIC GROUPS &YEAR";
```

Appendix A.227
JCL/SAS Code: Table21up

```
RUN;

PROC SUMMARY DATA=TEMP&YRDIG SUM;
  BY GROUP;
  VAR COUNT;
  OUTPUT OUT=OUT&YRDIG SUM=SUM;
RUN;

PROC PRINT DATA=OUT&YRDIG;
RUN;

PROC TRANSPOSE DATA=OUT&YRDIG OUT=OUT&YEAR;
  VAR SUM;
  ID GROUP;
RUN;

FILENAME ssdival DDE "EXCEL|Table21!R&ROWYEAR.C3:R&ROWYEAR.C20";

DATA _NULL_;
  SET OUT&YEAR;
  FILE ssdival NOTAB LRECL=200;
  PUT CONGEN_ANOM '09'X ENDOCRINE '09'X INFECTIOUS '09'X INJURIES '09'X '09'X MENTAL_RET '09'X
MENTAL_OTHER '09'X
    NEOPLASMS '09'X BLOOD '09'X CIRCULATORY '09'X DIGESTIVE '09'X GENITO '09'X MUSCULO '09'X NERVOUS '09'X
    RESPIRATORY '09'X SKIN '09'X OTHER '09'X MISSING;
RUN;
%MEND;

%DIAGYR(2018,18,6);
```

Appendix A.228
JCL/SAS Code: Table27up

```
/*********************************************************************/
/* PROGRAM: TABLE27.SAS                                              */
/* PURPOSE: TO READ DATA FOR 2010 INTO AN EXCEL SHELL FOR            */
/*        COMPARISON TO TABLE 27 OF THE SSA DI TABLES                */
/*********************************************************************/

LIBNAME IN 'M:\DAF18\Validation\SSDI\Data';

%let year=2018;
%let yr=18;

DATA TEMP;
  SET IN.ST&year;
  IF PST&yr.12='AL' THEN ROW=1;
    ELSE IF PST&yr.12='AK' THEN ROW=2;
    ELSE IF PST&yr.12='AZ' THEN ROW=3;
    ELSE IF PST&yr.12='AR' THEN ROW=4;
    ELSE IF PST&yr.12='CA' THEN ROW=5;
    ELSE IF PST&yr.12='CO' THEN ROW=6;
    ELSE IF PST&yr.12='CT' THEN ROW=7;
    ELSE IF PST&yr.12='DE' THEN ROW=8;
    ELSE IF PST&yr.12='DC' THEN ROW=9;
    ELSE IF PST&yr.12='FL' THEN ROW=10;
    ELSE IF PST&yr.12='GA' THEN ROW=11;
    ELSE IF PST&yr.12='HI' THEN ROW=12;
    ELSE IF PST&yr.12='ID' THEN ROW=13;
    ELSE IF PST&yr.12='IL' THEN ROW=14;
    ELSE IF PST&yr.12='IN' THEN ROW=15;
    ELSE IF PST&yr.12='IA' THEN ROW=16;
    ELSE IF PST&yr.12='KS' THEN ROW=17;
    ELSE IF PST&yr.12='KY' THEN ROW=18;
    ELSE IF PST&yr.12='LA' THEN ROW=19;
    ELSE IF PST&yr.12='ME' THEN ROW=20;
    ELSE IF PST&yr.12='MD' THEN ROW=21;
    ELSE IF PST&yr.12='MA' THEN ROW=22;
    ELSE IF PST&yr.12='MI' THEN ROW=23;
    ELSE IF PST&yr.12='MN' THEN ROW=24;
    ELSE IF PST&yr.12='MS' THEN ROW=25;
    ELSE IF PST&yr.12='MO' THEN ROW=26;
    ELSE IF PST&yr.12='MT' THEN ROW=27;
    ELSE IF PST&yr.12='NE' THEN ROW=28;
    ELSE IF PST&yr.12='NV' THEN ROW=29;
    ELSE IF PST&yr.12='NH' THEN ROW=30;
    ELSE IF PST&yr.12='NJ' THEN ROW=31;
```

Appendix A.228
JCL/SAS Code: Table27up

```
    ELSE IF PST&yr.12='NM' THEN ROW=32;
    ELSE IF PST&yr.12='NY' THEN ROW=33;
    ELSE IF PST&yr.12='NC' THEN ROW=34;
    ELSE IF PST&yr.12='ND' THEN ROW=35;
    ELSE IF PST&yr.12='OH' THEN ROW=36;
    ELSE IF PST&yr.12='OK' THEN ROW=37;
    ELSE IF PST&yr.12='OR' THEN ROW=38;
    ELSE IF PST&yr.12='PA' THEN ROW=39;
    ELSE IF PST&yr.12='RI' THEN ROW=40;
    ELSE IF PST&yr.12='SC' THEN ROW=41;
    ELSE IF PST&yr.12='SD' THEN ROW=42;
    ELSE IF PST&yr.12='TN' THEN ROW=43;
    ELSE IF PST&yr.12='TX' THEN ROW=44;
    ELSE IF PST&yr.12='UT' THEN ROW=45;
    ELSE IF PST&yr.12='VT' THEN ROW=46;
    ELSE IF PST&yr.12='VA' THEN ROW=47;
    ELSE IF PST&yr.12='WA' THEN ROW=48;
    ELSE IF PST&yr.12='WV' THEN ROW=49;
    ELSE IF PST&yr.12='WI' THEN ROW=50;
    ELSE IF PST&yr.12='WY' THEN ROW=51;
    ELSE IF PST&yr.12='GU' THEN ROW=54;
    ELSE IF PST&yr.12='MP' THEN ROW=55;
    ELSE IF PST&yr.12='PR' THEN ROW=56;
    ELSE IF PST&yr.12='VI' THEN ROW=57;
    ELSE IF PST&yr.12='  ' THEN ROW=58;
RUN;

DATA TEMP_F;
  SET TEMP;
  IF SEX='F';
  IF AGEGR IN ('1','2','3','4','5','6','7','*');
RUN;

PROC SORT DATA=TEMP_F;
   BY ROW;
RUN;

PROC SUMMARY DATA=TEMP_F SUM;
   BY ROW;
   VAR COUNT;
   OUTPUT OUT=OUT_F SUM=SUM;
RUN;


FILENAME ssdival DDE "EXCEL|Table27!R126C2:R176C2";
```

Appendix A.228
JCL/SAS Code: Table27up

```
DATA _NULL_;
  SET OUT_F;
  FILE ssdival NOTAB LRECL=200;
  IF 1 <= ROW <= 51;
  PUT SUM;
RUN;

FILENAME ssdival DDE "EXCEL|Table27!R179C2:R183C2";

DATA _NULL_;
  SET OUT_F;
  FILE ssdival NOTAB LRECL=200;
  IF 54 <= ROW <= 58;
  PUT SUM;
RUN;

DATA TEMP_M;
 SET TEMP;
 IF SEX='M';
 IF AGEGR IN ('1','2','3','4','5','6','7','*');
RUN;

PROC SORT DATA=TEMP_M;
  BY ROW;
RUN;

PROC SUMMARY DATA=TEMP_M SUM;
  BY ROW;
  VAR COUNT;
  OUTPUT OUT=OUT_M SUM=SUM;
RUN;

FILENAME ssdival DDE "EXCEL|Table27!R66C2:R116C2";

DATA _NULL_;
  SET OUT_M;
  FILE ssdival NOTAB LRECL=200;
  IF 1 <= ROW <= 51;
  PUT SUM;
RUN;

FILENAME ssdival DDE "EXCEL|Table27!R119C2:R123C2";

DATA _NULL_;
```

Appendix A.228
JCL/SAS Code: Table27up

```
    SET OUT_M;
    FILE ssdival NOTAB LRECL=200;
    IF 54 <= ROW <= 58;
    PUT SUM;
  RUN;
```

Appendix A.229
JCL/SAS Code: TKTVAL

```
//#6266TKV  JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//          MSGCLASS=1,MSGLEVEL=(1,1),REGION=2047M,NOTIFY=#6266
//*****************************************************************
//* PROJECT: DAF17
//* LEADER: LAURA KOSAR
//*
//*   *-----------------------------------------------------*
//*   |  OPDR.TG.PRD.ETTW.#6266.DAF17.TKTVAL.PRDLIB(TKTVAL)  |
//*   *-----------------------------------------------------*
//*
//* PURPOSE: COMPARE DAFYY TICKET BASE FILE AGAINST MAXIMUS
//*        REPORT FOR VALIDATION PURPOSES
//*
//* DATE:   11/05/2018 SERGE LUKASHANETS
//*
//* INPUT:   TKT BASE: OPDR.TG.PRD.ETTW.DRAFT.DAF<YY>P.TICKETBS
//*             ANN: OPDR.TG.PRD.ETTW.<ID>.DAF<YY>P.Y20<YY>.SA.V1
//*
//* OUTPUT:  OPDR.TG.PRD.ETTW.<ID>.DAF<YY>E.TKTVAL.SA.V1(PST1712)
//*
//* AUTHOR:  SERGE LUKASHANETS
//* CONTACT: SLUKASHANETS@MATHEMATICA-MPR.COM
//* PHONE #:
//*****************************************************************
//*
//JS010   EXEC SAS9,
//       WORK='120000,60000'
//*
//TBS     DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF17P.TICKETBS,DISP=SHR
//ANN     DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF17I.Y2017.SA.V1,DISP=SHR
//OUT     DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF17E.TKTVAL.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         SPACE=(CYL,(3000,3000),RLSE),VOL=(,,,10)
//SYSIN   DD *
*GET TICKET COUNTS FROM TICKETBASE AND ANNUALS DATA TO COMPARE TO
 MAXIMUS REPORT;
OPTIONS NOCENTER COMPRESS=BINARY MACROGEN MPRINT OBS=MAX;
%LET ANNYR=2017;*CURRENT YEAR FOR ANNUALS FILE;
%LET PSTYR=17;*CURRENT YEAR FOR PST VARIABLE;
%LET MAXRPTDT='31MAY2018';*DATE MAXIMUS ISSUED REPORT;

%MACRO TKTVAL;
DATA TBSTEST;
   SET TBS.TICKETBS(KEEP=SSN TKTASGNDDT: TKTUNASGDT: TKTTERMDDT:
```

Appendix A.229
JCL/SAS Code: TKTVAL

```
                    NOE PROVTYPE: PMTTYPE:);
   ARRAY ATKTASGNDDT(*) TKTASGNDDT:;
   ARRAY ATKTUNASGDT(*) TKTUNASGDT:;
   ARRAY ATKTTERMDDT(*) TKTTERMDDT:;
   ARRAY APROVTYPE(*) PROVTYPE:;
   ARRAY APMTTYPE(*) PMTTYPE:;
   IF .<ATKTASGNDDT(NOE)<=&MAXRPTDT.D THEN DO;
     TKTASSGND=ATKTASGNDDT(NOE);
     TKTUASSGND=ATKTUNASGDT(NOE);
     TKTTERMD=ATKTTERMDDT(NOE);
     PROVIDER=APROVTYPE(NOE);
     PAYMENT=APMTTYPE(NOE);
   END;
   ELSE DO I=1 TO DIM(ATKTASGNDDT)
       WHILE(ATKTASGNDDT(I)<=&MAXRPTDT.D);
         TKTASSGND =ATKTASGNDDT(I);
         TKTUASSGND=ATKTUNASGDT(I);
         TKTTERMD  =ATKTTERMDDT(I);
         PROVIDER  =APROVTYPE(I);
         PAYMENT   =APMTTYPE(I);
   END;
   KEEP SSN TKTASSGND TKTUASSGND TKTTERMD PROVIDER PAYMENT;
   IF (TKTASSGND <= &MAXRPTDT.D AND TKTASSGND NE .) AND
     (TKTUASSGND =. OR TKTUASSGND > &MAXRPTDT.D)   AND
     (TKTTERMD   =. OR TKTTERMD   > &MAXRPTDT.D);
RUN;

DATA ANNTEST;
SET ANN.Y&ANNYR(KEEP=SSN PST&PSTYR.12);
RUN;

DATA TBSANNTEST;
MERGE TBSTEST(IN=TBS) ANNTEST;
  BY SSN;
  IF TBS;
  ENM=(PROVIDER='E' AND PAYMENT='M');
  ENO=(PROVIDER='E' AND PAYMENT='O');
  VRV=(PROVIDER='V' AND PAYMENT='V');
  VRV2=(PROVIDER='E' AND PAYMENT='V');
  VRO=(PROVIDER='V' AND PAYMENT='O');
  VRM=(PROVIDER='V' AND PAYMENT='M');
  KEEP PST&PSTYR.12 ENM ENO VRV VRV2 VRO VRM PROVIDER PAYMENT;
RUN;

PROC FREQ DATA=TBSANNTEST;
```

Appendix A.229
JCL/SAS Code: TKTVAL

```
TABLES PROVIDER*PAYMENT*ENM*ENO*VRV*VRV2*VRO*VRM / LIST MISSING;
RUN;

PROC SORT DATA=TBSANNTEST;
  BY PST&PSTYR.12;
RUN;

PROC MEANS DATA=TBSANNTEST SUM NOPRINT;
  VAR ENM ENO VRV VRV2 VRO VRM;
  BY PST&PSTYR.12;
OUTPUT OUT=OUT.TKTVAL(DROP=_TYPE_) SUM=/AUTONAME;
RUN;

%MEND TKTVAL;

%TKTVAL;
```

Appendix A.230
JCL/SAS Code: Download_TKTVAL

```
*****************************************************************;
/* Use the firstobs and obs control only if needed.  For example, if the first download   */
/*  after the 499th record, then the code below will start downloading at the 500th     */
/*  observation and go until it completes or crashes.                                    */
*****************************************************************;
libname local 'M:\DAF18\Validation\Ticket\Output';
options comamid=tcp; %let SY56=SY56.sspf.ssa.gov; %let tcpsec=_prompt_; options remote=sy56.spawner; run;


SIGNON ;
********************NOTE THAT DSN COLUMN IS FORMATED WITH '' SO ONLY ADD NAMES;
*                    V V V V V V V V V V V V V V V V V V V V V V ;
rsubmit;
;

libname MISF4   'OPDR.TG.PRD.ETTW.#6266.DAF18E.TKTVAL.SA.V1';


proc download data=MISF4.TKTVAL out=local.TKTVAL1812(compress=binary);
run;
```

Appendix A.231
JCL/SAS Code: DOWNLOAD_DATA

```
options comamid=tcp; %let SY56=SY56.sspf.ssa.gov; %let tcpsec=_prompt_; options remote=sy56.spawner; run;


LIBNAME LOCAL "M:\DAF18\Validation\VRRMS";

SIGNON;
RSUBMIT;
LIBNAME LOC 'OPDR.TG.PRD.ETTW.DRAFT.DAF18P.VRRMS';

PROC DOWNLOAD DATA=LOC.VRRMS
        OUT=LOCAL.VRRMS(COMPRESS=BINARY);
RUN;

ENDRSUBMIT;
SIGNOFF;
```

Appendix A.232
JCL/SAS Code: VRRMS_Validation

```
/****************************************************
*** VALIDATE DAF15 VRRMS Data
*** PROGRAMMER : MIAOMIAO SHEN
*** DATE      : 10/13/2016
****************************************************/
libname in  "M:\DAF18\Validation\VRRMS";  *DAF18 VRRMS Data;
libname out "M:\DAF18\Validation\VRRMS";

OPTIONS NOCENTER OBS=MAX FORMDLIM=' ' PAGENO=1  LS=200 PS=80
      FORMCHAR="|----|+|---+=|-/\<>*";

data vrrms_wide;
  set in.vrrms;

  *Exclude the claim with no Total Amount of Dollars Allowed;
  if TOT_PAID_AMT1 ~= .;

  *Construct the Federal Fiscal Year based on the dispatch date;
  *For example, Fiscal Year 2012 is between 10/1/2011 and 9/30/2012;

  array disp_dte(11) PSTUS_TS1-PSTUS_TS11;      *Input array;
  array fc_yr(11) fiscal_yr1-fiscal_yr11;          *Output array;

  do i = 1 to 11;
  if month(disp_dte(i)) in (10, 11, 12) then fc_yr(i) = year(disp_dte(i))+1;
    else fc_yr(i) = year(disp_dte(i));
  end;
run;

* Transpose data from wide to long;
proc transpose data = vrrms_wide out = long_tlamt prefix = tl_amt_allowed;
by SSN;
var TOT_PAID_AMT1-TOT_PAID_AMT11;
run;

data long_tlamt;
  set long_tlamt (rename=(tl_amt_allowed1=tl_amt_allowed));
  count = input(substr(_name_,13),5.);
  drop _name_;
run;

proc transpose data = vrrms_wide out = long_fcyr prefix = fiscal_yr;
by SSN;
var fiscal_yr1-fiscal_yr11;
```

Appendix A.232
JCL/SAS Code: VRRMS_Validation

```
run;

data long_fcyr;
  set long_fcyr (rename=(fiscal_yr1=fiscal_yr));
  count = input(substr(_name_,10),5.);
  drop _name_;
run;

* Merge Total Amount of Dollars Allowed and Fiscal Year two variables onto one data set;
data vrrms_long;
  merge long_tlamt
        long_fcyr
  ;
  by SSN count;
run;

* Check if Total Amount of Dollars Allowed and Fiscal Year two variables have the same missingness;
proc format;
value miss low-high ="nonmissing" other="missing";
run;

proc freq data = vrrms_long;
tables tl_amt_allowed*fiscal_yr/missing list;
format tl_amt_allowed fiscal_yr miss.;
run;

* Remove the records with missing Total Amount of Dollars Allowed and Fiscal Year;
data vrrms_long;
  set vrrms_long (where = (tl_amt_allowed~=. and fiscal_yr~=.));
run;

proc sort data = vrrms_long;
by fiscal_yr;
run;

proc means data = vrrms_long n sum mean /*noprint*/;
var tl_amt_allowed;
by fiscal_yr;
output out=vrrms_validation_table1
         (drop=_TYPE_ _FREQ_
          rename=(tl_amt_allowed=number_of_claims_allowed))
          n=;
run;

proc means data = vrrms_long n sum mean /*noprint*/;
```

Appendix A.232
JCL/SAS Code: VRRMS_Validation

```
var tl_amt_allowed;
by fiscal_yr;
output out=vrrms_validation_table2
        (drop=_TYPE_ _FREQ_
         rename=(tl_amt_allowed=amount_of_dollars_allowed))
         sum=;
run;

proc means data = vrrms_long n sum mean /*noprint*/;
var tl_amt_allowed;
by fiscal_yr;
output out=vrrms_validation_table3
        (drop=_TYPE_ _FREQ_
         rename=(tl_amt_allowed=average_cost_per_claim))
         mean=;
run;

data out.vrrms_validation_table;
  merge vrrms_validation_table1 vrrms_validation_table2 vrrms_validation_table3;
  amount_of_dollars_allowed=round(amount_of_dollars_allowed,0.01);
  average_cost_per_claim=round(average_cost_per_claim,0.01);
  by fiscal_yr;
run;

title "DAF18 VRRMS Validation Table";
proc export data=out.vrrms_validation_table
         outfile="M:\DAF18\Validation\VRRMS\vrrms_validation_table_DAF18.xlsx"
               dbms=xlsx replace;
               sheet="vrrms_validation_table";
run;
title;
```

Appendix A.233
JCL/SAS Code: T16EARN

```
//$4671T16  JOB (12510000,T715,,SAS,,ITC9FL),ALEX-BRYCE,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: BUILD DAF16 (50214)
//* PROJECT
//* DIRECTOR:    CASSANDRA PICKENS JEWELL
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF18.PEARN.PRDLIB(T16EARN)
//*
//* DESCRIPTION: BUILDS THE YYMM EARNINGS VARIABLES FROM THE DCF
//*              T16EARN FILE
//*
//* DATE:        02/27/20 DAWN PHELPS
//*****************************************************************
//*
//SAS       EXEC SAS9,
//         WORK='120000,60000'
//*
//*
//IN1   DD DSN=OPDR.TG.PRD.ETTW.#4941.DAF18P.DCFT16ER.SA.V1,DISP=SHR
//BLD   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIEDCF.SA.V1,DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.T16EARN.SA.V1,
//        DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//TEMP1  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP2  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP3  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP4  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//      SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN  DD *

OPTIONS LS=132 COMPRESS=YES MPRINT MACROGEN OBS=MAX;

%LET BEGYR=1994;
%LET ENDYR=2018; /* CHANGE AS NEEDED */
%LET ENDMN=12;   /* CHANGE AS NEEDED */

  /* ASSIGN MACRO VARIABLES TO HANDLE TIME SERIES DATA */
%LET NUMYRS=%EVAL(&ENDYR.-&BEGYR.+1);

%MACRO START;
```

Appendix A.233
JCL/SAS Code: T16EARN

```
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

*************** T16 EARNINGS PROCESSING ******************************;

DATA TEMP1.T16ERN;
   SET IN1.T16ERNGS;

   * IF THE EARNINGS DATE IS IN A REPORTING YEAR THEN KEEP;
   WHERE
     (ERNGS_DT>="01JAN&BEGYR."D) AND
     (ERNGS_DT<="31DEC&ENDYR."D) AND
     (CID='00');

   * ATTACH FORMAT TO THE ERNGS_DT FIELD SO IT WILL APPEAR AS YYMM;
   ATTRIB ERNGS_DT FORMAT=YYMMN4.;

RUN;

PROC SORT DATA=TEMP1.T16ERN;
   BY COSSN;
RUN;

* CREATE ONE OBSERVATION PER SSN WITH YYMM VARIABLES CONTAINING EACH
  OF THE EARNINGS AMOUNTS;
%MACRO T16EARN(ERNVAR,ERNPREF);
PROC TRANSPOSE DATA=TEMP1.T16ERN
   OUT=TEMP2.&ERNPREF.(DROP=_NAME_ _LABEL_) PREFIX=&ERNPREF.;
   BY COSSN;
   ID ERNGS_DT;
   VAR &ERNVAR.;
RUN;
%MEND T16EARN;

%T16EARN(STUD_EINCMXCL_AMT,T16EXLAMT);
%T16EARN(WRK_EXP_AMT,T16EXPAMT);
%T16EARN(GRS_AMT,T16GRSAMT);
%T16EARN(SE_NET_AMT,T16NETAMT);
%T16EARN(PASS_AMT,T16PASAMT);
%T16EARN(VRFD_IND,T16VERIND);
%T16EARN(SE_VRFD_IND,T16SEVERIND);

*************** COMINE ALL EARNINGS **********************************;
DATA TEMP3.T16EARN;
   MERGE TEMP2.T16EXLAMT
       TEMP2.T16EXPAMT
```

Appendix A.233
JCL/SAS Code: T16EARN

```
        TEMP2.T16GRSAMT
        TEMP2.T16NETAMT
        TEMP2.T16PASAMT
        TEMP2.T16VERIND
        TEMP2.T16SEVERIND
        ;
   BY COSSN;
 * THIS ARRAY WILL ENSURE THAT THERE IS A VARIABLE FOR EVERY
  EARNINGS TYPE FOR EVERY YYMM COMBINATION.  ALTHOUGH UNLIKELY
  IT IS POSSIBLE THAT THERE WILL BE NO BENES WHO HAD A CERTAIN
  EARNINGS TYPE IN A GIVEN MONTH -- IF THIS WERE TO HAPPEN THEN
  THERE WOULD BE NO YYMM VARIABLE FOR THAT EARNING TYPE SINCE THE
  PROC TRANSPOSE IN THE PREVIOUS STEP ONLY CREATES VARIABLES FOR
  DATA IT ENCOUNTERS;
  * THIS IS A MULTIDIMENSIONAL ARRAY.  THE FIRST DIMENSION REPRESENTS
    THE NUMBER OF VARIABLE GROUPS, THE SECOND DIMENSION REPRESENTS
    THE NUMBER OF YEARS BEING REPORTED, THE THIRD DIMENSION
    REPRSENTS THE NUMBER OF MONTHS WITHIN EACH YEAR.  THERE ARE 7
    VARIABLE GROUPS WITH 12 MONTHLY OCCURENCES FOR &NUMYRS. - SEE
    BEGIN OF PROGRAM TO SEE HOW MANY YEARS ARE BEGIN REPORTED;
 ARRAY OVARS {5,&NUMYRS.,12}
     %DO MM=1 %TO &TOTMOS; T16EXLAMT&&YY&MM %END;
      %DO MM=1 %TO &TOTMOS; T16EXPAMT&&YY&MM %END;
      %DO MM=1 %TO &TOTMOS; T16GRSAMT&&YY&MM %END;
      %DO MM=1 %TO &TOTMOS; T16NETAMT&&YY&MM %END;
      %DO MM=1 %TO &TOTMOS; T16PASAMT&&YY&MM %END;
      ;
  ARRAY OCVARS {2,&NUMYRS.,12}
      %DO MM=1 %TO &TOTMOS; T16VERIND&&YY&MM %END;
      %DO MM=1 %TO &TOTMOS; T16SEVERIND&&YY&MM %END;
      ;
RUN;

* SORT THE YYMM VARIABLES INTO THE RIGHT ORDER;
PROC CONTENTS DATA = TEMP3.T16EARN OUT = TEMP3.VARS(KEEP = NAME);
RUN;

PROC SQL;
SELECT NAME INTO :SORTED_COLS SEPARATED BY ' '
FROM TEMP3.VARS
ORDER BY NAME;
QUIT;

DATA TEMP4.T16EARN;
RETAIN &SORTED_COLS;
```

Appendix A.233
JCL/SAS Code: T16EARN

```
SET TEMP3.T16EARN;
RUN;

PROC CONTENTS DATA=TEMP4.T16EARN;
RUN;

PROC PRINT DATA=TEMP4.T16EARN(OBS=10);
RUN;

*************** BUILD SSIERNLVL **********************************;

DATA OUT.T16EARN;
  MERGE TEMP4.T16EARN (IN=T16)
      BLD.MIEDCF  (IN=BLD KEEP = SSN BLINDDT RENAME=(SSN=COSSN));
  BY COSSN;

  IF T16;

  * SET INPUT ARRAY *;
  ARRAY T16GRSAMT (&BEGYR.:&ENDYR.,1:12)
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T16GRSAMT&YR.01-T16GRSAMT&YR.12
            %END;;

  ARRAY T16NETAMT (&BEGYR.:&ENDYR.,1:12)
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T16NETAMT&YR.01-T16NETAMT&YR.12
            %END;;

  ARRAY T16EXPAMT (&BEGYR.:&ENDYR.,1:12)
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T16EXPAMT&YR.01-T16EXPAMT&YR.12
            %END;;

  ARRAY T16PASAMT  (&BEGYR.:&ENDYR.,1:12)
             %DO YEAR=&BEGYR %TO &ENDYR;
             %LET YR=%SUBSTR(&YEAR.,3,2);
             T16PASAMT&YR.01-T16PASAMT&YR.12
             %END;;

  ARRAY T16EXLAMT (&BEGYR.:&ENDYR.,1:12)
            %DO YEAR=&BEGYR %TO &ENDYR;
```

Appendix A.233
JCL/SAS Code: T16EARN

```
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T16EXLAMT&YR.01-T16EXLAMT&YR.12
            %END;;

* SET FBR VALUES *;
* VALUES FROM HTTPS://WWW.SSA.GOV/OACT/COLA/SSIAMTS.HTML *;
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(FBRIN)";

* SET SGA VALUES - NON-BLIND *;
* VALUES FROM HTTPS://WWW.SSA.GOV/OACT/COLA/SGA.HTML *;
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(SGANB)";

* SET SGA VALUES - BLIND *;
* VALUES FROM HTTPS://WWW.SSA.GOV/OACT/COLA/SGA.HTML *;
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(SGAB)";

  * SET UP OUTPUT ARRAY *;
  ARRAY SSIERNLVL (&BEGYR.:&ENDYR.,1:12) $
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            SSIERNLVL&YR.01-SSIERNLVL&YR.12
            %END;;

 DO YR=&BEGYR. TO &ENDYR.;
   DO MO = 1 TO 12;
     * MONTHLY TOTAL SSI GROSS EARNINGS AMOUNT *;
     T16TENAMT = SUM(T16GRSAMT(YR,MO),T16NETAMT(YR,MO));

     * MONTHLY TOTAL SSI INCOME EXCLUSIONS *;
     T16INCEXL = SUM(T16EXPAMT(YR,MO),
                 T16PASAMT(YR,MO),
                 T16EXLAMT(YR,MO));

     * MONTHLY SSI COUNTABLE EARNINGS *;
     T16CNTERN = SUM(T16TENAMT,T16INCEXL*-1);

     * CREATE SSIERNLVL *;
     IF T16TENAMT = 0 THEN SSIERNLVL(YR,MO) = "0";
     ELSE IF 0 < T16TENAMT < FBRIN(YR)
       THEN SSIERNLVL(YR,MO) = "L";

     ELSE IF MONTH(BLINDDT) NE . AND
          MDY(MO,1,YR) >= BLINDDT THEN DO;
       IF FBRIN(YR) <= T16TENAMT < SGAB(YR) AND
         FBRIN(YR) > T16CNTERN
```

Appendix A.233
JCL/SAS Code: T16EARN

```
            THEN SSIERNLVL(YR,MO) = "F";
          ELSE IF FBRIN(YR) <= T16TENAMT < SGAB(YR) AND
                FBRIN(YR) <= T16CNTERN
            THEN SSIERNLVL(YR,MO) = "B";
          ELSE IF T16TENAMT >= SGAB(YR) AND
                T16CNTERN < FBRIN(YR)
            THEN SSIERNLVL(YR,MO) = "A";
          ELSE IF T16TENAMT >= SGAB(YR) AND
                FBRIN(YR) <= T16CNTERN < SGAB(YR)
            THEN SSIERNLVL(YR,MO) = "G";
          ELSE IF T16CNTERN >= SGAB(YR)
            THEN SSIERNLVL(YR,MO) = "S";
        END;

        ELSE IF MDY(MO,1,YR) < BLINDDT
            OR MONTH(BLINDDT)=. THEN DO;
          IF FBRIN(YR) <= T16TENAMT < SGANB(YR) AND
            FBRIN(YR) > T16CNTERN
            THEN SSIERNLVL(YR,MO) = "F";
          ELSE IF FBRIN(YR) <= T16TENAMT < SGANB(YR) AND
                FBRIN(YR) <= T16CNTERN
            THEN SSIERNLVL(YR,MO) = "B";
          ELSE IF T16TENAMT >= SGANB(YR) AND
                T16CNTERN < FBRIN(YR)
            THEN SSIERNLVL(YR,MO) = "A";
          ELSE IF T16TENAMT >= SGANB(YR) AND
                FBRIN(YR) <= T16CNTERN < SGANB(YR)
            THEN SSIERNLVL(YR,MO) = "G";
          ELSE IF T16CNTERN >= SGANB(YR)
            THEN SSIERNLVL(YR,MO) = "S";
        END;
      END; /* END OF MO LOOP */
    END; /* END OF YR LOOP */
  RUN;

  PROC FORMAT;
    VALUE AMTV
    0              = "$0"
    0-<100         = "$0 - LESS THAN $100"
    %DO I = 1 %TO 300;
    %EVAL(100*&I)-<%EVAL(100*(&I+1))
    = "$ %EVAL(100*&I) - LESS THAN $ %EVAL(100*(&I+1))"
    %END;;
  RUN;
```

Appendix A.233
JCL/SAS Code: T16EARN

```
* CHECK FREQ OF SSIERNLVL VARIABLE *;
TITLE1 "CROSSTAB OF SSIERNLVL AND TOTAL SSI GROSS EARNINGS AMOUNT";
TITLE2 "FOR MARCH,JUNE,SEPTEMBER AND DECEMBER";
%DO YEAR=&BEGYR. %TO &ENDYR.;
%LET YR=%SUBSTR(&YEAR.,3,2);
  %LET MO=03 06 09 12;
  %DO I=1 %TO 4;
  %LET VAR=%SCAN(&MO,&I);
  PROC FREQ DATA=OUT.T16EARN;
    TABLES SSIERNLVL&YR.&VAR*T16TENAMT / LIST MISSING;
    FORMAT T16TENAMT AMTV.;
  RUN;
  %END; /*END OF MO LOOP*/
 %END; /*END OF YEAR LOOP*/
 TITLE;

%MEND START;
%START;
ENDSAS;
//**************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<DPHELPS@MATHEMATICA-MPR.COM>
RCPT TO:<DPHELPS@MATHEMATICA-MPR.COM>
DATA
FROM:   <DPHELPS@MATHEMATICA-MPR.COM>
TO:     <DPHELPS@MATHEMATICA-MPR.COM>
SUBJECT: DAF16 T16EARN ARE COMPLETE
PROGRAM T16EARN FOR DAF18 EARNINGS PATCH - REVERT BACK TO DCF
```

Appendix A.234
JCL/SAS Code: SSIERNLV

```
//$4671SSI  JOB (12510000,T715,,SAS,,ITC9FL),DAWN-PHELPS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: BUILD DAF16 (50214)
//* PROJECT
//* DIRECTOR:    JODY SCHIMMEL HYDE
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF18.PATDCF.PRDLIB(SSIERNLV)
//*
//* DESCRIPTION: BUILDS THE YYMM EARNINGS VARIABLES FROM THE SSR
//*              EARNINGS FILE
//*
//* UPDATED:     DAWN PHELPS 04/13/2020
//*****************************************************************
//*
//SAS       EXEC SAS9,
//         WORK='120000,60000'
//*
//*
//IN1   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.T16EARN.SA.V1,DISP=SHR
//BLD   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIEDCF.SA.V1,DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.SSRERNLV.SA.V3,
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO,VOL=(,,,10)
//TEMP1  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//       SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP2  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//       SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP3  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//       SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP4  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//       SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN  DD *

OPTIONS LS=132 COMPRESS=YES MPRINT MACROGEN OBS=MAX;

%LET BEGYR=1994;
%LET ENDYR=2018; /* CHANGE AS NEEDED */
%LET ENDMN=12;   /* CHANGE AS NEEDED */

  /* ASSIGN MACRO VARIABLES TO HANDLE TIME SERIES DATA */
%LET NUMYRS=%EVAL(&ENDYR.-&BEGYR.+1);

%MACRO START;
```

Appendix A.234
JCL/SAS Code: SSIERNLV

```
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

*************** BUILD SSIERNLVL ********************************;

DATA OUT.SSREARN;
  MERGE IN1.T16EARN (IN=SSR RENAME=(COSSN=SSN))
      BLD.MIEDCF  (IN=BLD KEEP = SSN BLINDDT);
  BY SSN;

  IF SSR;

  * SET INPUT ARRAY *;
  ARRAY T16GRSAMT (&BEGYR.:&ENDYR.,1:12)
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T16GRSAMT&YR.01-T16GRSAMT&YR.12
            %END;;
  ARRAY T16NETAMT (&BEGYR.:&ENDYR.,1:12)
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T16NETAMT&YR.01-T16NETAMT&YR.12
            %END;;
  ARRAY T16EXPAMT (&BEGYR.:&ENDYR.,1:12)
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T16EXPAMT&YR.01-T16EXPAMT&YR.12
            %END;;
  ARRAY T16PASAMT  (&BEGYR.:&ENDYR.,1:12)
             %DO YEAR=&BEGYR %TO &ENDYR;
             %LET YR=%SUBSTR(&YEAR.,3,2);
             T16PASAMT&YR.01-T16PASAMT&YR.12
             %END;;
  ARRAY T16EXLAMT (&BEGYR.:&ENDYR.,1:12)
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T16EXLAMT&YR.01-T16EXLAMT&YR.12
            %END;;

  * SET FBR VALUES *;
  * VALUES FROM HTTPS://WWW.SSA.GOV/OACT/COLA/SSIAMTS.HTML *;
  %INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(FBRIN)";

 * SET SGA VALUES - NON-BLIND *;
 * VALUES FROM HTTPS://WWW.SSA.GOV/OACT/COLA/SGA.HTML *;
 %INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(SGANB)";
```

Appendix A.234
JCL/SAS Code: SSIERNLV

```
* SET SGA VALUES - BLIND *;
* VALUES FROM HTTPS://WWW.SSA.GOV/OACT/COLA/SGA.HTML *;
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(SGAB)";

* SET UP OUTPUT ARRAY *;
ARRAY SSIERNLVL (&BEGYR.:&ENDYR.,1:12) $
        %DO YEAR=&BEGYR %TO &ENDYR;
        %LET YR=%SUBSTR(&YEAR.,3,2);
        SSIERNLVL&YR.01-SSIERNLVL&YR.12
        %END;;

 DO YR=&BEGYR. TO &ENDYR.;
   DO MO = 1 TO 12;
     * MONTHLY TOTAL SSI GROSS EARNINGS AMOUNT *;
     T16TENAMT = SUM(T16GRSAMT(YR,MO),
                T16NETAMT(YR,MO));

     * MONTHLY TOTAL SSI INCOME EXCLUSIONS *;
     T16INCEXL = SUM(T16EXLAMT(YR,MO),
                T16PASAMT(YR,MO),
                T16EXPAMT(YR,MO));

     * MONTHLY SSI COUNTABLE EARNINGS *;
     T16CNTERN = SUM(T16TENAMT,T16INCEXL*-1);

     * CREATE SSIERNLVL *;
     IF T16TENAMT = 0 THEN SSIERNLVL(YR,MO) = "0";
     ELSE IF 0 < T16TENAMT < FBRIN(YR)
       THEN SSIERNLVL(YR,MO) = "L";

     ELSE IF MONTH(BLINDDT) NE . AND
          MDY(MO,1,YR) >= BLINDDT THEN DO;
       IF FBRIN(YR) <= T16TENAMT < SGAB(YR) AND
         FBRIN(YR) > T16CNTERN
         THEN SSIERNLVL(YR,MO) = "F";
       ELSE IF FBRIN(YR) <= T16TENAMT < SGAB(YR) AND
             FBRIN(YR) <= T16CNTERN
         THEN SSIERNLVL(YR,MO) = "B";
       ELSE IF T16TENAMT >= SGAB(YR) AND
             T16CNTERN < FBRIN(YR)
         THEN SSIERNLVL(YR,MO) = "A";
       ELSE IF T16TENAMT >= SGAB(YR) AND
             FBRIN(YR) <= T16CNTERN < SGAB(YR)
         THEN SSIERNLVL(YR,MO) = "G";
```

Appendix A.234
JCL/SAS Code: SSIERNLV

```
          ELSE IF T16CNTERN >= SGAB(YR)
            THEN SSIERNLVL(YR,MO) = "S";
        END;

        ELSE IF MDY(MO,1,YR) < BLINDDT
           OR MONTH(BLINDDT)=. THEN DO;
          IF FBRIN(YR) <= T16TENAMT < SGANB(YR) AND
            FBRIN(YR) > T16CNTERN
            THEN SSIERNLVL(YR,MO) = "F";
          ELSE IF FBRIN(YR) <= T16TENAMT < SGANB(YR) AND
                FBRIN(YR) <= T16CNTERN
            THEN SSIERNLVL(YR,MO) = "B";
          ELSE IF T16TENAMT >= SGANB(YR) AND
                T16CNTERN < FBRIN(YR)
            THEN SSIERNLVL(YR,MO) = "A";
          ELSE IF T16TENAMT >= SGANB(YR) AND
                FBRIN(YR) <= T16CNTERN < SGANB(YR)
            THEN SSIERNLVL(YR,MO) = "G";
          ELSE IF T16CNTERN >= SGANB(YR)
            THEN SSIERNLVL(YR,MO) = "S";
        END;
      END; /* END OF MO LOOP */
    END; /* END OF YR LOOP */

    * KEEP VARIABLES THAT WILL BE PATCHED TO THE DAF18;
    KEEP SSIERNLVL: T16EXLAMT: T16EXPAMT: T16GRSAMT: T16NETAMT:
        T16PASAMT: T16SEVERIND: T16VERIND: SSN;

  RUN;

  %MEND START;
  %START;
  ENDSAS;
  //*************************************************
  //SENDNOTE EXEC PGM=IEBGENER
  //SYSIN    DD DUMMY
  //SYSPRINT DD SYSOUT=*
  //SYSUT2   DD SYSOUT=(B,SMTP)
  //SYSUT1   DD *
  HELO MVSHOST
  MAIL FROM:<DPHELPS@MATHEMATICA-MPR.COM>
  RCPT TO:<DPHELPS@MATHEMATICA-MPR.COM>
  DATA
  FROM:   <DPHELPS@MATHEMATICA-MPR.COM>
  TO:     <DPHELPS@MATHEMATICA-MPR.COM>
```

Appendix A.234
JCL/SAS Code: SSIERNLV

SUBJECT: DAF18 SSIERNLV IS COMPLETE

Appendix A.235
JCL/SAS Code: JCLYRSP

```
//$4671MSP JOB (12510000,T715,,SAS,,ITC9FL),PHELPS-DAWN,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//*
//*     *-------------------------------------------------*
//*     ¦  THE MACRO SPLIT PROGRAM                        ¦
//*     *-------------------------------------------------*
//*
//* E-MAIL      DPHELPS@MATHEMATICA-MPR.COM
//*****************************************************************
//  SET REG='64M'
//*
//JS010  EXEC SAS9,
//      WORK='200000,100000', F10
//      REGION=&REG,
//      PARM='MEMSIZE=&REG'
//*
//***DATA FOR SPLIT
//IN1    DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.SSRERNLV.SA.V3,DISP=SHR
//***OUT YEARLY FILES
//OUT94  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF1994.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT95  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF1995.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT96  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF1996.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT97  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF1997.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT98  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF1998.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT99  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF1999.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT00  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF2000.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT01  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF2001.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
```

Appendix A.235
JCL/SAS Code: JCLYRSP

```
//OUT02  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF2002.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT03  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF2003.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT04  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF2004.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT05  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF2005.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT06  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF2006.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT07  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF2007.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT08  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF2008.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT09  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF2009.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT10  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF2010.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT11  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF2011.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT12  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF2012.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT13  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF2013.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT14  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF2014.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT15  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF2015.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT16  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF2016.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
```

Appendix A.235
JCL/SAS Code: JCLYRSP

```
//OUT17  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF2017.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//OUT18  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF2018.SA.V1,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//SYSIN   DD *
OPTIONS NOCENTER COMPRESS=YES MPRINT OBS=MAX;

%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(MSPLIT)";

%OUTP(IN1.SSREARN,OUT,DCF,1994,2018,SSN);

PROC CONTENTS DATA=OUT94.DCF;RUN;
PROC CONTENTS DATA=OUT95.DCF;RUN;
PROC CONTENTS DATA=OUT96.DCF;RUN;
PROC CONTENTS DATA=OUT97.DCF;RUN;
PROC CONTENTS DATA=OUT98.DCF;RUN;
PROC CONTENTS DATA=OUT99.DCF;RUN;
PROC CONTENTS DATA=OUT00.DCF;RUN;
PROC CONTENTS DATA=OUT01.DCF;RUN;
PROC CONTENTS DATA=OUT02.DCF;RUN;
PROC CONTENTS DATA=OUT03.DCF;RUN;
PROC CONTENTS DATA=OUT04.DCF;RUN;
PROC CONTENTS DATA=OUT05.DCF;RUN;
PROC CONTENTS DATA=OUT06.DCF;RUN;
PROC CONTENTS DATA=OUT07.DCF;RUN;
PROC CONTENTS DATA=OUT08.DCF;RUN;
PROC CONTENTS DATA=OUT09.DCF;RUN;
PROC CONTENTS DATA=OUT10.DCF;RUN;
PROC CONTENTS DATA=OUT11.DCF;RUN;
PROC CONTENTS DATA=OUT12.DCF;RUN;
PROC CONTENTS DATA=OUT13.DCF;RUN;
PROC CONTENTS DATA=OUT14.DCF;RUN;
PROC CONTENTS DATA=OUT15.DCF;RUN;
PROC CONTENTS DATA=OUT16.DCF;RUN;
PROC CONTENTS DATA=OUT17.DCF;RUN;
PROC CONTENTS DATA=OUT18.DCF;RUN;
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
```

Appendix A.235
JCL/SAS Code: JCLYRSP

```
MAIL FROM:<DPHELPS@MATHEMATICA-MPR.COM>
RCPT TO:<DPHELPS@MATHEMATICA-MPR.COM>
DATA
FROM:   <DPHELPS@MATHEMATICA-MPR.COM>
TO:     <DPHELPS@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 JCLYRSP IS COMPLETE
```

Appendix A.236
JCL/SAS Code: PATANJCL

```
//$4671ANN  JOB (12510000,T715,,SAS,,ITC9FL),DAWN-PHELPS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT:     DAF18 CONSTRUCTION
//* DIRECTOR:    JODY SCHIMMEL HYDE
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF18.PATDCF.PRDLIB(PATANJCL)
//* DESCRIPTION: REPLACE SSR EARNINGS WITH DCF EARNINGS
//*              CREATE 10%DM ANNUALS
//* DATE:        04/16/2020
//* CONTACT:     DAWN PHELPS
//* MPR EMAIL:   DPHELPS@MATHEMATICA-MPR.COM
//* SSA EMAIL:   DAWN.PHELPS@SSA.GOV
//*****************************************************************
//*
//ANNPROC    PROC
//SAS        EXEC SAS9,
//           WORK='120000,60000',
//           PARM='SYSPARM="&YYYY"'
//*
//ANNIN   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E.R200416,
//           DISP=SHR
//DCF     DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.DCF&YYYY..SA.V1,DISP=SHR
//ANNOUT  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//           DISP=(NEW,CATLG,DELETE),
//           UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.CAN&YYYY.E.SA.V1,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y&YYYY.E.SA.V1,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//OUTC10 DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18D.CAN&YYYY.E.SA.V1,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//SYSIN   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.PATDCF.PRDLIB(PATANN),
//           DISP=(SHR,PASS,KEEP)
//        PEND
//*
//Y2018   EXEC ANNPROC,YYYY=2018
//Y2017   EXEC ANNPROC,YYYY=2017
//Y2016   EXEC ANNPROC,YYYY=2016
//Y2015   EXEC ANNPROC,YYYY=2015
//Y2014   EXEC ANNPROC,YYYY=2014
```

Appendix A.236
JCL/SAS Code: PATANJCL

```
//Y2013   EXEC ANNPROC,YYYY=2013
//Y2012   EXEC ANNPROC,YYYY=2012
//Y2011   EXEC ANNPROC,YYYY=2011
//Y2010   EXEC ANNPROC,YYYY=2010
//Y2009   EXEC ANNPROC,YYYY=2009
//Y2008   EXEC ANNPROC,YYYY=2008
//Y2007   EXEC ANNPROC,YYYY=2007
//Y2006   EXEC ANNPROC,YYYY=2006
//Y2005   EXEC ANNPROC,YYYY=2005
//Y2004   EXEC ANNPROC,YYYY=2004
//Y2003   EXEC ANNPROC,YYYY=2003
//Y2002   EXEC ANNPROC,YYYY=2002
//Y2001   EXEC ANNPROC,YYYY=2001
//Y2000   EXEC ANNPROC,YYYY=2000
//Y1999   EXEC ANNPROC,YYYY=1999
//Y1998   EXEC ANNPROC,YYYY=1998
//Y1997   EXEC ANNPROC,YYYY=1997
//Y1996   EXEC ANNPROC,YYYY=1996
//Y1995   EXEC ANNPROC,YYYY=1995
//Y1994   EXEC ANNPROC,YYYY=1994
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<DPHELPS@MATHEMATICA-MPR.COM>
RCPT TO:<DPHELPS@MATHEMATICA-MPR.COM>
DATA
FROM:   <DPHELPS@MATHEMATICA-MPR.COM>
TO:     <DPHELPS@MATHEMATICA-MPR.COM>
SUBJECT: DCFPATCH
DAF18 DCF ANN PATCH COMPLETE
```

Appendix A.237
JCL/SAS Code: PATANN

```
OPTIONS LS=132 COMPRESS=YES MPRINT MACROGEN NOCENTER OBS=MAX;

%LET YR=%SUBSTR(&SYSPARM.,3,2);

%MACRO START;

* MERGE DCF PATCH FILE TO ANNUAL REPLACING SSR EARNINGS VARIABLES WITH
  THOSE FROM THE DCF;
DATA ANNOUT.Y&SYSPARM.;
   MERGE ANNIN.Y&SYSPARM.(IN=ANN DROP=T16BEXPAMT: T16EXLAMT:
                          T16EXPAMT: T16GRSAMT:
                          T16NETAMT: T16PASAMT:
                          T16SEAMT: SSIERNLVL:)
       /* KEEP ONLY DCF EARNINGS VALUES FOR THIS ANNUAL */
       DCF.DCF(IN=DCF
       KEEP=SSIERNLVL: T16EXLAMT: T16EXPAMT: T16GRSAMT: T16NETAMT:
          T16PASAMT: T16SEVERIND: T16VERIND: SSN)
          ;
   BY SSN;
   IF ANN;

   %INCLUDE "OPDR.TG.PRD.ETTW.$4671.DAF18.PATDCF.PRDLIB(LABELS)";
RUN;

* CREATE 10%DM FOR ANNUAL FILES;
DATA E10.Y&SYSPARM.;
  SET ANNOUT.Y&SYSPARM.;
  IF (SUBSTR(SSN,8,1) IN ('0', '2', '4', '7', '9'))
     AND (SUBSTR(SSN,9,1) IN ('0', '5'));
RUN;

TITLE "FULL ENROLLED ANNUALS";
PROC CONTENTS DATA = ANNOUT.Y&SYSPARM.
          OUT = OUTCE.ANN&YR.CON; RUN;

TITLE "10% ENROLLED ANNUALS";
PROC CONTENTS DATA = E10.Y&SYSPARM.
          OUT = OUTC10.ANN&YR.CON; RUN;

%MEND START;
%START;
```

Appendix A.238
JCL/SAS Code: LABELS

```
label
SSIERNLVL&YR.01="SSI EARNING LEVEL INDICATOR &YR.01"
SSIERNLVL&YR.02="SSI EARNING LEVEL INDICATOR &YR.02"
SSIERNLVL&YR.03="SSI EARNING LEVEL INDICATOR &YR.03"
SSIERNLVL&YR.04="SSI EARNING LEVEL INDICATOR &YR.04"
SSIERNLVL&YR.05="SSI EARNING LEVEL INDICATOR &YR.05"
SSIERNLVL&YR.06="SSI EARNING LEVEL INDICATOR &YR.06"
SSIERNLVL&YR.07="SSI EARNING LEVEL INDICATOR &YR.07"
SSIERNLVL&YR.08="SSI EARNING LEVEL INDICATOR &YR.08"
SSIERNLVL&YR.09="SSI EARNING LEVEL INDICATOR &YR.09"
SSIERNLVL&YR.10="SSI EARNING LEVEL INDICATOR &YR.10"
SSIERNLVL&YR.11="SSI EARNING LEVEL INDICATOR &YR.11"
SSIERNLVL&YR.12="SSI EARNING LEVEL INDICATOR &YR.12"
T16EXLAMT&YR.01="SSI STUDENT EXCLUSION AMOUNT (DCF) &YR.01"
T16EXLAMT&YR.02="SSI STUDENT EXCLUSION AMOUNT (DCF) &YR.02"
T16EXLAMT&YR.03="SSI STUDENT EXCLUSION AMOUNT (DCF) &YR.03"
T16EXLAMT&YR.04="SSI STUDENT EXCLUSION AMOUNT (DCF) &YR.04"
T16EXLAMT&YR.05="SSI STUDENT EXCLUSION AMOUNT (DCF) &YR.05"
T16EXLAMT&YR.06="SSI STUDENT EXCLUSION AMOUNT (DCF) &YR.06"
T16EXLAMT&YR.07="SSI STUDENT EXCLUSION AMOUNT (DCF) &YR.07"
T16EXLAMT&YR.08="SSI STUDENT EXCLUSION AMOUNT (DCF) &YR.08"
T16EXLAMT&YR.09="SSI STUDENT EXCLUSION AMOUNT (DCF) &YR.09"
T16EXLAMT&YR.10="SSI STUDENT EXCLUSION AMOUNT (DCF) &YR.10"
T16EXLAMT&YR.11="SSI STUDENT EXCLUSION AMOUNT (DCF) &YR.11"
T16EXLAMT&YR.12="SSI STUDENT EXCLUSION AMOUNT (DCF) &YR.12"
T16EXPAMT&YR.01="SSI WORK EXPENSE AMOUNT (DCF) &YR.01"
T16EXPAMT&YR.02="SSI WORK EXPENSE AMOUNT (DCF) &YR.02"
T16EXPAMT&YR.03="SSI WORK EXPENSE AMOUNT (DCF) &YR.03"
T16EXPAMT&YR.04="SSI WORK EXPENSE AMOUNT (DCF) &YR.04"
T16EXPAMT&YR.05="SSI WORK EXPENSE AMOUNT (DCF) &YR.05"
T16EXPAMT&YR.06="SSI WORK EXPENSE AMOUNT (DCF) &YR.06"
T16EXPAMT&YR.07="SSI WORK EXPENSE AMOUNT (DCF) &YR.07"
T16EXPAMT&YR.08="SSI WORK EXPENSE AMOUNT (DCF) &YR.08"
T16EXPAMT&YR.09="SSI WORK EXPENSE AMOUNT (DCF) &YR.09"
T16EXPAMT&YR.10="SSI WORK EXPENSE AMOUNT (DCF) &YR.10"
T16EXPAMT&YR.11="SSI WORK EXPENSE AMOUNT (DCF) &YR.11"
T16EXPAMT&YR.12="SSI WORK EXPENSE AMOUNT (DCF) &YR.12"
T16GRSAMT&YR.01="SSI EARNINGS GROSS AMOUNT (DCF) &YR.01"
T16GRSAMT&YR.02="SSI EARNINGS GROSS AMOUNT (DCF) &YR.02"
T16GRSAMT&YR.03="SSI EARNINGS GROSS AMOUNT (DCF) &YR.03"
T16GRSAMT&YR.04="SSI EARNINGS GROSS AMOUNT (DCF) &YR.04"
T16GRSAMT&YR.05="SSI EARNINGS GROSS AMOUNT (DCF) &YR.05"
T16GRSAMT&YR.06="SSI EARNINGS GROSS AMOUNT (DCF) &YR.06"
T16GRSAMT&YR.07="SSI EARNINGS GROSS AMOUNT (DCF) &YR.07"
```

Appendix A.238
JCL/SAS Code: LABELS

```
T16GRSAMT&YR.08="SSI EARNINGS GROSS AMOUNT (DCF) &YR.08"
T16GRSAMT&YR.09="SSI EARNINGS GROSS AMOUNT (DCF) &YR.09"
T16GRSAMT&YR.10="SSI EARNINGS GROSS AMOUNT (DCF) &YR.10"
T16GRSAMT&YR.11="SSI EARNINGS GROSS AMOUNT (DCF) &YR.11"
T16GRSAMT&YR.12="SSI EARNINGS GROSS AMOUNT (DCF) &YR.12"
T16NETAMT&YR.01="SSI SELF-EMP NET INCOME AMOUNT (DCF) &YR.01"
T16NETAMT&YR.02="SSI SELF-EMP NET INCOME AMOUNT (DCF) &YR.02"
T16NETAMT&YR.03="SSI SELF-EMP NET INCOME AMOUNT (DCF) &YR.03"
T16NETAMT&YR.04="SSI SELF-EMP NET INCOME AMOUNT (DCF) &YR.04"
T16NETAMT&YR.05="SSI SELF-EMP NET INCOME AMOUNT (DCF) &YR.05"
T16NETAMT&YR.06="SSI SELF-EMP NET INCOME AMOUNT (DCF) &YR.06"
T16NETAMT&YR.07="SSI SELF-EMP NET INCOME AMOUNT (DCF) &YR.07"
T16NETAMT&YR.08="SSI SELF-EMP NET INCOME AMOUNT (DCF) &YR.08"
T16NETAMT&YR.09="SSI SELF-EMP NET INCOME AMOUNT (DCF) &YR.09"
T16NETAMT&YR.10="SSI SELF-EMP NET INCOME AMOUNT (DCF) &YR.10"
T16NETAMT&YR.11="SSI SELF-EMP NET INCOME AMOUNT (DCF) &YR.11"
T16NETAMT&YR.12="SSI SELF-EMP NET INCOME AMOUNT (DCF) &YR.12"
T16PASAMT&YR.01="SSI PASS AMOUNT (DCF) &YR.01"
T16PASAMT&YR.02="SSI PASS AMOUNT (DCF) &YR.02"
T16PASAMT&YR.03="SSI PASS AMOUNT (DCF) &YR.03"
T16PASAMT&YR.04="SSI PASS AMOUNT (DCF) &YR.04"
T16PASAMT&YR.05="SSI PASS AMOUNT (DCF) &YR.05"
T16PASAMT&YR.06="SSI PASS AMOUNT (DCF) &YR.06"
T16PASAMT&YR.07="SSI PASS AMOUNT (DCF) &YR.07"
T16PASAMT&YR.08="SSI PASS AMOUNT (DCF) &YR.08"
T16PASAMT&YR.09="SSI PASS AMOUNT (DCF) &YR.09"
T16PASAMT&YR.10="SSI PASS AMOUNT (DCF) &YR.10"
T16PASAMT&YR.11="SSI PASS AMOUNT (DCF) &YR.11"
T16PASAMT&YR.12="SSI PASS AMOUNT (DCF) &YR.12"
T16SEVERIND&YR.01="SSI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.01"
T16SEVERIND&YR.02="SSI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.02"
T16SEVERIND&YR.03="SSI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.03"
T16SEVERIND&YR.04="SSI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.04"
T16SEVERIND&YR.05="SSI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.05"
T16SEVERIND&YR.06="SSI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.06"
T16SEVERIND&YR.07="SSI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.07"
T16SEVERIND&YR.08="SSI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.08"
T16SEVERIND&YR.09="SSI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.09"
T16SEVERIND&YR.10="SSI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.10"
T16SEVERIND&YR.11="SSI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.11"
T16SEVERIND&YR.12="SSI SELF-EMP EARNINGS VERIFIED SWITCH (DCF) &YR.12"
T16VERIND&YR.01=
"SSI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.01"
T16VERIND&YR.02=
"SSI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.02"
```

Appendix A.238
JCL/SAS Code: LABELS

```
T16VERIND&YR.03=
"SSI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.03"
T16VERIND&YR.04=
"SSI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.04"
T16VERIND&YR.05=
"SSI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.05"
T16VERIND&YR.06=
"SSI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.06"
T16VERIND&YR.07=
"SSI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.07"
T16VERIND&YR.08=
"SSI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.08"
T16VERIND&YR.09=
"SSI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.09"
T16VERIND&YR.10=
"SSI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.10"
T16VERIND&YR.11=
"SSI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.11"
T16VERIND&YR.12=
"SSI GROSS EARNINGS AMOUNT VERIFIED SWITCH (DCF) &YR.12"
;
```

Appendix A.239
JCL/SAS Code: COLA

```
*********************************************************************; ;
*************************** COLA ************************************; ;
*********************************************************************; ;

* THIS IS AN INCLUDE FILE FOR YEARLY COLA RATES;
* FIND TABLE AT HTTPS://WWW.SSA.GOV/OACT/COLA/SSIAMTS.HTML ;
* UPDATED THROUGH 2018 ;
ARRAY COLA(1994:2018) COLA1994-COLA2018
                    (.026  /* 1994 */
                     .028  /* 1995 */
                     .026  /* 1996 */
                     .029  /* 1997 */
                     .021  /* 1998 */
                     .013  /* 1999 */
                     .025  /* 2000 */
                     .035  /* 2001 */
                     .026  /* 2002 */
                     .014  /* 2003 */
                     .021  /* 2004 */
                     .027  /* 2005 */
                     .041  /* 2006 */
                     .033  /* 2007 */
                     .023  /* 2008 */
                     .058  /* 2009 */
                     0    /* 2010 */
                     0    /* 2011 */
                     .036  /* 2012 */
                     .017  /* 2013 */
                     .015  /* 2014 */
                     .017  /* 2015 */
                     0    /* 2016 */
                     .003  /* 2017 */
                     .020  /* 2018 */
                      );
```

Appendix A.240
JCL/SAS Code: FBRIN

```
*****************************************************************;    ;
*************************** FBRIN ******************************;    ;
*****************************************************************;    ;

* THIS IS AN INCLUDE FILE FOR YEARLY FBR RATES FOR INDIVIDUALS;
* FIND TABLE AT HTTPS://WWW.SSA.GOV/OACT/COLA/SSIAMTS.HTML ;
* UPDATED THROUGH 2018 ;
 ARRAY FBRIN(1994:2018) FBRIN1994-FBRIN2018
                        (446.00  /* 1994 */
                         458.00  /* 1995 */
                         470.00  /* 1996 */
                         484.00  /* 1997 */
                         494.00  /* 1998 */
                         500.00  /* 1999 */
                         513.00  /* 2000 */
                         531.00  /* 2001 */
                         545.00  /* 2002 */
                         552.00  /* 2003 */
                         564.00  /* 2004 */
                         579.00  /* 2005 */
                         603.00  /* 2006 */
                         623.00  /* 2007 */
                         637.00  /* 2008 */
                         674.00  /* 2009 */
                         674.00  /* 2010 */
                         674.00  /* 2011 */
                         698.00  /* 2012 */
                         710.00  /* 2013 */
                         721.00  /* 2014 */
                         733.00  /* 2015 */
                         733.00  /* 2016 */
                         735.00  /* 2017 */
                         750.00  /* 2018 */
                          );
```

Appendix A.241
JCL/SAS Code: FBRCP

```
*****************************************************************;   ;
*************************** FBRCP ********************************;   ;
*****************************************************************;   ;

* THIS IS AN INCLUDE FILE FOR YEARLY FBR RATES FOR COUPLES;
* FIND TABLE AT HTTPS://WWW.SSA.GOV/OACT/COLA/SSIAMTS.HTML ;
* UPDATED THROUGH 2018 ;
 ARRAY FBRCP(1994:2018) FBRCP1994-FBRCP2018
                        (669.00  /* 1994 */
                         687.00  /* 1995 */
                         705.00  /* 1996 */
                         726.00  /* 1997 */
                         741.00  /* 1998 */
                         751.00  /* 1999 */
                         769.00  /* 2000 */
                         796.00  /* 2001 */
                         817.00  /* 2002 */
                         829.00  /* 2003 */
                         846.00  /* 2004 */
                         869.00  /* 2005 */
                         904.00  /* 2006 */
                         934.00  /* 2007 */
                         956.00  /* 2008 */
                         1011.00 /* 2009 */
                         1011.00 /* 2010 */
                         1011.00 /* 2011 */
                         1048.00 /* 2012 */
                         1066.00 /* 2013 */
                         1082.00 /* 2014 */
                         1100.00 /* 2015 */
                         1100.00 /* 2016 */
                         1103.00 /* 2017 */
                         1125.00 /* 2018 */
                         );
```

Appendix A.242
JCL/SAS Code: TWPA

```
************************************************************;      ;
************************** TWPA **************************;
************************************************************;      ;

* THIS IS AN INCLUDE FILE FOR YEARLY TWP RATES;
* FIND TABLE AT HTTPS://WWW.SSA.GOV/OACT/COLA/TWP.HTML ;
* UPDATED THROUGH 2018 ;
ARRAY TWPA(1994:2018) TWP1994-TWP2018
                    ( 200  /*1994*/
                      200  /*1995*/
                      200  /*1996*/
                      200  /*1997*/
                      200  /*1998*/
                      200  /*1999*/
                      200  /*2000*/
                      530  /*2001*/
                      560  /*2002*/
                      570  /*2003*/
                      580  /*2004*/
                      590  /*2005*/
                      620  /*2006*/
                      640  /*2007*/
                      670  /*2008*/
                      700  /*2009*/
                      720  /*2010*/
                      720  /*2011*/
                      720  /*2012*/
                      750  /*2013*/
                      770  /*2014*/
                      780  /*2015*/
                      810  /*2016*/
                      840  /*2017*/
                      850  /*2018*/
                     );
```

Appendix A.243
JCL/SAS Code: JCLSSR21

```
//$4671SS2 JOB (12510000,T715,,SAS,,ITC9FL),DAWN-PHELPS,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//*
//*     *-----------------------------------------------------*
//*     ¦  OPDR.TG.PRD.ETTW.$4671.DAF18.TEARN.PRDLIB(JCLSSR2)  ¦
//*     *-----------------------------------------------------*
//*
//*     1.  COMBINE AND PROCESS LONGITUDINAL FILE
//*     2.  OUTPUT UPDATED STEP2 FILE
//*
//* SEGMENTS WERE PRODUCED IN STEP 1
//* THIS IS A NEW PROGRAM COMBINING JCL STATEMENTS FOR ALL SEGMENTS
//* 1974-1993 VS. 1994-DAFYR WILL HAVE DIFFERENT INCLUDE FILE
//*****************************************************************
//*
//JS010   EXEC SAS9,
//        WORK='120000,60000',
//* MAKE UPDATES TO THIS SYSPARM
//* THE FORMAT IS: BEGYR, ENDYR, YOURID, NUMSEG, NODE, DAFYR
//* DO NOT UPDATE BEGYR
//* UPDATE ENDYR TO THIS DAFYR
//* UPDATE YOUR ID
//* UPDATE NUMSEG (THE NUMBER OF SEGMENTS IN SSR1 PROGRAMS)
//* DO NOT UPDATE NODE (THIS IS A NODE FOR THE INPUT FILES)
//* UPDATE THE TWO-DIGIT DAFYR (USED IN THE NODE FOR INPUT FILES)
//        PARM='SYSPARM="1994,2018,#7429,18,RLONG,18"'
//*
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18A.SSR2P1.SA.V1,
//         DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.ALTSSR.PRDLIB(SSR2P1),
//         DISP=(SHR,PASS,KEEP)
//*
//JS020   EXEC SAS9,
//        WORK='120000,60000',
//* MAKE UPDATES TO THIS SYSPARM
//* THE FORMAT IS: BEGYR, ENDYR, YOURID, NUMSEG, NODE, DAFYR
//* DO NOT UPDATE BEGYR
//* DO NOT UPDATE ENDYR
//* UPDATE YOUR ID
//* UPDATE NUMSEG (THE NUMBER OF SEGMENTS IN SSR1 PROGRAMS)
//* DO NOT UPDATE NODE (THIS IS A NODE FOR THE INPUT FILES)
//* UPDATE THE TWO-DIGIT DAFYR (USED IN THE NODE FOR INPUT FILES)
```

Appendix A.243
JCL/SAS Code: JCLSSR21

```
//       PARM='SYSPARM="1974,1993,#7429,18,RLONGB,18"'
//*
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18A.SSR2BP1.SA.V1,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.ALTSSR.PRDLIB(SSR2P1),
//         DISP=(SHR,PASS,KEEP)
//*

//**************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//**************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<DPHELPS@MATHEMATICA-MPR.COM>
RCPT TO:<DPHELPS@MATHEMATICA-MPR.COM>
DATA
FROM:   <DPHELPS@MATHEMATICA-MPR.COM>
TO:     <DPHELPS@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 SSR2 IS COMPLETE
DAF18 SSR2 HAS FINISHED RUNNING
```

Appendix A.244
JCL/SAS Code: SSR2P1

```
* SSR2 - THIS IS AN INCLUDE FILE TO PROCESS 1994 - CURRENT DAF FILES;
%LET BEGYR=%SCAN(%QUOTE(&SYSPARM),1,%STR(,));
%LET ENDYR=%SCAN(%QUOTE(&SYSPARM),2,%STR(,));
%LET YOURID=%SCAN(%QUOTE(&SYSPARM),3,%STR(,));
%LET NUMSEG=%SCAN(%QUOTE(&SYSPARM),4,%STR(,));
%LET NODE=%SCAN(%QUOTE(&SYSPARM),5,%STR(,));
%LET DAFYR=%SCAN(%QUOTE(&SYSPARM),6,%STR(,));

* BEGIN PROCESSING;
OPTIONS NOCENTER LS=132 PS=60 COMPRESS=BINARY;
OPTIONS OBS=MAX MPRINT SYMBOLGEN;
 /* NOTE: CHANGE THE ENDYR AND ENDMN PARAMETER BEFORE EACH RUN */


 /* ASSIGN MACROS VARIABLES TO HANDLE TIME SERIES DATA */

%MACRO PROCSSILF;
   /*INITIATE MONTH COUNTER, MOCNTER, TO 1*/
 %LET MOCNTER=1;
   /*LOOPING THROUGH EACH YEAR SPECIFIED ABOVE*/
 %DO YEAR=&BEGYR. %TO &ENDYR.;
   /*SETTING YR MACRO VAR TO LAST TWO DIGITS OF EACH YEAR*/
    %LET YR=%SUBSTR(&YEAR.,3,2);

    /*LOOP THROUGH MONTHS 1 TO 12 AND INCREMENT MONTH COUNTER*/
    %DO M=1 %TO 12;
       %LET M=%SYSFUNC(PUTN(&M.,Z2.));
       %LET YY&MOCNTER=%EVAL(&YR)%EVAL(&M);
       %LET MOCNTER=%EVAL(&MOCNTER+1);
    %END;
 %END;
   /*SET TOTAL MONTHS, TOTMOS, EQUAL TO MOCNTER - 1 TO GET
     TOTAL MONTHS IN TIME SERIES*/
 %LET TOTMOS=%EVAL(&MOCNTER-1);

  /*USED TO PRING MAPPING TO LOG - CHECK DURING CODE REVIEW*/
 %DO MM=1 % TO &TOTMOS;
    %PUT &MM. MAPS TO YYMM, &&YY&MM.;
 %END;
    %PUT TOTAL MONTHS = &TOTMOS.;

 /*********************************************************************
 WE NEED TO READ THE SSI LONG FILES TO CAPTURE THE HISTORY FIELDS
 WE NEED TO SCAN ALL THE RECORDS FOR VALID VALUES INSTEAD OF JUST
```

Appendix A.244
JCL/SAS Code: SSR2P1

```
KEEPING THE LAST RECORD AS WE DID PREVIOUSLY.
THE LAST RECORD MAY HAVE HISTORY FIELDS BLANKED OUT
*********************************************************************/

 /*SPLIT THE VARIABLE  FILE TO UPDATE RECORDS WITH NONMISSING DATA */

 %DO SEG = 1 %TO &NUMSEG; /*UPDATE THE TOTAL NUMBER OF SEGMENTS */
    %LET SEG=%SYSFUNC(PUTN(&SEG,Z2.));
    LIBNAME IN&SEG.
      "OPDR.TG.PRD.ETTW.&YOURID..DAF&DAFYR.P.&NODE.&SEG..SA.V1"
           DISP=SHR;
 %END;


DATA OUT1.SSR2P1;
   SET
    %DO SEG = 1 %TO &NUMSEG; /* UPDATE THE TOTAL NUMBER OF SEGMENTS */
      %LET SEG=%SYSFUNC(PUTN(&SEG,Z2.));
      IN&SEG..LONG
    %END;;
    BY SSN RCD_EST;
RUN;

PROC CONTENTS;
RUN;

%MEND PROCSSILF;
%PROCSSILF;
```

Appendix A.245
JCL/SAS Code: SSR2P1ER

```
//$4671SS3 JOB (12510000,T715,,SAS,,ITC9FL),DAWN-PHELPS,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//*
//*     *-----------------------------------------------------*
//*     ¦  OPDR.TG.PRD.ETTW.$4671.DAF18.TEARN.PRDLIB(JCLSSR2)  ¦
//*     *-----------------------------------------------------*
//*
//*     1.  COMBINE AND PROCESS LONGITUDINAL FILE
//*     2.  OUTPUT UPDATED STEP2 FILE
//*
//* SEGMENTS WERE PRODUCED IN STEP 1
//* THIS IS A NEW PROGRAM COMBINING JCL STATEMENTS FOR ALL SEGMENTS
//* 1974-1993 VS. 1994-DAFYR WILL HAVE DIFFERENT INCLUDE FILE
//*****************************************************************
//*
//JS010   EXEC SAS9,
//        WORK='120000,60000',
//* MAKE UPDATES TO THIS SYSPARM
//* THE FORMAT IS: BEGYR, ENDYR, YOURID, NUMSEG, NODE, DAFYR
//* DO NOT UPDATE BEGYR
//* UPDATE ENDYR TO THIS DAFYR
//* UPDATE YOUR ID
//* UPDATE NUMSEG (THE NUMBER OF SEGMENTS IN SSR1 PROGRAMS)
//* DO NOT UPDATE NODE (THIS IS A NODE FOR THE INPUT FILES)
//* UPDATE THE TWO-DIGIT DAFYR (USED IN THE NODE FOR INPUT FILES)
//        PARM='SYSPARM="1994,2018,#7429,18,RLONG,18"'
//*
//IN    DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18A.SSR2P1.SA.V1,DISP=SHR
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18A.SSR2P1.SA.V2,
//         DISP=(MOD,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//TEMP1  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP2  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP3  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP4  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP5  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP6  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP7  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP8  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP9  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP10 DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//SYSIN   DD *
```

Appendix A.245
JCL/SAS Code: SSR2P1ER

```
%MACRO SORTDAT(BEGOBS= ,ENDOBS= ,RUN= );
PROC SORT DATA=IN.SSR2P1(FIRSTOBS=&BEGOBS. OBS=&ENDOBS.
                    KEEP=SSN RCD_EST)
        OUT = TEMP&RUN..SSR2P1;
  BY SSN DESCENDING RCD_EST;
RUN;
%MEND SORTDAT;
%SORTDAT(BEGOBS =       1,   ENDOBS =  5000000,  RUN = 1);
%SORTDAT(BEGOBS =  5000001,   ENDOBS = 10000000,  RUN = 2);
%SORTDAT(BEGOBS = 10000001,   ENDOBS = 15000000,  RUN = 3);
%SORTDAT(BEGOBS = 15000001,   ENDOBS = 20000000,  RUN = 4);
%SORTDAT(BEGOBS = 20000001,   ENDOBS = 25000000,  RUN = 5);
%SORTDAT(BEGOBS = 25000001,   ENDOBS = 30000000,  RUN = 6);
%SORTDAT(BEGOBS = 30000001,   ENDOBS = 35000000,  RUN = 7);
%SORTDAT(BEGOBS = 35000001,   ENDOBS = 40000000,  RUN = 8);
%SORTDAT(BEGOBS = 40000001,   ENDOBS = 45000000,  RUN = 9);
%SORTDAT(BEGOBS = 45000001,   ENDOBS = MAX,       RUN =10);

DATA OUT1.SSRSSP1;
   SET TEMP1.SSR2P1
      TEMP2.SSR2P1
      TEMP3.SSR2P1
      TEMP4.SSR2P1
      TEMP5.SSR2P1
      TEMP6.SSR2P1
      TEMP7.SSR2P1
      TEMP8.SSR2P1
      TEMP9.SSR2P1
      TEMP10.SSR2P1
      ;
  BY SSN DESCENDING RCD_EST;
  IF FIRST.RCD_EST;
RUN;
```

Appendix A.246
JCL/SAS Code: SSRERNC4

```
//$4671SRE JOB (12510000,T715,,SAS,,ITC9FL),DAWN-PHELPS,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: DAF18 CONSTRUCTION
//*
//* PROGRAM: OPDR.TG.PRD.ETTW.$4671.DAF18.TEARN.PRDLIB(SSRERNCR)
//*
//* PURPOSE: GENERATE EARNYYMM VARIABLES FROM SSITXT
//*
//* PROGRAMMER: DAWN PHELPS
//*           DPHELPS@MATHEMATICA-MPR.COM
//*           202-554-7556
//*****************************************************************
//*
//JS030   EXEC SAS9,
//       WORK='120000,60000'             * SPACE IN BLKS *
//*
//SSRERN DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.SSREARN1.V1,DISP=SHR
//SSILF  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18A.SSR2P1.SA.V2,DISP=SHR
//*
//TEMP1  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP2  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP3  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP4  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP5  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP6  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP7  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP8  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP9  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//TEMP10 DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),UNIT=TSILO,VOL=(,,,10)
//*
//OUT     DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18A.SSREARN.SA.V5,
//         DISP=(NEW,CATLG,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//*
//SYSIN   DD *

OPTIONS NOCENTER COMPRESS=BINARY MACROGEN OBS=MAX;

%LET ENDYR=2018;/*CHANGE AS NEEDED*/

%MACRO DOIT;
```

Appendix A.246
JCL/SAS Code: SSRERNC4

```
    /*WE SUBSET THE SSREARN FILE USING IESTART AND IESTOP.
      WE DO THIS IN A SEPARATE DATA SET SINCE WE NEED TO TRANSFORM
      IESTART AND IESTOP INTO NUMERIC DATE VARIABLES FIRST*/
  DATA TEMP1.SSREARN;
    SET SSRERN.SSREARN;
    BY SSN;

    *TRANSFORM IESTART AND IESTOP INTO NUMERIC VARIABLES;
    IESTART_DATE = MDY(SUBSTR(IESTART,5,2), 1, SUBSTR(IESTART,1,4));

    IF IESTOP = '000000' THEN IESTOP_DATE = MDY(12,1,&ENDYR.);
    ELSE IESTOP_DATE = MDY(SUBSTR(IESTOP,5,2), 1, SUBSTR(IESTOP,1,4));

    *DROP IESTOPS BEFORE JAN 1994;
    IF NOT MISSING(IESTOP_DATE) AND IESTOP_DATE GE '01JAN1994'D;

    *DROP IESTARTS AFTER DEC OF LAST DAF YEAR;
    IF IESTART_DATE LE "31DEC&ENDYR."D;

    *RECODE START AND END DATES;
    IF IESTART_DATE < '01JAN1994'D THEN IESTART_DATE='01JAN1994'D;
    IF IESTOP_DATE > "01DEC&ENDYR."D THEN IESTOP_DATE="01DEC&ENDYR."D;

  RUN;
      /*
   PROC FREQ DATA=TEMP1.SSREARN;
   TITLE 'QA IE VARIABLES BEFORE RESHAPING';
   TABLES IESTART * IESTART_DATE / LIST MISSING;
   TABLES IESTOP * IESTOP_DATE / LIST MISSING;
   TABLES IETYP / LIST MISSING;
   RUN;
      */

  DATA TEMP2.SSREARN;
    SET TEMP1.SSREARN;
    BY SSN RCD_EST;

   * SET UP OUTPUT ARRAYS;
   ARRAY T16EXLAMT (1994:&ENDYR.,1:12)
                %DO YEAR=1994 %TO &ENDYR;
                %LET YR=%SUBSTR(&YEAR.,3,2);
                T16EXLAMT&YR.01-T16EXLAMT&YR.12
                %END;;
   ARRAY T16EXPAMT (1994:&ENDYR,1:12)
                %DO YEAR=1994 %TO &ENDYR;
```

Appendix A.246
JCL/SAS Code: SSRERNC4

```
                %LET YR=%SUBSTR(&YEAR.,3,2);
                T16EXPAMT&YR.01-T16EXPAMT&YR.12
                %END;;
ARRAY T16BEXPAMT (1994:&ENDYR,1:12)
                 %DO YEAR=1994 %TO &ENDYR;
                 %LET YR=%SUBSTR(&YEAR.,3,2);
                 T16BEXPAMT&YR.01-T16BEXPAMT&YR.12
                 %END;;
ARRAY T16GRSAMT (1994:&ENDYR,1:12)
                %DO YEAR=1994 %TO &ENDYR;
                %LET YR=%SUBSTR(&YEAR.,3,2);
                T16GRSAMT&YR.01-T16GRSAMT&YR.12
                %END;;
ARRAY T16SEAMT (1994:&ENDYR,1:12)
               %DO YEAR=1994 %TO &ENDYR;
               %LET YR=%SUBSTR(&YEAR.,3,2);
               T16SEAMT&YR.01-T16SEAMT&YR.12
               %END;;
ARRAY T16NETAMT (1994:&ENDYR,1:12)
                %DO YEAR=1994 %TO &ENDYR;
                %LET YR=%SUBSTR(&YEAR.,3,2);
                T16NETAMT&YR.01-T16NETAMT&YR.12
                %END;;
ARRAY T16PASAMT (1994:&ENDYR,1:12)
                %DO YEAR=1994 %TO &ENDYR;
                %LET YR=%SUBSTR(&YEAR.,3,2);
                T16PASAMT&YR.01-T16PASAMT&YR.12
                %END;;

ARRAY T16VERCD (1994:&ENDYR.,1:12)
                %DO YEAR=1994 %TO &ENDYR;
                %LET YR=%SUBSTR(&YEAR.,3,2);
                T16VERCD&YR.01-T16VERCD&YR.12
                %END;;

 * KEEP YYMM VARIABLES ACROSS OBS WITH THE SAME SSN;
 RETAIN T16EXLAMT: T16EXPAMT: T16BEXPAMT: T16GRSAMT:
      T16SEAMT:  T16NETAMT: T16PASAMT: T16VERCD:;

 * INITIALIZE RETAINED VARIABLES WHEN AT THE FIRST OB WITH THIS SSN;
 IF FIRST.SSN THEN DO;
    DO YR=1994 TO &ENDYR.;
       DO MO = 1 TO 12;
          T16EXLAMT(YR,MO)=.;
          T16EXPAMT(YR,MO)=.;
```

Appendix A.246
JCL/SAS Code: SSRERNC4

```
            T16BEXPAMT(YR,MO)=.;
            T16GRSAMT(YR,MO)=.;
            T16SEAMT(YR,MO)=.;
            T16NETAMT(YR,MO)=.;
            T16PASAMT(YR,MO)=.;
            T16VERCD(YR,MO)='';
         END;
      END;
   END;

   * SET YYMM VARIABLES;
   * EACH OB REPRESENTS AN SSN, RECORD ESTABLISHMENT DATE, AND
     COMPUTATION MONTH COMBINATION UNIQUELY.  SO WE CAN USE THE VALUE
     OF COMPUTATION MONTH TO ASSIGN THE YYMM VALUES.  WHEN TWO
     COMPUTATION MONTHS OVERLAP FROM ONE SSN-RECORD ESTABLIHMENT DATE
     COMBINATION THE DATA FROM THE LATER ESTABLISHED RECORDS OVERLAYS
     THAT FROM THE EARLIER ESTABLISHED RECORDS BECAUSE OF THE RETAIN
     STATEMENT USED ABOVE;

   *SET START AND END POINTS;
    START_YR = YEAR(IESTART_DATE);  START_MO = MONTH(IESTART_DATE);
    END_YR   = YEAR(IESTOP_DATE);   END_MO   = MONTH(IESTOP_DATE);

   DO YR=START_YR TO END_YR;

      IF YR=START_YR THEN FIRSTMO = START_MO;
      ELSE FIRSTMO = 1;
      IF YR=END_YR THEN LASTMO = END_MO;
      ELSE LASTMO = 12;

      DO MO = FIRSTMO TO LASTMO;
         SELECT(IETYP);
         WHEN('W') DO;
            IF IEFRQ NE 'C' THEN DO CYR=YR TO &ENDYR.;
               IF CYR=YR THEN CFIRSTMO=MO;
               ELSE CFIRSTMO=1;
               DO CMO=CFIRSTMO TO 12;
                  T16GRSAMT(CYR,CMO)=.;
                  T16VERCD(CYR,CMO)='';
               END;
            END;
            T16GRSAMT(YR, MO)  = IEAMT;
            T16VERCD(YR,MO) = IEVAR;
         END;
         WHEN('B') DO;
```

Appendix A.246
JCL/SAS Code: SSRERNC4

```
    IF IEFRQ NE 'C' THEN DO CYR=YR TO &ENDYR.;
      IF CYR=YR THEN CFIRSTMO=MO;
      ELSE CFIRSTMO=1;
      DO CMO=CFIRSTMO TO 12;
        T16EXLAMT(CYR,CMO)=.;
      END;
    END;
    T16EXLAMT(YR, MO)  = IEAMT;
  END;
  WHEN('C') DO;
    IF IEFRQ NE 'C' THEN DO CYR=YR TO &ENDYR.;
      IF CYR=YR THEN CFIRSTMO=MO;
      ELSE CFIRSTMO=1;
      DO CMO=CFIRSTMO TO 12;
        T16BEXPAMT(CYR,CMO)=.;
      END;
    END;
    T16BEXPAMT(YR, MO)  = IEAMT;
  END;
  WHEN('T') DO;
    IF IEFRQ NE 'C' THEN DO CYR=YR TO &ENDYR.;
      IF CYR=YR THEN CFIRSTMO=MO;
      ELSE CFIRSTMO=1;
      DO CMO=CFIRSTMO TO 12;
        T16EXPAMT(CYR,CMO)=.;
      END;
    END;
    T16EXPAMT(YR, MO)  = IEAMT;
  END;
  WHEN('S') DO;
    IF IEFRQ NE 'C' THEN DO CYR=YR TO &ENDYR.;
      IF CYR=YR THEN CFIRSTMO=MO;
      ELSE CFIRSTMO=1;
      DO CMO=CFIRSTMO TO 12;
        T16SEAMT(CYR,CMO)=.;
      END;
    END;
    T16SEAMT(YR, MO)  = IEAMT;
  END;
  WHEN('N') DO;
    IF IEFRQ NE 'C' THEN DO CYR=YR TO &ENDYR.;
      IF CYR=YR THEN CFIRSTMO=MO;
      ELSE CFIRSTMO=1;
      DO CMO=CFIRSTMO TO 12;
        T16NETAMT(CYR,CMO)=.;
```

Appendix A.246
JCL/SAS Code: SSRERNC4

```
                END;
            END;
            T16NETAMT(YR, MO)  = IEAMT;
        END;
        WHEN('D') DO;
            IF IEFRQ NE 'C' THEN DO CYR=YR TO &ENDYR.;
                IF CYR=YR THEN CFIRSTMO=MO;
                ELSE CFIRSTMO=1;
                DO CMO=CFIRSTMO TO 12;
                    T16PASAMT(CYR,CMO)=.;
                END;
            END;
            T16PASAMT(YR, MO)  = IEAMT;
        END;
        OTHERWISE;
        END;
      END;
    END;

  * LAST OBS FOR THIS SSN THEN OUTPUT;
  IF LAST.RCD_EST THEN OUTPUT;

RUN;

%MACRO SORTDAT(BEGOBS= ,ENDOBS= ,RUN= );
PROC SORT DATA=TEMP2.SSREARN(FIRSTOBS=&BEGOBS. OBS=&ENDOBS.)
      OUT = TEMP&RUN..SSREARN;
  BY SSN DESCENDING RCD_EST;
RUN;
%MEND SORTDAT;
%SORTDAT(BEGOBS =       1,   ENDOBS =  5000000,  RUN = 3);
%SORTDAT(BEGOBS =  5000001,   ENDOBS = 10000000,  RUN = 4);
%SORTDAT(BEGOBS = 10000000,   ENDOBS = MAX,       RUN = 5);


DATA TEMP6.SSREARN;
   SET TEMP3.SSREARN
      TEMP4.SSREARN
      TEMP5.SSREARN
      ;
  BY SSN DESCENDING RCD_EST;
RUN;

DATA TEMP7.SSREARN;
  MERGE TEMP6.SSREARN(IN=A WHERE=(RCD_EST<='31DEC2018'D))
```

Appendix A.246
JCL/SAS Code: SSRERNC4

```
        SSILF.SSRSSP1(IN=B KEEP=SSN RCD_EST)
        ;
    BY SSN DESCENDING RCD_EST;

    RETAIN PREV_RCD_EST;

    IF FIRST.SSN THEN PREV_RCD_EST=.;

   * SET UP OUTPUT ARRAYS;
   ARRAY T16EXLAMT (1994:&ENDYR.,1:12)
                %DO YEAR=1994 %TO &ENDYR;
                %LET YR=%SUBSTR(&YEAR.,3,2);
                T16EXLAMT&YR.01-T16EXLAMT&YR.12
                %END;;
   ARRAY T16EXPAMT (1994:&ENDYR,1:12)
                %DO YEAR=1994 %TO &ENDYR;
                %LET YR=%SUBSTR(&YEAR.,3,2);
                T16EXPAMT&YR.01-T16EXPAMT&YR.12
                %END;;
   ARRAY T16BEXPAMT (1994:&ENDYR,1:12)
                 %DO YEAR=1994 %TO &ENDYR;
                 %LET YR=%SUBSTR(&YEAR.,3,2);
                 T16BEXPAMT&YR.01-T16BEXPAMT&YR.12
                 %END;;
   ARRAY T16GRSAMT (1994:&ENDYR,1:12)
                %DO YEAR=1994 %TO &ENDYR;
                %LET YR=%SUBSTR(&YEAR.,3,2);
                T16GRSAMT&YR.01-T16GRSAMT&YR.12
                %END;;
   ARRAY T16SEAMT (1994:&ENDYR,1:12)
               %DO YEAR=1994 %TO &ENDYR;
               %LET YR=%SUBSTR(&YEAR.,3,2);
               T16SEAMT&YR.01-T16SEAMT&YR.12
               %END;;
   ARRAY T16NETAMT (1994:&ENDYR,1:12)
                %DO YEAR=1994 %TO &ENDYR;
                %LET YR=%SUBSTR(&YEAR.,3,2);
                T16NETAMT&YR.01-T16NETAMT&YR.12
                %END;;
   ARRAY T16PASAMT (1994:&ENDYR,1:12)
                %DO YEAR=1994 %TO &ENDYR;
                %LET YR=%SUBSTR(&YEAR.,3,2);
                T16PASAMT&YR.01-T16PASAMT&YR.12
                %END;;
   ARRAY T16VERCD (1994:&ENDYR.,1:12)
```

Appendix A.246
JCL/SAS Code: SSRERNC4

```
                %DO YEAR=1994 %TO &ENDYR;
                %LET YR=%SUBSTR(&YEAR.,3,2);
                T16VERCD&YR.01-T16VERCD&YR.12
                %END;;

  * SET DATE OF SUBSEQUENT RECORD ESTABLISHMENT FOR USE AS START DATE
    FOR BACKING OUT CARRIED FORWARD EARNINGS;
  STARTYR=MAX('01JAN1994'D,MIN(PREV_RCD_EST,'31DEC2018'D));

  IF NOT FIRST.SSN THEN
     DO YR=YEAR(STARTYR) TO 2018;
        IF YR=YEAR(STARTYR) THEN STARTMO=MONTH(STARTYR);
        ELSE STARTMO=1;
        DO MO=STARTMO TO 12;
           T16GRSAMT(YR,MO)  = .;
           T16EXLAMT(YR,MO)  = .;
           T16BEXPAMT(YR,MO) = .;
           T16EXPAMT(YR,MO)  = .;
           T16SEAMT(YR,MO)   = .;
           T16NETAMT(YR,MO)  = .;
           T16PASAMT(YR,MO)  = .;
           T16VERCD(YR,MO)   = '';
        END;
     END;

  PREV_RCD_EST=RCD_EST;

  IF A THEN OUTPUT;
RUN;

%MACRO SORTDAT(BEGOBS= ,ENDOBS= ,RUN= );
PROC SORT DATA=TEMP7.SSREARN(FIRSTOBS=&BEGOBS. OBS=&ENDOBS.)
        OUT = TEMP&RUN..SSREARN;
   BY SSN RCD_EST;
RUN;
%MEND SORTDAT;
%SORTDAT(BEGOBS =       1,   ENDOBS =  5000000,  RUN = 8);
%SORTDAT(BEGOBS =  5000001,   ENDOBS = 10000000,  RUN = 9);
%SORTDAT(BEGOBS = 10000000,   ENDOBS = MAX,       RUN = 10);

DATA OUT.SSREARN;
   SET TEMP8.SSREARN
      TEMP9.SSREARN
      TEMP10.SSREARN
      ;
```

Appendix A.246
JCL/SAS Code: SSRERNC4

```
  BY SSN RCD_EST;
RUN;

PROC CONTENTS DATA = OUT.SSREARN;
TITLE 'CONTENTS OF FINAL SSIEXT FILE';
RUN;

PROC PRINT DATA=TEMP6.SSREARN (OBS=20);
RUN;

PROC PRINT DATA=OUT.SSREARN (OBS=20);
RUN;
  /*
PROC PRINT DATA = OUT.SSREARN (OBS=10);
TITLE 'PRINT 10 RANDOM OBS FOR CHECK';
WHERE RANUNI(1100)<0.1;
RUN;
  */
%MEND;
%DOIT;

//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<DPHELPS@MATHEMATICA-MPR.COM>
RCPT TO:<DPHELPS@MATHEMATICA-MPR.COM>
DATA
FROM:   <DPHELPS@MATHEMATICA-MPR.COM>
TO:     <DPHELPS@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 SSRERNCR COMPLETED
PROGRAM SSRERNCR IS COMPLETE.
```

Appendix A.247
JCL/SAS Code: JCLSSR22

```
//$4671SS2 JOB (12510000,T715,,SAS,,ITC9FL),DAWN-PHELPS,
//        MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//*
//*     *-----------------------------------------------------*
//*     ¦  OPDR.TG.PRD.ETTW.$4671.DAF18.TEARN.PRDLIB(JCLSSR22)¦
//*     *-----------------------------------------------------*
//*
//*     1.  COMBINE AND PROCESS LONGITUDINAL FILE
//*     2.  OUTPUT UPDATED STEP2 FILE
//*
//* SEGMENTS WERE PRODUCED IN STEP 1
//* THIS IS A NEW PROGRAM COMBINING JCL STATEMENTS FOR ALL SEGMENTS
//* 1974-1993 VS. 1994-DAFYR WILL HAVE DIFFERENT INCLUDE FILE
//*****************************************************************
//*
//JS010   EXEC SAS9,
//        WORK='120000,60000',
//        PARM='SYSPARM="1994,2018,#7429,18,RLONG,18"'
//* MAKE UPDATES TO THIS SYSPARM
//* THE FORMAT IS: BEGYR, ENDYR, YOURID, NUMSEG, NODE, DAFYR
//* DO NOT UPDATE BEGYR
//* UPDATE ENDYR TO THIS DAFYR
//* UPDATE YOUR ID
//* UPDATE NUMSEG (THE NUMBER OF SEGMENTS IN SSR1 PROGRAMS)
//* DO NOT UPDATE NODE (THIS IS A NODE FOR THE INPUT FILES)
//* UPDATE THE TWO-DIGIT DAFYR (USED IN THE NODE FOR INPUT FILES)
//*
//SSILF  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18A.SSR2P1.SA.V1,DISP=SHR
//EARN   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18A.SSREARN.SA.V5,DISP=SHR
//LONGF DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(3000,3000),RLSE),VOL=(,,,20)
//LONGV DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//LF1   DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//LF2   DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),
//         SPACE=(CYL,(3000,3000),RLSE),VOL=(,,,20)
//LV1   DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//LV2   DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),VOL=(,,,10),
//          UNIT=TSILO
//LV3   DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),VOL=(,,,10),
//          UNIT=TSILO
```

Appendix A.247
JCL/SAS Code: JCLSSR22

```
//LFUPD DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//LVUPD DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//OUT1   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18A.SSR2P2.SA.V6,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.ALTSSR.PRDLIB(SSR2P2),
//         DISP=(SHR,PASS,KEEP)
//*
//*JS020   EXEC SAS9,
//*       WORK='120000,60000',
//* MAKE UPDATES TO THIS SYSPARM
//* THE FORMAT IS: BEGYR, ENDYR, YOURID, NUMSEG, NODE, DAFYR
//* DO NOT UPDATE BEGYR
//* DO NOT UPDATE ENDYR
//* UPDATE YOUR ID
//* UPDATE NUMSEG (THE NUMBER OF SEGMENTS IN SSR1 PROGRAMS)
//* DO NOT UPDATE NODE (THIS IS A NODE FOR THE INPUT FILES)
//* UPDATE THE TWO-DIGIT DAFYR (USED IN THE NODE FOR INPUT FILES)
//*       PARM='SYSPARM="1974,1993,#7429,18,RLONGB,18"'
//*
//*SSILF DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18A.SSR2BP1.SA.V1,DISP=SHR
//*EARN   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18A.SSREARN.SA.V1,DISP=SHR
//*OUT   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18A.SSR2BP2.SA.V1,
//*         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//*         UNIT=TSILO
//*SYSIN   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.ALTSSR.PRDLIB(SSR2P2),
//*         DISP=(SHR,PASS,KEEP)
//*
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<DPHELPS@MATHEMATICA-MPR.COM>
RCPT TO:<DPHELPS@MATHEMATICA-MPR.COM>
DATA
FROM:   <DPHELPS@MATHEMATICA-MPR.COM>
TO:     <DPHELPS@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 SSR2 IS COMPLETE
```

Appendix A.247
JCL/SAS Code: JCLSSR22

DAF18 SSR2 HAS FINISHED RUNNING

Appendix A.248
JCL/SAS Code: SSR2P2

```
* SSR2 - THIS IS AN INCLUDE FILE TO PROCESS 1994 - CURRENT DAF FILES;
%LET BEGYR=%SCAN(%QUOTE(&SYSPARM),1,%STR(,));
%LET ENDYR=%SCAN(%QUOTE(&SYSPARM),2,%STR(,));
%LET YOURID=%SCAN(%QUOTE(&SYSPARM),3,%STR(,));
%LET NUMSEG=%SCAN(%QUOTE(&SYSPARM),4,%STR(,));
%LET NODE=%SCAN(%QUOTE(&SYSPARM),5,%STR(,));
%LET DAFYR=%SCAN(%QUOTE(&SYSPARM),6,%STR(,));

* BEGIN PROCESSING;
OPTIONS NOCENTER LS=132 PS=60 COMPRESS=BINARY;
OPTIONS OBS=MAX MPRINT;
 /* NOTE: CHANGE THE ENDYR AND ENDMN PARAMETER BEFORE EACH RUN */


 /* ASSIGN MACROS VARIABLES TO HANDLE TIME SERIES DATA */

%MACRO PROCSSILF;
   /*INITIATE MONTH COUNTER, MOCNTER, TO 1*/
 %LET MOCNTER=1;
   /*LOOPING THROUGH EACH YEAR SPECIFIED ABOVE*/
 %DO YEAR=&BEGYR. %TO &ENDYR.;
   /*SETTING YR MACRO VAR TO LAST TWO DIGITS OF EACH YEAR*/
    %LET YR=%SUBSTR(&YEAR.,3,2);

    /*LOOP THROUGH MONTHS 1 TO 12 AND INCREMENT MONTH COUNTER*/
    %DO M=1 %TO 12;
       %LET M=%SYSFUNC(PUTN(&M.,Z2.));
       %LET YY&MOCNTER=%EVAL(&YR)%EVAL(&M);
       %LET MOCNTER=%EVAL(&MOCNTER+1);
    %END;
 %END;
   /*SET TOTAL MONTHS, TOTMOS, EQUAL TO MOCNTER - 1 TO GET
     TOTAL MONTHS IN TIME SERIES*/
 %LET TOTMOS=%EVAL(&MOCNTER-1);

  /*USED TO PRING MAPPING TO LOG - CHECK DURING CODE REVIEW*/
 %DO MM=1 % TO &TOTMOS;
    %PUT &MM. MAPS TO YYMM, &&YY&MM.;
 %END;
    %PUT TOTAL MONTHS = &TOTMOS.;

 /*********************************************************************
 WE NEED TO READ THE SSI LONG FILES TO CAPTURE THE HISTORY FIELDS
 WE NEED TO SCAN ALL THE RECORDS FOR VALID VALUES INSTEAD OF JUST
```

Appendix A.248
JCL/SAS Code: SSR2P2

```
KEEPING THE LAST RECORD AS WE DID PREVIOUSLY.
THE LAST RECORD MAY HAVE HISTORY FIELDS BLANKED OUT
*********************************************************************/

 /*SPLIT THE VARIABLE  FILE TO UPDATE RECORDS WITH NONMISSING DATA */

DATA LONGF.ALLF(DROP=
          %DO MM=1 %TO &TOTMOS;
           PSTA&&YY&MM.     LIVF&&YY&MM. SCON&&YY&MM. EICM&&YY&MM.
           UINC&&YY&MM.     FAMT&&YY&MM. SAMT&&YY&MM. MTST&&YY&MM.
           FPMT&&YY&MM.     SPMT&&YY&MM.
           CMTHRD&&YY&MM. CURCOMP&&YY&MM.
           T16GRSAMT&&YY&MM.
           T16EXLAMT&&YY&MM.
           T16EXPAMT&&YY&MM.
           T16BEXPAMT&&YY&MM.
           T16SEAMT&&YY&MM.
           T16NETAMT&&YY&MM.
           T16PASAMT&&YY&MM.
           T16VERCD&&YY&MM.
          %END;)
   LONGV.ALLV(KEEP=SSN RCD_EST  /* VARIABLE PART */
   %DO MM=1 %TO &TOTMOS;
     PSTA&&YY&MM.    LIVF&&YY&MM. SCON&&YY&MM. EICM&&YY&MM.
     UINC&&YY&MM.    FAMT&&YY&MM. SAMT&&YY&MM. MTST&&YY&MM.
     FPMT&&YY&MM.    SPMT&&YY&MM.
     CMTHRD&&YY&MM. CURCOMP&&YY&MM.
     T16GRSAMT&&YY&MM.
     T16EXLAMT&&YY&MM.
     T16EXPAMT&&YY&MM.
     T16BEXPAMT&&YY&MM.
     T16SEAMT&&YY&MM.
     T16NETAMT&&YY&MM.
     T16PASAMT&&YY&MM.
     T16VERCD&&YY&MM.
   %END;);
  MERGE SSILF.SSR2P1(IN=SSILF)
      EARN.SSREARN(IN=SSREARN)
      ;
  BY SSN RCD_EST;
  IF SSREARN;
RUN;

PROC PRINT DATA=LONGF.ALLF (OBS=20); TITLE 'BEFORE UPDATE'; RUN;
PROC PRINT DATA=LONGV.ALLV (OBS=50); RUN;
```

Appendix A.248
JCL/SAS Code: SSR2P2

```
  /*CREATE MIN AND MAX VALUES FROM SOME OF THE FIXED PART VARIABLES */

PROC MEANS NOPRINT DATA=LONGF.ALLF;
 VAR START_RD RCD_EST ELG_RD APP_RD _8080_JD CLM_FIL FIRST_PA STOP_RD;
 BY SSN;
 OUTPUT OUT=LONGF.MAXMIN(DROP=_:)
      MIN=MINSTRRD MINRCDST SSI_MIN_ELG MINAPPRD MIN_80JD MINCLMFL
        MINFRSTP MINSTPRD
      MAX=MAXSTRRD MAXRCDST MAXELGRD MAXAPPRD MAX_80JD MAXCLMFL
        MAXFRSTP MAXSTPRD
      ;
RUN;

 /*SPLIT THE FIXED PART FILE TO UPDATE RECS WITH NONMISSING DATA */
 /*FOR FIXED DATA WE DO NOT HAVE TO EXAMINE INTERMEDIATE RECORDS */
 /*WE WANT THE CURRENT VALUE IN THE FIELDS                      */

DATA LF1.FIXEDA LF2.FIXEDB;
 SET LONGF.ALLF;
 BY SSN RCD_EST;
 IF FIRST.SSN THEN OUTPUT LF1.FIXEDA;
 ELSE OUTPUT LF2.FIXEDB;
RUN;

 /* RUN THE UPDATE PROCEDURE */

DATA LFUPD.LONGF;
 UPDATE LF1.FIXEDA LF2.FIXEDB;
 BY SSN;
RUN;

/* CONVERSATIONS WITH MARY BARBOUR HAVE REVEALED THAT SSA WILL
   TRY TO SAVE SPACE BY BLANKING AND ZEROING OUT HISTORY FIELDS
   WHEN A NEW PERIOD OF ELIGIBILITY IS ESTABLISHED FOLLOWING THE
   END OF AN OLD PERIOD OF ELIGIBILITY (CREATING A NEW RECORD).
   THEREFORE WE CAN NOT TAKE THE HISTORY VALUES FROM THE LAST RECORD
   AS PREVIOUSLY BUT MUST SCAN ALL THE RECORDS USING AN UPDATE
   PROCEDURE.  FOR CHARACTER VALUES, A BLANK ON A SUBSEQUENT RECORD
   (WHERE THERE HAD BEEN A VALUE ON A PREVIOUS RECORD) WILL NOT
   OVERWRITE THE VALUE USING THE UPDATE PROCEDURE. HOWEVER, FOR
   NUMERIC VALUES, SSA WILL ZERO OUT THE FIELD AND UPDATE WILL
   OVERWRITE A VALUE WITH THE ZERO. AS A RESULT WE WILL BLANK OUT
   THESE ZEROS SO AS NOT TO OVERWRITE THE FIELD.
   WITH REFERENCE TO THE ACTUAL STATE AND FEDERAL PAYMENT FIELDS
```

Appendix A.248
JCL/SAS Code: SSR2P2

```
    MARY HAS ALSO INDICATED THAT THERE MAY BE DOLLAR ADJUSTMENTS TO A
    GIVEN MONTHLY PAYMENT ON A SUBSEQUENT RECORD. FOR EXAMPLE,
    FDP0309 (FED PAYMENT IN SEPT 2003) MAY SHOW PAYMENTS ON 2 RECORDS
    THE TOTAL ACTUAL PAYMENT BEING THE SUM OF THESE.  THIS IS HANDLED
    IN THE FOLLOWING PROCEDURE  */

DATA LV1.VARA LV2.VARB;
 SET LONGV.ALLV; BY SSN RCD_EST;

    /* ADD UP THE PAYMENT AMOUNTS ACROSS RECORDS */
    /* IN THE CASE WHERE A FIELD IS ADJUSTED, THE INCREMENT
       WILL APPEAR  ACROSS RECORDS AND THE UPDATE PROCEDURE
       WILL TAKE THE SUM INSTEAD OF OVERWRITING ONE AMOUNT
       WITH A SUBSEQUENT AMOUNT */

   ARRAY  FPMT (*) %DO MM=1 %TO &TOTMOS;  FPMT&&YY&MM. %END;;
   ARRAY  SPMT (*) %DO MM=1 %TO &TOTMOS;  SPMT&&YY&MM. %END;;
   /*CREATING TEMPORARY VARIABLES, IMPLIED BY 'T'*/
   ARRAY TFPMT (*) %DO MM=1 %TO &TOTMOS; TFPMT&&YY&MM. %END;;
   ARRAY TSPMT (*) %DO MM=1 %TO &TOTMOS; TSPMT&&YY&MM. %END;;

    RETAIN  %DO MM=1 %TO &TOTMOS; TFPMT&&YY&MM. %END;;
    RETAIN  %DO MM=1 %TO &TOTMOS; TSPMT&&YY&MM. %END;;

     IF FIRST.SSN THEN DO I=1 TO DIM(FPMT);
      TFPMT(I) = FPMT(I);
      TSPMT(I) = SPMT(I);
     END;
     ELSE DO I=1 TO DIM(FPMT);
      IF FPMT(I) >= 0 THEN TFPMT(I) + FPMT(I);
      IF SPMT(I) >= 0 THEN TSPMT(I) + SPMT(I);
     END;


   * SET EARNINGS VALUES TO MISSING WHEN THE STATUS CODE IS BLANK. THIS
     WILL CURTAIL ANY CONTINUIOUS EARNINGS VALUES SO THEY WILL NOT BE
     REPORTED ON LATER RECORDS;
   ARRAY PSTA (*) %DO MM=1 %TO &TOTMOS;
                 PSTA&&YY&MM.
              %END;;
   * IN THIS ARRAY THE FIRST DIMENSION IS THE MONTH AND THE SECOND
     IS THE NUMBER OF EARNINGS VARIABLES;
   ARRAY ERNVARS (&TOTMOS.,7) %DO MM=1 %TO &TOTMOS.;
                        T16GRSAMT&&YY&MM.
                        T16EXLAMT&&YY&MM.
```

Appendix A.248
JCL/SAS Code: SSR2P2

```
                    T16EXPAMT&&YY&MM.
                    T16BEXPAMT&&YY&MM.
                    T16SEAMT&&YY&MM.
                    T16NETAMT&&YY&MM.
                    T16PASAMT&&YY&MM.
                   %END;;
  ARRAY ERNVER (&TOTMOS.) %DO MM=1 %TO &TOTMOS.;
                    T16VERCD&&YY&MM.
                 %END;;

  * WHEN CURRENT MONTH STATUS CODE IS MISSING SET ALL EARNINGS VARS TO
    MISSING AS ANY CONTINIOUS VALUE SHOULD STOP AT THIS POINT.  IF THE
    PRIOR MONTH WAS TERMINATED AND THE CURRENT MONTH IS NOT TERMINATED
    SET ALL EARNINGS VARS TO MISSING AS ANY CONTINIOUS VALUE SHOULD
    STOP AT TERMINATION.;
  DO I=1 TO DIM(PSTA);
     IF PSTA(I)='' THEN DO;
        ERNVER(I)='';
        DO J=1 TO 7;
           ERNVARS(I,J)=.;
        END;
     END;
     IF I>1 AND SUBSTR(PSTA(I-1),1,1)='T'
       AND SUBSTR(PSTA(I),1,1) NE 'T' THEN DO;
       ERNVER(I)='';
       DO J=1 TO 7;
        ERNVARS(I,J)=.;
       END;
     END;
  END;

  DROP FPMT: SPMT: I J;
  /* RENAME PAYMENT VARIABLES BACK TO ORIGINAL NAME */

 %DO MM = 1 %TO &TOTMOS;
   RENAME TFPMT&&YY&MM. = FPMT&&YY&MM.;
   RENAME TSPMT&&YY&MM. = SPMT&&YY&MM.;
 %END;

 IF FIRST.SSN THEN OUTPUT LV1.VARA;
 OUTPUT LV2.VARB;
RUN;

 DATA LV3.VARB2;
  SET LV2.VARB; BY SSN RCD_EST;
```

Appendix A.248
JCL/SAS Code: SSR2P2

```
/* ON THE LAST RECORD IF IT IS A TERMINATION RECORD THE WHOLE
   HISTORY MAY BE BLANKED AND ZEROED */

ARRAY FAMT    (*) %DO MM=1 %TO &TOTMOS;    FAMT&&YY&MM. %END;;
ARRAY SAMT    (*) %DO MM=1 %TO &TOTMOS;    SAMT&&YY&MM. %END;;
ARRAY EICM    (*) %DO MM=1 %TO &TOTMOS;    EICM&&YY&MM. %END;;
ARRAY UINC    (*) %DO MM=1 %TO &TOTMOS;    UINC&&YY&MM. %END;;
ARRAY FPMT    (*) %DO MM=1 %TO &TOTMOS;    FPMT&&YY&MM. %END;;
ARRAY SPMT    (*) %DO MM=1 %TO &TOTMOS;    SPMT&&YY&MM. %END;;
ARRAY CURCOMP (*) %DO MM=1 %TO &TOTMOS; CURCOMP&&YY&MM. %END;;

 /*NEW DAF13-CURCOMPYYMM RANGES FROM 0 TO 8. 0 IS INVALID SO SET TO
   MISSING.  WITH 0'S RECODING TO MISSING, DO NOT HAVE TO WORRY ABOUT
   0'S OVERWRITING VALID 1-8 VALUES DURING THE UPDATE PROCEDURE BELOW*/
 DO I=1 TO DIM(CURCOMP);
    IF CURCOMP(I)="0" THEN CURCOMP(I)=" ";
 END; DROP I;

 /* FLAG THE NUMERIC FIELDS IF GT 0 ON ANY RECORD -
    NEVER SET THEM TO ZERO IF THEY ARE ZEROED OUT SUBSEQUENTLY */
 /*DELETED '3' WHICH SET NUMERIC LENGTH TO 3*/
ARRAY FAF (&TOTMOS) _TEMPORARY_;
ARRAY SAF (&TOTMOS) _TEMPORARY_;
ARRAY EIF (&TOTMOS) _TEMPORARY_;
ARRAY UIF (&TOTMOS) _TEMPORARY_;
ARRAY FPF (&TOTMOS) _TEMPORARY_;
ARRAY SPF (&TOTMOS) _TEMPORARY_;


 /* INITIALIZE FLAGS TO ZERO */
IF FIRST.SSN THEN DO I = 1 TO DIM(FAF);

  FAF(I) = 0;
  SAF(I) = 0;
  EIF(I) = 0;
  UIF(I) = 0;
  FPF(I) = 0;
  SPF(I) = 0;
 END;


  DO I = 1 TO DIM(FAMT);
   IF FAMT(I) > 0 THEN FAF(I) = 1;
   IF SAMT(I) > 0 THEN SAF(I) = 1;
```

Appendix A.248
JCL/SAS Code: SSR2P2

```
    IF EICM(I) > 0 THEN EIF(I) = 1;
    IF UINC(I) > 0 THEN UIF(I) = 1;
    IF FPMT(I) > 0 THEN FPF(I) = 1;
    IF SPMT(I) > 0 THEN SPF(I) = 1;
   END;

 /* IF THE AMOUNTS HAVE BEEN ZEROED OUT ON SUBSEQUENT RECORDS
    WITH A NEW START DATE -
    SET THE ZERO TO MISSING IF THE MONTHLY AMOUNT HAS BEEN
    FLAGGED AS EVER BEING > 0. THIS PREVENTS THE UPDATE
    PROCEDURE FROM OVERWRITING A RECORD WITH ZERO.
    FOR THE ALPHANUMERIC FIELDS A BLANK WILL NOT OVERWRITE
    A PREVIOUS VALID VALUE     */

  DO I = 1 TO DIM(FAMT);
   IF FAMT(I) = 0 AND FAF(I) = 1 THEN FAMT(I) = .;
   IF SAMT(I) = 0 AND SAF(I) = 1 THEN SAMT(I) = .;
   IF EICM(I) = 0 AND EIF(I) = 1 THEN EICM(I) = .;
   IF UINC(I) = 0 AND UIF(I) = 1 THEN UINC(I) = .;
   IF FPMT(I) = 0 AND FPF(I) = 1 THEN FPMT(I) = .;
   IF SPMT(I) = 0 AND SPF(I) = 1 THEN SPMT(I) = .;
  END;
   DROP I;
RUN;

  /* RUN THE UPDATE PROCEDURE */

DATA LVUPD.LONGV;
  UPDATE LV1.VARA LV3.VARB2;
  BY SSN;
  /*CAN WE MOVE THIS DROP STATEMENT TO THE DATASTEP ABOVE?*/

 ARRAY CURCOMP (*) %DO MM=1 %TO &TOTMOS; CURCOMP&&YY&MM. %END;;

 /*NEW DAF13-REVERSING RECODING PERFORMED ABOVE*/
 DO I=1 TO DIM(CURCOMP);
    IF CURCOMP(I)=" " THEN CURCOMP(I)="0";
 END;
 DROP I;
RUN;

DATA OUT1.LONG;
   MERGE LFUPD.LONGF(IN=A)
        LONGF.MAXMIN
        LVUPD.LONGV
```

Appendix A.248
JCL/SAS Code: SSR2P2

```
        ;
    BY SSN;
    IF A;
    /*ADDING SSIYY*/
    /*TWO DIMENSIONAL ARRAY - YEAR BY MONTH*/
   ARRAY PSTAYYMM(&BEGYR.:&ENDYR.,1:12) %DO YEAR=&BEGYR. %TO &ENDYR.;
                                %LET YR=%SUBSTR(&YEAR.,3,2);
                                PSTA&YR.01-PSTA&YR.12
                              %END;;
   ARRAY SSIYY (&BEGYR.:&ENDYR.) %DO YEAR=&BEGYR. %TO &ENDYR.;
                             %LET YR=%SUBSTR(&YEAR.,3,2);
                             SSI&YR.
                          %END;;

   DO YR=&BEGYR. TO &ENDYR.;
     SSIYY(YR) = 0; *SET INITIAL SSIYY VALUE TO BE 0;
     DO MO=1 TO 12 UNTIL(SSIYY(YR)=1);
       IF PSTAYYMM(YR,MO) IN ("C01","M01","M02") THEN SSIYY(YR)=1;
      END;
   END;

   DROP MO;
  RUN;

  PROC PRINT DATA=OUT1.LONG (OBS=20); TITLE 'AFTER UPDATE'; RUN;
  RUN;
  PROC CONTENTS;
  RUN;

  %MEND PROCSSILF;
  %PROCSSILF;
```

Appendix A.249
JCL/SAS Code: SSIERNLV

```
//$4671SSI  JOB (12510000,T715,,SAS,,ITC9FL),DAWN-PHELPS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT: BUILD DAF16 (50214)
//* PROJECT
//* DIRECTOR:    JODY SCHIMMEL HYDE
//*
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF18.ANN.PRDLIB(SSIERNLV)
//*
//* DESCRIPTION: BUILDS THE YYMM EARNINGS VARIABLES FROM THE SSR
//*              EARNINGS FILE
//*
//* UPDATED:     MIAOMIAO SHEN 7/25/2019 FOR DAF18
//*****************************************************************
//*
//SAS       EXEC SAS9,
//         WORK='120000,60000'
//*
//*
//IN1   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18A.SSR2P2.SA.V6,DISP=SHR
//BLD   DD DSN=OPDR.TG.PRD.ETTW.#6502.DAF18P.MIEDCF.SA.V1,DISP=SHR
//OUT   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.SSRERNLV.SA.V4,
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO,VOL=(,,,10)
//TEMP1  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//       SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP2  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//       SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP3  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//       SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//TEMP4  DD DSN=&&TEMPX,UNIT=SYSDA,DISP=(NEW,DELETE,DELETE),
//       SPACE=(CYL,(4000,2000),RLSE),VOL=(,,,10)
//SYSIN  DD *

OPTIONS LS=132 COMPRESS=YES MPRINT MACROGEN OBS=MAX;

%LET BEGYR=1994;
%LET ENDYR=2018; /* CHANGE AS NEEDED */
%LET ENDMN=12;   /* CHANGE AS NEEDED */

  /* ASSIGN MACRO VARIABLES TO HANDLE TIME SERIES DATA */
%LET NUMYRS=%EVAL(&ENDYR.-&BEGYR.+1);

%MACRO START;
```

Appendix A.249
JCL/SAS Code: SSIERNLV

```
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

*************** BUILD SSIERNLVL ********************************;

DATA OUT.SSREARN;
  MERGE IN1.LONG (IN=SSR)
      BLD.MIEDCF  (IN=BLD KEEP = SSN BLINDDT);
  BY SSN;

  IF SSR;

  * SET INPUT ARRAY *;
  * IETYP = W;
  ARRAY T16GRSAMT (&BEGYR.:&ENDYR.,1:12)
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T16GRSAMT&YR.01-T16GRSAMT&YR.12
            %END;;
  * IETYP = N;
  ARRAY T16NETAMT (&BEGYR.:&ENDYR.,1:12)
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T16NETAMT&YR.01-T16NETAMT&YR.12
            %END;;
  * IETYP = T;
  ARRAY T16EXPAMT (&BEGYR.:&ENDYR.,1:12)
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T16EXPAMT&YR.01-T16EXPAMT&YR.12
            %END;;
  * IETYP = D;
  ARRAY T16PASAMT  (&BEGYR.:&ENDYR.,1:12)
             %DO YEAR=&BEGYR %TO &ENDYR;
             %LET YR=%SUBSTR(&YEAR.,3,2);
             T16PASAMT&YR.01-T16PASAMT&YR.12
             %END;;
  * IETYP = B;
  ARRAY T16EXLAMT (&BEGYR.:&ENDYR.,1:12)
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T16EXLAMT&YR.01-T16EXLAMT&YR.12
            %END;;
  * IETYP = C;
  ARRAY T16BEXPAMT (&BEGYR.:&ENDYR.,1:12)
             %DO YEAR=&BEGYR %TO &ENDYR;
```

Appendix A.249
JCL/SAS Code: SSIERNLV

```
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T16BEXPAMT&YR.01-T16BEXPAMT&YR.12
            %END;;
 * IETYP = S;
 ARRAY T16SEAMT  (&BEGYR.:&ENDYR.,1:12)
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            T16SEAMT&YR.01-T16SEAMT&YR.12
            %END;;

 * SET FBR VALUES *;
 * VALUES FROM HTTPS://WWW.SSA.GOV/OACT/COLA/SSIAMTS.HTML *;
 %INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(FBRIN)";

* SET SGA VALUES - NON-BLIND *;
* VALUES FROM HTTPS://WWW.SSA.GOV/OACT/COLA/SGA.HTML *;
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(SGANB)";

* SET SGA VALUES - BLIND *;
* VALUES FROM HTTPS://WWW.SSA.GOV/OACT/COLA/SGA.HTML *;
%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(SGAB)";

* SET UP OUTPUT ARRAY *;
ARRAY SSIERNLVL (&BEGYR.:&ENDYR.,1:12) $
            %DO YEAR=&BEGYR %TO &ENDYR;
            %LET YR=%SUBSTR(&YEAR.,3,2);
            SSIERNLVL&YR.01-SSIERNLVL&YR.12
            %END;;

 DO YR=&BEGYR. TO &ENDYR.;
   DO MO = 1 TO 12;
     * MONTHLY TOTAL SSI GROSS EARNINGS AMOUNT *;
     T16TENAMT = SUM(T16GRSAMT(YR,MO),
                 T16SEAMT(YR,MO),
                 T16NETAMT(YR,MO)*-1);

     * MONTHLY TOTAL SSI INCOME EXCLUSIONS *;
     T16INCEXL = SUM(T16EXLAMT(YR,MO),
                 T16BEXPAMT(YR,MO),
                 T16PASAMT(YR,MO),
                 T16EXPAMT(YR,MO));

     * MONTHLY SSI COUNTABLE EARNINGS *;
     T16CNTERN = SUM(T16TENAMT,T16INCEXL*-1);
```

Appendix A.249
JCL/SAS Code: SSIERNLV

```
        * CREATE SSIERNLVL *;
        IF T16TENAMT = 0 THEN SSIERNLVL(YR,MO) = "0";
        ELSE IF 0 < T16TENAMT < FBRIN(YR)
          THEN SSIERNLVL(YR,MO) = "L";

        ELSE IF MONTH(BLINDDT) NE . AND
              MDY(MO,1,YR) >= BLINDDT THEN DO;
          IF FBRIN(YR) <= T16TENAMT < SGAB(YR) AND
            FBRIN(YR) > T16CNTERN
            THEN SSIERNLVL(YR,MO) = "F";
          ELSE IF FBRIN(YR) <= T16TENAMT < SGAB(YR) AND
                FBRIN(YR) <= T16CNTERN
            THEN SSIERNLVL(YR,MO) = "B";
          ELSE IF T16TENAMT >= SGAB(YR) AND
                T16CNTERN < FBRIN(YR)
            THEN SSIERNLVL(YR,MO) = "A";
          ELSE IF T16TENAMT >= SGAB(YR) AND
                FBRIN(YR) <= T16CNTERN < SGAB(YR)
            THEN SSIERNLVL(YR,MO) = "G";
          ELSE IF T16CNTERN >= SGAB(YR)
            THEN SSIERNLVL(YR,MO) = "S";
        END;

        ELSE IF MDY(MO,1,YR) < BLINDDT
             OR MONTH(BLINDDT)=. THEN DO;
          IF FBRIN(YR) <= T16TENAMT < SGANB(YR) AND
            FBRIN(YR) > T16CNTERN
            THEN SSIERNLVL(YR,MO) = "F";
          ELSE IF FBRIN(YR) <= T16TENAMT < SGANB(YR) AND
                FBRIN(YR) <= T16CNTERN
            THEN SSIERNLVL(YR,MO) = "B";
          ELSE IF T16TENAMT >= SGANB(YR) AND
                T16CNTERN < FBRIN(YR)
            THEN SSIERNLVL(YR,MO) = "A";
          ELSE IF T16TENAMT >= SGANB(YR) AND
                FBRIN(YR) <= T16CNTERN < SGANB(YR)
            THEN SSIERNLVL(YR,MO) = "G";
          ELSE IF T16CNTERN >= SGANB(YR)
            THEN SSIERNLVL(YR,MO) = "S";
        END;
      END; /* END OF MO LOOP */
    END; /* END OF YR LOOP */
  RUN;

  %MEND START;
```

Appendix A.249
JCL/SAS Code: SSIERNLV

```
%START;
ENDSAS;
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<DPHELPS@MATHEMATICA-MPR.COM>
RCPT TO:<DPHELPS@MATHEMATICA-MPR.COM>
DATA
FROM:   <DPHELPS@MATHEMATICA-MPR.COM>
TO:     <DPHELPS@MATHEMATICA-MPR.COM>
SUBJECT: DAF18 SSIERNLV IS COMPLETE
```

Appendix A.250
JCL/SAS Code: PATANJCL

```
//$4671ANN  JOB (12510000,T715,,SAS,,ITC9FL),DAWN-PHELPS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT:     DAF18 CONSTRUCTION
//* DIRECTOR:    JODY SCHIMMEL HYDE
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF18.PATSSR.PRDLIB(PATANJCL)
//* DESCRIPTION: REPLACE DCF EARNINGS WITH SSR EARNINGS
//*              CREATE 10%DM ANNUALS
//* DATE:        06/17/2020
//* CONTACT:     DAWN PHELPS
//* MPR EMAIL:   DPHELPS@MATHEMATICA-MPR.COM
//* SSA EMAIL:   DAWN.PHELPS@SSA.GOV
//*****************************************************************
//*
//ANNPROC    PROC
//SAS        EXEC SAS9,
//           WORK='120000,60000',
//           PARM='SYSPARM="&YYYY"'
//*
//ANNIN   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,
//           DISP=SHR
//SSR     DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.SSRERNLV.SA.V4,DISP=SHR
//ANNOUT  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y&YYYY.E,
//           DISP=(NEW,CATLG,DELETE),
//           UNIT=TSILO
//OUTCE  DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18P.CAN&YYYY.E.SA.V3,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//* 10% DM FILES
//E10   DD  DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y&YYYY.E,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//OUTC10 DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18D.CAN&YYYY.E.SA.V3,
//          DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//          SPACE=(CYL,(3000,3000),RLSE)
//SYSIN   DD DSN=OPDR.TG.PRD.ETTW.$4671.DAF18.PATSSR.PRDLIB(PATANN),
//           DISP=(SHR,PASS,KEEP)
//        PEND
//*
//Y2018   EXEC ANNPROC,YYYY=2018
//Y2017   EXEC ANNPROC,YYYY=2017
//Y2016   EXEC ANNPROC,YYYY=2016
//Y2015   EXEC ANNPROC,YYYY=2015
//Y2014   EXEC ANNPROC,YYYY=2014
```

Appendix A.250
JCL/SAS Code: PATANJCL

```
//Y2013   EXEC ANNPROC,YYYY=2013
//Y2012   EXEC ANNPROC,YYYY=2012
//Y2011   EXEC ANNPROC,YYYY=2011
//Y2010   EXEC ANNPROC,YYYY=2010
//Y2009   EXEC ANNPROC,YYYY=2009
//Y2008   EXEC ANNPROC,YYYY=2008
//Y2007   EXEC ANNPROC,YYYY=2007
//Y2006   EXEC ANNPROC,YYYY=2006
//Y2005   EXEC ANNPROC,YYYY=2005
//Y2004   EXEC ANNPROC,YYYY=2004
//Y2003   EXEC ANNPROC,YYYY=2003
//Y2002   EXEC ANNPROC,YYYY=2002
//Y2001   EXEC ANNPROC,YYYY=2001
//Y2000   EXEC ANNPROC,YYYY=2000
//Y1999   EXEC ANNPROC,YYYY=1999
//Y1998   EXEC ANNPROC,YYYY=1998
//Y1997   EXEC ANNPROC,YYYY=1997
//Y1996   EXEC ANNPROC,YYYY=1996
//Y1995   EXEC ANNPROC,YYYY=1995
//Y1994   EXEC ANNPROC,YYYY=1994
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<DPHELPS@MATHEMATICA-MPR.COM>
RCPT TO:<DPHELPS@MATHEMATICA-MPR.COM>
DATA
FROM:   <DPHELPS@MATHEMATICA-MPR.COM>
TO:     <DPHELPS@MATHEMATICA-MPR.COM>
SUBJECT: DCFPATCH
DAF18 SSR ANN PATCH COMPLETE
```

Appendix A.251
JCL/SAS Code: LABELS

```
label
T16BEXPAMT&YR.01=
  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.01"
T16BEXPAMT&YR.02=
  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.02"
T16BEXPAMT&YR.03=
  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.03"
T16BEXPAMT&YR.04=
  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.04"
T16BEXPAMT&YR.05=
  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.05"
T16BEXPAMT&YR.06=
  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.06"
T16BEXPAMT&YR.07=
  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.07"
T16BEXPAMT&YR.08=
  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.08"
T16BEXPAMT&YR.09=
  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.09"
T16BEXPAMT&YR.10=
  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.10"
T16BEXPAMT&YR.11=
  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.11"
T16BEXPAMT&YR.12=
  "SSI BLIND IMPAIRMENT-RELATED WORK EXPENSE (BLIND IRWE) SSR &YR.12"
T16EXLAMT&YR.01="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.01"
T16EXLAMT&YR.02="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.02"
T16EXLAMT&YR.03="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.03"
T16EXLAMT&YR.04="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.04"
T16EXLAMT&YR.05="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.05"
T16EXLAMT&YR.06="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.06"
T16EXLAMT&YR.07="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.07"
T16EXLAMT&YR.08="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.08"
T16EXLAMT&YR.09="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.09"
T16EXLAMT&YR.10="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.10"
T16EXLAMT&YR.11="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.11"
T16EXLAMT&YR.12="SSI STUDENT EXCLUSION AMOUNT (SSR) &YR.12"
T16EXPAMT&YR.01=
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.01"
T16EXPAMT&YR.02=
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.02"
T16EXPAMT&YR.03=
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.03"
T16EXPAMT&YR.04=
```

Appendix A.251
JCL/SAS Code: LABELS

```
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.04"
T16EXPAMT&YR.05=
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.05"
T16EXPAMT&YR.06=
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.06"
T16EXPAMT&YR.07=
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.07"
T16EXPAMT&YR.08=
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.08"
T16EXPAMT&YR.09=
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.09"
T16EXPAMT&YR.10=
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.10"
T16EXPAMT&YR.11=
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.11"
T16EXPAMT&YR.12=
  "SSI IMPAIRMENT-RELATED WORK EXPENSE (IRWE) AMOUNT (SSR) &YR.12"
T16GRSAMT&YR.01="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.01"
T16GRSAMT&YR.02="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.02"
T16GRSAMT&YR.03="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.03"
T16GRSAMT&YR.04="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.04"
T16GRSAMT&YR.05="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.05"
T16GRSAMT&YR.06="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.06"
T16GRSAMT&YR.07="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.07"
T16GRSAMT&YR.08="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.08"
T16GRSAMT&YR.09="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.09"
T16GRSAMT&YR.10="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.10"
T16GRSAMT&YR.11="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.11"
T16GRSAMT&YR.12="SSI EARNINGS GROSS WAGE AMOUNT (SSR) &YR.12"
T16NETAMT&YR.01="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.01"
T16NETAMT&YR.02="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.02"
T16NETAMT&YR.03="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.03"
T16NETAMT&YR.04="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.04"
T16NETAMT&YR.05="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.05"
T16NETAMT&YR.06="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.06"
T16NETAMT&YR.07="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.07"
T16NETAMT&YR.08="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.08"
T16NETAMT&YR.09="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.09"
T16NETAMT&YR.10="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.10"
T16NETAMT&YR.11="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.11"
T16NETAMT&YR.12="SSI SELF-EMPLOYMENT NET LOSS AMOUNT (SSR) &YR.12"
T16PASAMT&YR.01="SSI PASS AMOUNT (SSR) &YR.01"
T16PASAMT&YR.02="SSI PASS AMOUNT (SSR) &YR.02"
T16PASAMT&YR.03="SSI PASS AMOUNT (SSR) &YR.03"
T16PASAMT&YR.04="SSI PASS AMOUNT (SSR) &YR.04"
```

Appendix A.251
JCL/SAS Code: LABELS

```
T16PASAMT&YR.05="SSI PASS AMOUNT (SSR) &YR.05"
T16PASAMT&YR.06="SSI PASS AMOUNT (SSR) &YR.06"
T16PASAMT&YR.07="SSI PASS AMOUNT (SSR) &YR.07"
T16PASAMT&YR.08="SSI PASS AMOUNT (SSR) &YR.08"
T16PASAMT&YR.09="SSI PASS AMOUNT (SSR) &YR.09"
T16PASAMT&YR.10="SSI PASS AMOUNT (SSR) &YR.10"
T16PASAMT&YR.11="SSI PASS AMOUNT (SSR) &YR.11"
T16PASAMT&YR.12="SSI PASS AMOUNT (SSR) &YR.12"
T16SEAMT&YR.01="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.01"
T16SEAMT&YR.02="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.02"
T16SEAMT&YR.03="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.03"
T16SEAMT&YR.04="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.04"
T16SEAMT&YR.05="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.05"
T16SEAMT&YR.06="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.06"
T16SEAMT&YR.07="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.07"
T16SEAMT&YR.08="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.08"
T16SEAMT&YR.09="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.09"
T16SEAMT&YR.10="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.10"
T16SEAMT&YR.11="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.11"
T16SEAMT&YR.12="SSI SELF-EMPLOYMENT INCOME AMOUNT (SSR) &YR.12"
SSIERNLVL&YR.01="SSI EARNING LEVEL INDICATOR &YR.01"
SSIERNLVL&YR.02="SSI EARNING LEVEL INDICATOR &YR.02"
SSIERNLVL&YR.03="SSI EARNING LEVEL INDICATOR &YR.03"
SSIERNLVL&YR.04="SSI EARNING LEVEL INDICATOR &YR.04"
SSIERNLVL&YR.05="SSI EARNING LEVEL INDICATOR &YR.05"
SSIERNLVL&YR.06="SSI EARNING LEVEL INDICATOR &YR.06"
SSIERNLVL&YR.07="SSI EARNING LEVEL INDICATOR &YR.07"
SSIERNLVL&YR.08="SSI EARNING LEVEL INDICATOR &YR.08"
SSIERNLVL&YR.09="SSI EARNING LEVEL INDICATOR &YR.09"
SSIERNLVL&YR.10="SSI EARNING LEVEL INDICATOR &YR.10"
SSIERNLVL&YR.11="SSI EARNING LEVEL INDICATOR &YR.11"
SSIERNLVL&YR.12="SSI EARNING LEVEL INDICATOR &YR.12"
;
```

Appendix A.252
JCL/SAS Code: PATANN

```
OPTIONS LS=132 COMPRESS=YES MPRINT MACROGEN NOCENTER OBS=MAX;

%LET YR=%SUBSTR(&SYSPARM.,3,2);

%MACRO START;

* MERGE DCF PATCH FILE TO ANNUAL REPLACING SSR EARNINGS VARIABLES WITH
  THOSE FROM THE DCF;
DATA ANNOUT.Y&SYSPARM.;
   MERGE ANNIN.Y&SYSPARM.(IN=ANN DROP=T16EXPAMT: T16EXLAMT:
                            T16GRSAMT: T16VERIND:
                            T16NETAMT: T16PASAMT:
                            T16SEVERIND: SSIERNLVL:)
        /* KEEP ONLY SSR EARNINGS VALUES FOR THIS ANNUAL */
        SSR.SSREARN(IN=SSR
        KEEP=SSIERNLVL&YR.: T16EXLAMT&YR.: T16EXPAMT&YR.:
            T16GRSAMT&YR.: T16NETAMT&YR.: T16PASAMT&YR.:
            T16SEAMT&YR.: T16BEXPAMT&YR.: SSN)
            ;
   BY SSN;
   IF ANN;

   %INCLUDE "OPDR.TG.PRD.ETTW.$4671.DAF18.PATSSR.PRDLIB(LABELS)";
RUN;

* CREATE 10%DM FOR ANNUAL FILES;
DATA E10.Y&SYSPARM.;
  SET ANNOUT.Y&SYSPARM.;
  IF (SUBSTR(SSN,8,1) IN ('0', '2', '4', '7', '9'))
     AND (SUBSTR(SSN,9,1) IN ('0', '5'));
RUN;

TITLE "FULL ENROLLED ANNUALS";
PROC CONTENTS DATA = ANNOUT.Y&SYSPARM.
            OUT = OUTCE.ANN&YR.CON; RUN;

TITLE "10% ENROLLED ANNUALS";
PROC CONTENTS DATA = E10.Y&SYSPARM.
            OUT = OUTC10.ANN&YR.CON; RUN;

%MEND START;
%START;
```

Appendix A.253
JCL/SAS Code: COPYANN

```
//$4671ARA  JOB (12510000,T715,,SAS,,ITC9FL),PHELPS-DAWN,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    JODY SCHIMMEL HYDE
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF18.PATDCF.PRDLIB(ARCHANN)
//* DESCRIPTION: CREATE ARCHIVE COPY OF EXISTING DAF FILES
//* DATE:        04/16/2020
//*****************************************************************
//STEP1994   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y1994E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y1994E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP1995   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y1995E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y1995E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP1996   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y1996E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y1996E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP1997   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y1997E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y1997E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP1998   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y1998E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y1998E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
```

Appendix A.253
JCL/SAS Code: COPYANN

```
//STEP1999   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y1999E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y1999E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2000   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y2000E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2000E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2001   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y2001E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2001E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2002   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y2002E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2002E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2003   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y2003E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2003E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2004   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y2004E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2004E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//*
//STEP2005   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
```

Appendix A.253
JCL/SAS Code: COPYANN

```
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y2005E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2005E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2006   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y2006E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2006E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2007   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y2007E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2007E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2008   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y2008E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2008E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2009   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y2009E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2009E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2010   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y2010E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2010E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2011   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y2011E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2011E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
```

Appendix A.253
JCL/SAS Code: COPYANN

```
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2012   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y2012E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2012E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2013   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y2013E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2013E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2014   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y2014E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2014E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2015   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y2015E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2015E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2016   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y2016E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2016E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2017   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y2017E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2017E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2018   EXEC PGM=IEBGENER
```

Appendix A.253
JCL/SAS Code: COPYANN

```
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18P.Y2018E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2018E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
```

Appendix A.254
JCL/SAS Code: COPY10P

```
//$4671AR1  JOB (12510000,T715,,SAS,,ITC9FL),PHELPS-DAWN,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    JODY SCHIMMEL HYDE
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF18.PATDCF.PRDLIB(ARCH10P)
//* DESCRIPTION: CREATE ARCHIVE COPY OF EXISTING DAF FILES
//* DATE:        04/16/2020
//*****************************************************************
//STEP1994   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y1994E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y1994E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP1995   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y1995E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y1995E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP1996   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y1996E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y1996E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP1997   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y1997E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y1997E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP1998   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y1998E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y1998E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
```

Appendix A.254
JCL/SAS Code: COPY10P

```
//STEP1999   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y1999E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y1999E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2000   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y2000E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y2000E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2001   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y2001E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y2001E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2002   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y2002E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y2002E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2003   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y2003E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y2003E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2004   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y2004E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y2004E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//*
//STEP2005   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
```

Appendix A.254
JCL/SAS Code: COPY10P

```
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y2005E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y2005E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2006   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y2006E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y2006E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2007   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y2007E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y2007E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2008   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y2008E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y2008E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2009   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y2009E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y2009E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2010   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y2010E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y2010E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2011   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y2011E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y2011E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
```

Appendix A.254
JCL/SAS Code: COPY10P

```
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2012   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y2012E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y2012E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2013   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y2013E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y2013E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2014   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y2014E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y2014E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2015   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y2015E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y2015E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2016   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y2016E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y2016E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2017   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y2017E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y2017E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2018   EXEC PGM=IEBGENER
```

Appendix A.254
JCL/SAS Code: COPY10P

```
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.Y2018E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.Y2018E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
```

Appendix A.255
JCL/SAS Code: COPYANN2

```
//$4671ARA  JOB (12510000,T715,,SAS,,ITC9FL),PHELPS-DAWN,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=$4671
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    JODY SCHIMMEL HYDE
//* PROGRAM:     OPDR.TG.PRD.ETTW.$4671.DAF18.PATDCF.PRDLIB(ARCHANN)
//* DESCRIPTION: CREATE ARCHIVE COPY OF EXISTING DAF FILES
//* DATE:        04/16/2020
//*****************************************************************
//STEP1994   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y1994E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y1994E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP1995   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y1995E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y1995E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP1996   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y1996E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y1996E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP1997   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y1997E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y1997E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP1998   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y1998E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y1998E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
```

Appendix A.255
JCL/SAS Code: COPYANN2

```
//STEP1999   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y1999E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y1999E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2000   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2000E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2000E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2001   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2001E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2001E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2002   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2002E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2002E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2003   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2003E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2003E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2004   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2004E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2004E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//*
//STEP2005   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
```

Appendix A.255
JCL/SAS Code: COPYANN2

```
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2005E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2005E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2006   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2006E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2006E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2007   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2007E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2007E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2008   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2008E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2008E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2009   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2009E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2009E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2010   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2010E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2010E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2011   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2011E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2011E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
```

Appendix A.255
JCL/SAS Code: COPYANN2

```
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2012   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2012E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2012E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2013   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2013E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2013E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2014   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2014E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2014E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2015   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2015E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2015E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2016   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2016E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2016E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2017   EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2017E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2017E,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        UNIT=TSILO
//SYSIN  DD  DUMMY
//STEP2018   EXEC PGM=IEBGENER
```

Appendix A.255
JCL/SAS Code: COPYANN2

```
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y2018E,DISP=SHR
//SYSUT2  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18C.Y2018E,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN  DD  DUMMY
```

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APPENDIX B

ADM CODE

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Appendix B.1
JCL/SAS Code: ADMBENES

```
//#6266ADM  JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//* PROJECT:     DAF 50214(06979)
//* DIRECTOR:    LAURA KOSAR
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6266.DAF18.ADM.PRDLIB(ADMBENES)
//* DESCRIPTION: AWARDEE DATA MART BENEFICIARY SELECTION
//* DATE:        11/14/13 SVETLANA BRONNIKOV
//* UPDATED:     1/7/15 SVETLANA BRONNIKOV
//* UPDATED:     11/17/2015 JOE MASTRIANNI
//* UPDATED:     12/15/2016 MIAOMIAO SHEN
//* UPDATED:     3/2/2017 MIAOMIAO SHEN USE V2 DEMO
//* UPDATED:     4/18/2018 SERGE LUKASHANETS
//* UPDATED:     1/8/2019 BRITTANY COLIP (CONSOLIDATING PROGRAMS)
//*****************************************************************
//*
//SAS      EXEC SAS9,
//         WORK='120000,60000'
//*
//DEM   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.DMG,DISP=SHR
//OUT  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18D.ADMBENES.SA.V1,
//        DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//        SPACE=(CYL,(3000,3000),RLSE)
//TEMP  DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),
//        UNIT=TSILO,VOL=(,,,10)
//SYSIN DD *


OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN OBS=MAX;

%LET ENDYR=2018;  /* CHANGE AS NEEDED */

* DEFINE THE INITIAL POPULATION BEFORE FLAGGING SSI AND DI BENES;
%MACRO START;
DATA TEMP.ADMBENES(KEEP=SSN DOBBEST DODBEST FRA DOEI DOEC KEEP:
                  BIC SSIELIG_ADULT MINFRSTP RID: RDT:
                  AGESTART AGEEND AGESTART94
                  DODEC: FIRSTDODEC AGE18_CDR SEX);
  SET DEM.DMG;
  * IF DOEI NOT MISSING OR SSIELIG_ADULT NOT MISSING *;
  IF DOEI NE . OR SSIELIG_ADULT NE .;

  * CREATE FLAGS BASED ON AGE ;
  ***CALCULATE AGE***;
```

Appendix B.1
JCL/SAS Code: ADMBENES

```
      AGESTART = INTCK('MONTH',DOBBEST,'01JAN1996'd,'c')/12;
      AGESTART94 = INTCK('MONTH',DOBBEST,'01JAN1994'd,'c')/12;
      AGEEND=INTCK('MONTH',DOBBEST,"31DEC&ENDYR."d,'c')/12;

      IF AGEEND>=18 AND AGESTART<FRA THEN KEEPAGE = 1;
      ELSE KEEPAGE = 0;

      *** KEEP IF NOT DEAD AT START OF YEAR 1996 ***;
      IF YEAR(DODBEST) = . OR DODBEST > '01JAN1996'D THEN KEEPYRDOD=1;

      IF KEEPAGE = 1 AND KEEPYRDOD=1 THEN KEEP=1;ELSE KEEP  = 0;

    RUN;
    %MEND START;
    %START;
    TITLE "CHECK ON KEEP VARIABLES";
    PROC FREQ DATA=TEMP.ADMBENES;
       TABLES KEEP: / LIST MISSING;
    RUN;

    DATA OUT.ADMBENES(DROP = AGESTART AGEEND AGESTART94)
       ;
      SET TEMP.ADMBENES;
      IF KEEP = 1;
      DROP KEEP:;
      * CREATE FLAGS FOR SSDI AND SSI BENES;
      * INITIALIZE THESE FLAGS TO 0;
      ADM_SSDI = 0;
      ADM_SSI = 0;

      ***FLAG SSI BENES WHERE MIN_SSI_ELG IS
      NOT MISSING AND MINFRSTP IS ON OR AFTER
      JANUARY 1,1996***;

      IF (SSIELIG_ADULT NE .) AND (MINFRSTP >='01JAN1996'D)
      THEN ADM_SSI = 1;

      ***FLAG DI BENES WHERE DOEI IS NOT MISSING
        EXCLUDE WHO HAVE DOEI BEFORE 1994 AND
        18 BIRTHDAY BEFORE 1994***;
      IF DOEI NE . AND (DOEI>='01JAN1994'D OR AGESTART94<=18)
      THEN DO;
       /*ADDITIONAL CRITERIA FOR FLAGGING DI BENES*/
       REFDATE = '01JAN1996'D;
       DOECFLAG = 1;
```

Appendix B.1
JCL/SAS Code: ADMBENES

```
      FRAFLAG = 1;
      /* FLAG THE RESTRICTIONS FOR THE BENEFICIARIES */
      IF DOEC LT REFDATE AND DOEC GT DOEI THEN DOECFLAG = 0;
      /* ESTABLISH AGE AT DOEI DATE FROM THE END OF THE DOEI
       MONTH AND COMPARE TO AGE AT RETIRMENT */
      NEWDOEI = INTNX('MONTH',DOEI,0,'END');
      AGEDOEI = INTCK('MONTHS',DOBBEST,NEWDOEI,'C')/12;
      IF AGEDOEI GE FRA THEN FRAFLAG = 0;

      /* FLAG THE BENE IF DI CRITERIA IS MET */
      IF DOECFLAG AND FRAFLAG THEN ADM_SSDI = 1;
    END;

    /*KEEP ONLY THE OBS THAT HAVE BEEN FLAGGED*/
    IF ADM_SSI = 1 OR ADM_SSDI = 1;
  RUN;

  TITLE "CONTENTS OF ADMBENES DATA";
  PROC CONTENTS DATA = OUT.ADMBENES;
  RUN;

  TITLE "GET FREQS OF SSDI AND SSI BENES";
  PROC FREQ DATA = OUT.ADMBENES;
    TABLES ADM_SSDI*ADM_SSI/MISSING LIST;
  RUN;

  TITLE "ADMBENES DATA (SSDI POPULATION)";
  PROC FREQ DATA=OUT.ADMBENES (WHERE = (ADM_SSDI = 1));
      TABLES DOEI  / MISSING;
      FORMAT DOEI YYMMN6.;
  RUN;

  TITLE 'EXAMINE DISTRIBUTION OF THE FLAGS (SSDI POPULATION)';
  PROC PRINT DATA=OUT.ADMBENES (WHERE = (ADM_SSDI = 1) OBS = 50);
    FORMAT DOEI NEWDOEI DOBBEST DODBEST DOEC YYMMDD10.;
  RUN;

  PROC FREQ DATA=OUT.ADMBENES (WHERE = (ADM_SSDI = 1));
    TABLES DOECFLAG * FRAFLAG / LIST MISSING;
  RUN;

  TITLE "ADMBENES DATA (SSI POPULATION)";
  PROC FREQ DATA=OUT.ADMBENES (WHERE = (ADM_SSI = 1));
       TABLES SSIELIG_ADULT MINFRSTP / MISSING;
       FORMAT SSIELIG_ADULT MINFRSTP YYMMN6.;
```

Appendix B.1
JCL/SAS Code: ADMBENES

```
RUN;

TITLE;


//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<SLUKASHANETS@MATHEMATICA-MPR.COM>
RCPT TO:<SLUKASHANETS@MATHEMATICA-MPR.COM>
DATA
FROM:   <SLUKASHANETS@MATHEMATICA-MPR.COM>
TO:     <SLUKASHANETS@MATHEMATICA-MPR.COM>
SUBJECT: ADMBENES IS COMPLETE
DAF18 ADMBENES IS COMPLETE.
```

Appendix B.2
JCL/SAS Code: JCLADMAN

```
//#6266ADD  JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//* PROJECT:     DAF 50214(06979)
//* DIRECTOR:    LAURA KOSAR
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6266.DAF18.ADM.PRDLIB(JCLADMAN)
//* DESCRIPTION:
//* DATE:        12/07/15
//* PROGRAMMER:  JOE MASTRIANNI
//* UPDATE:      01/05/2017 MIAOMIAO SHEN
//* UPDATE:      04/18/2018 SERGE LUKASHANETS
//* UPDATE:      05/09/2018 DAWN PHELPS
//* UPDATE:      01/10/2019 BRITTANY COLIP
//*            (CONSOLIDATING OLDER PROGRAMS)
//* EMAILL:      DAWN.PHELPS@SSA.GOV
//*            DPHELPS@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//MRGPROC   PROC
//STEP1     EXEC SAS9,
//         WORK='120000,60000',
//         PARM='SYSPARM="&YYYY"'
//*
//IN1    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18D.ADMBENES.SA.V1,DISP=SHR
//ANN    DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.Y&YYYY.E,DISP=SHR
//OUT    DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18D.ADMY&YYYY..SA.V1,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         SPACE=(CYL,(3000,3000),RLSE)
//SYSIN  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18.ADM.PRDLIB(ADMANN),
//         DISP=(SHR,PASS,KEEP)
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<SLUKASHANETS@MATHEMATICA-MPR.COM>
RCPT TO:<SLUKASHANETS@MATHEMATICA-MPR.COM>
DATA
FROM:   <SLUKASHANETS@MATHEMATICA-MPR.COM>
TO:     <SLUKASHANETS@MATHEMATICA-MPR.COM>
```

Appendix B.2
JCL/SAS Code: JCLADMAN

```
SUBJECT: JCLADMAN COMPLETE &YYYY.
//      PEND
//*
//RUN25  EXEC MRGPROC,YYYY=2018
//RUN24  EXEC MRGPROC,YYYY=2017
//RUN23  EXEC MRGPROC,YYYY=2016
//RUN22  EXEC MRGPROC,YYYY=2015
//RUN21  EXEC MRGPROC,YYYY=2014
//RUN20  EXEC MRGPROC,YYYY=2013
//RUN19  EXEC MRGPROC,YYYY=2012
//RUN18  EXEC MRGPROC,YYYY=2011
//RUN17  EXEC MRGPROC,YYYY=2010
//RUN16  EXEC MRGPROC,YYYY=2009
//RUN15  EXEC MRGPROC,YYYY=2008
//RUN14  EXEC MRGPROC,YYYY=2007
//RUN13  EXEC MRGPROC,YYYY=2006
//RUN12  EXEC MRGPROC,YYYY=2005
//RUN11  EXEC MRGPROC,YYYY=2004
//RUN10  EXEC MRGPROC,YYYY=2003
//RUN9   EXEC MRGPROC,YYYY=2002
//RUN8   EXEC MRGPROC,YYYY=2001
//RUN7   EXEC MRGPROC,YYYY=2000
//RUN6   EXEC MRGPROC,YYYY=1999
//RUN5   EXEC MRGPROC,YYYY=1998
//RUN4   EXEC MRGPROC,YYYY=1997
//RUN3   EXEC MRGPROC,YYYY=1996
//RUN2   EXEC MRGPROC,YYYY=1995
//RUN1   EXEC MRGPROC,YYYY=1994
//*
//**************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//**************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<SLUKASHANETS@MATHEMATICA-MPR.COM>
RCPT TO:<SLUKASHANETS@MATHEMATICA-MPR.COM>
DATA
FROM:   <SLUKASHANETS@MATHEMATICA-MPR.COM>
TO:     <SLUKASHANETS@MATHEMATICA-MPR.COM>
SUBJECT: JCLADMAN COMPLETE 1994-2018
```

Appendix B.3
JCL/SAS Code: ADMANN

```
*****************************************************************
* PROJECT: DAF 50214(06979)
* DIRECTOR:   LAURA KOSAR
* PROGRAM: OPDR.TG.PRD.ETTW.#7429.DAF17.ADM.PRDLIB(ADMANN)
* DESCRIPTION: EXTRACT ANNUAL VARIABLES FOR ADM BENES
*          THE FORMER SSIANN AND DIANN INCLUDE FILES ARE
*          BEING CONSOLIDATED INTO THIS PROGRAM
* DATE:       01/10/2019
* PROGRAMMER: BRITTANY COLIP
* EMAIL: SIARHEI.LUKASHANETS@SSA.GOV
*       SLUKASHANETS@MATHEMATICA-MPR.COM
*****************************************************************;

OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN OBS=MAX DKRICOND=WARN;

%MACRO DOIT;

DATA OUT.ADMY&SYSPARM.;
  MERGE IN1.ADMBENES(IN=ADM)
      ANN.Y&SYSPARM.(KEEP=SSN /*BOTH SSI AND SSDI*/
                    PST: /*BOTH SSI AND SSDI,
                        BUT PSTA IS SSI ONLY*/
                    PAYS: /*SSI ONLY*/
                    DUES: /*SSI ONLY*/
                    LAF: /*BOTH SSI AND SSDI*/
                    PAYD: /*BOTH SSI AND SSDI*/
                    DUED: /*BOTH SSI AND SSDI*/
                    );
  BY SSN;
  IF ADM;
RUN;

* IF THE BENE IS SSDI ONLY, SET THE SSI VARS TO MISSING;
* PAYS AND DUES ARE NUMERIC ACCORDING TO
 THE ANNUALS PROC CONTENTS ROLLUP;
* PSTA IS CHARACTER ACCORDING TO PROC CONTENTS ROLLUP;
DATA OUT.ADMY&SYSPARM.;
  SET OUT.ADMY&SYSPARM.;
  ARRAY PAYS (*) PAYS: ;
  ARRAY DUES (*) DUES: ;
  ARRAY PSTA (*) PSTA: ;
  DO I = 1 TO DIM(PAYS);
     IF ADM_SSDI = 1 AND ADM_SSI = 0 THEN PAYS(I) = .;
  END;
```

Appendix B.3
JCL/SAS Code: ADMANN

```
    DO I = 1 TO DIM(DUES);
      IF ADM_SSDI = 1 AND ADM_SSI = 0 THEN DUES(I) = .;
    END;
    DO I = 1 TO DIM(PSTA);
      IF ADM_SSDI = 1 AND ADM_SSI = 0 THEN PSTA(I) = "";
    END;
    DROP I;
  RUN;

  TITLE "CHECK MERGED &SYSPARM FILE (OBS=10)";
    PROC PRINT DATA=OUT.ADMY&SYSPARM.(OBS=10);
  RUN;

  %MEND DOIT;
  %DOIT;
```

Appendix B.4
JCL/SAS Code: COMBANN

```
//#6266CMA  JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//* PROJECT:     DAF 50214(06979)
//* DIRECTOR:    LAURA KOSAR
//* PROGRAM:     OPDR.TG.PRD.ETTW.#7429.DAF17.ADM.PRDLIB(COMBANN)
//* DESCRIPTION: COMBINE ALL SSI DATA FOR ANALYSIS
//* DATE:        05/29/12
//* PROGRAMMER:  DAWN PHELPS
//* UPDATE:      12/09/15 JOE MASTRIANNI
//* UPDATE:      12/15/2016 MIAOMIAO SHEN
//* UPDATE:      04/20/2018 SERGE LUKASHANETS
//* UPDATED:     1/17/2019 BRITTANY COLIP (CONSOLIDATING PROGRAMS)
//* EMAIL:       BRITTANY.COLIP@SSA.GOV
//*              BCOLIP@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//SAS       EXEC SAS9,
//          WORK='120000,60000'
//*
//BENE  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18D.ADMBENES.SA.V1,DISP=SHR
//SSI   DD DSN=OPDR.TG.PRD.ETTW.#7429.DAF18P.SSR2.SA.V1,DISP=SHR
//DEM   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.DMG,DISP=SHR
//* SEE THE INPUT STATEMENT IN THE LIBNAME BELOW
//OUT   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18D.COMBANN.SA.V1,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//TEMP1 DD DSN=&&TEMPX,DISP=(NEW,DELETE,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//TEMP2 DD DSN=&&TEMPX,DISP=(NEW,DELETE,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//SYSIN DD *

OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN OBS=MAX;

%MACRO DOIT;

 %DO YEAR=1994 %TO 2018;
 LIBNAME IN&YEAR. "OPDR.TG.PRD.ETTW.#6266.DAF18D.ADMY&YEAR..SA.V1"
              DISP=SHR;
 %END;

 * THE VARIABLES TO KEEP FROM THE ANNUALS MERGE IN THE
   PREVIOUS PROGRAM;
```

Appendix B.4
JCL/SAS Code: COMBANN

```
%LET KEEPVARS = SSN PST: PAYS: DUES: LAF: PAYD: DUED: ;

DATA TEMP1.COMBANN;
   MERGE BENE.ADMBENES(IN=BENE)
        SSI.LONG
        DEM.DMG(KEEP=SSN SSDI_ONSET)
        %DO YEAR=1994 %TO 2018;
           IN&YEAR..ADMY&YEAR.(KEEP= &KEEPVARS)
        %END;
        ;
   BY SSN;
   IF BENE;
RUN;

* IF THE BENE IS DI ONLY (ADM_SSDI = 1 AND ADM_SSI = 0), THEN
  WE NEED TO MAKE SURE THE SSI LONG VARS ARE SET TO . ;
* FIRST, GET THE NAMES OF VARS FROM SSI.LONG DATASET;
* WE NEED TO SEPARATE THE LIST INTO CHAR AND NUM VARS;
PROC SQL;
   * THIS GETS NUMERIC VARIABLES;
   SELECT NAME INTO: SSI_NUM_VARS SEPARATED BY " "
    FROM SASHELP.VCOLUMN
      WHERE (LIBNAME = "SSI"
        AND MEMNAME = "LONG"
        AND NAME ~= "SSN"
        AND UPCASE(TYPE) = "NUM");

   * THIS GETS CHARACTER VARIABLES;
   SELECT NAME INTO: SSI_CHAR_VARS SEPARATED BY " "
    FROM SASHELP.VCOLUMN
      WHERE (LIBNAME = "SSI"
        AND MEMNAME = "LONG"
        AND NAME ~= "SSN"
        AND UPCASE(TYPE) = "CHAR");
QUIT;

%PUT NUMERIC VARIABLES IN THE SSI.LONG DATASET: ;
%PUT &SSI_NUM_VARS;

%PUT CHARACTER VARIABLES IN THE SSI.LONG DATASET: ;
%PUT &SSI_CHAR_VARS;

DATA OUT.COMBANN;
   SET TEMP1.COMBANN;
   ARRAY SSI_NUM_VARS (*) &SSI_NUM_VARS;
```

Appendix B.4
JCL/SAS Code: COMBANN

```
    ARRAY SSI_CHAR_VARS (*) &SSI_CHAR_VARS;

  * LOOP THROUGH THE NUM VARS;
      DO I = 1 TO DIM(SSI_NUM_VARS);
        IF ADM_SSDI = 1 AND ADM_SSI = 0
          THEN SSI_NUM_VARS(I) = . ;
      END;
  * LOOP THROUGH THE CHAR VARS;
    DO J = 1 TO DIM(SSI_CHAR_VARS);
        IF ADM_SSDI = 1 AND ADM_SSI = 0
          THEN SSI_CHAR_VARS(J) = "" ;
      END;

    * ALSO, IF BENE IS SSI ONLY, WE NEED TO
     SET SSDI_ONSET FROM THE DMG TO MISSING;
     IF ADM_SSDI = 0 AND ADM_SSI = 1
          THEN SSDI_ONSET = .;
    DROP I J;
  RUN;


  %MEND DOIT;
  %DOIT;



  ENDSAS;

  //*************************************************
  //SENDNOTE EXEC PGM=IEBGENER
  //SYSIN    DD DUMMY
  //SYSPRINT DD SYSOUT=*
  //SYSUT2   DD SYSOUT=(B,SMTP)
  //SYSUT1   DD *
  HELO MVSHOST
  MAIL FROM:<SLUKASHANETS@MATHEMATICA-MPR.COM>
  RCPT TO:<SLUKASHANETS@MATHEMATICA-MPR.COM>
  DATA
  FROM:   <SLUKASHANETS@MATHEMATICA-MPR.COM>
  TO:     <SLUKASHANETS@MATHEMATICA-MPR.COM>
  SUBJECT: ADM COMBANN IS COMPLETE
```

Appendix B.5
JCL/SAS Code: FINADM

```
//#6266ADM  JOB (12510000,T715,,SAS,,ITC9FL),LUKASHANETS,
//         MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6266
//*****************************************************************
//* PROJECT:     DAF 50214(06979)
//* DIRECTOR:    LAURA KOSAR
//* PROGRAM:     OPDR.TG.PRD.ETTW.#7429.DAF17.ADM.PRDLIB(FINADM)
//* DESCRIPTION: CREATE THE FINAL ADM DATASET
//* DATE:        02/04/13 XIAO BARRY
//* UPDATED:     01/07/16 JOE MASTRIANNI
//* UPDATED:     03/19/2018 SERGE LUKASHANETS
//* UPDATED:     01/29/2019 BRITTANY COLIP
//* EMAIL:       BRITTANY.COLIP@SSA.GOV
//*              BCOLIP@MATHEMATICA-MPR.COM
//*****************************************************************
//*
//SAS       EXEC SAS9,
//          WORK='120000,60000'
//*
//DEMO  DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18P.DMG,DISP=SHR
//* ADM DATASET
//ADM   DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18D.COMBANN.SA.V1,DISP=SHR
//* SSDI DATASET
//OUT1  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18D.ADMDIAWD.SA.V1,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//* SSI DATASET
//OUT2  DD DSN=OPDR.TG.PRD.ETTW.#6266.DAF18D.ADMSIAWD.SA.V1,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//* FINAL ADM OUTPUT DATASET
//OUT   DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.AWARDEE,
//         DISP=(NEW,CATLG,DELETE),VOL=(,,,10),
//         UNIT=TSILO
//TEMP1 DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//TEMP2 DD DSN=&&TEMP,DISP=(NEW,DELETE,DELETE),
//         UNIT=TSILO,VOL=(,,,10)
//SYSIN DD *

OPTIONS NOCENTER COMPRESS=BINARY MPRINT MACROGEN OBS=MAX;

%LET ENDYR=2018; /*CURRENT DAF YEAR*/

* FLAG THE DI BENES;
```

Appendix B.5
JCL/SAS Code: FINADM

```
%INCLUDE "OPDR.TG.PRD.ETTW.#6266.DAF18.ADM.PRDLIB(DIFLAGS)";

* FLAG THE SSI BENES;
%INCLUDE "OPDR.TG.PRD.ETTW.#6266.DAF18.ADM.PRDLIB(SSIFLAGS)";

%MACRO DOIT;

DATA OUT.AWARDEE
     (DROP=FPMT: PAIDPRE94 PAYS: SPMT: START SO5_BEG  PSTA: PST0:
          PST9:  PST1:);
   * IN THE PREVIOUS PROGRAMS, BENES WHOSE DI AWARD DATE IS GT
   FRA OR WHOSE SSI AWARD DATE IS GT FRA WERE DELETED;
   * NOW, INSTEAD, WE WILL EXCLUDE THEM DURING THE MERGE;
  MERGE OUT1.ADMDIAWD (IN=DI
        WHERE = (DIAWARDAGE<FRA))
       OUT2.ADMSSIAWD(IN=SSI
        WHERE = (SSIAWARDAGE<FRA))
       DEMO.DMG
       ;
  BY SSN;
  IF DI OR SSI;

  * FLAG POSSIBLE SERIAL BENEFICIARIES;
  IF DI AND SSI AND 1<=INTCK('MONTHS',SSIAWARDDT,DIAWARDDT,'C')<=5
  THEN POSSERIAL=1;

  * CREATE OVERALL VARIABLES;
  AWARDDT=MIN(DIAWARDDT,SSIAWARDDT);
  ELIGDT=MIN(DIELIGDT,SSIELIGDT);

  IF DIAWARDDT=AWARDDT THEN DO;
     AWARDST=DIAWARDST;
     AWARDAGE=DIAWARDAGE;
  END;
  ELSE IF SSIAWARDDT=AWARDDT THEN DO;
     AWARDST=SSIAWARDST;
     AWARDAGE=SSIAWARDAGE;
  END;

  * UPDATING LOGIC FROM OLD PROGRAMS;
  * ELIGAGE IS EITHER SSIELIGAGE OR DIELIGAGE;
  * NOT DIELIGDT;
  IF SSIELIGDT=ELIGDT THEN ELIGAGE=SSIELIGAGE;
  ELSE IF DIELIGDT=ELIGDT THEN ELIGAGE=DIELIGAGE;
```

Appendix B.5
JCL/SAS Code: FINADM

```
    LABEL AWARDAGE    ='AGE AT OVERALL AWARD'
        AWARDDT     ='DATE OF OVERALL AWARD'
        AWARDST     ='STATE OF RESIDENCE AT OVERALL AWARD DATE'
        DIAWARDAGE  ='AGE AT SSDI AWARD'
        DIAWARDDAC  ='DOEI BEFORE 18TH BIRTHDAY'
        DIAWARDDT   ='DATE OF SSDI AWARD'
        DIAWARDST   ='STATE OF RESIDENCE AT SSDI AWARD DATE'
        DIELIGDT    ='AGE AT DI ELIGIBILITY'
        POSSERIAL   ='POSSIBLE SERIAL BENEFICIARY'
        SSIAWARDAGE ='AGE AT SSI AWARD'
        SSIAWARDDT  ='DATE OF SSI AWARD'
        SSIAWARDST  ='STATE OF RESIDENCE AT SSI AWARD DATE'
        SSICHILD    ='RECEIVED SSI PAYMENTS AS A CHILD'
        SSICHILDAT18='WAS RECEIVING SSI PAYMENTS AS A CHILD AT TIME
                 OF 18TH BIRTHDAY'
        SUSPECT='SSDI INITIAL ENTITLEMENT BEFORE 1994 (SUSPECT)'
        ;
RUN;

PROC FREQ DATA=OUT.AWARDEE;
   FORMAT SSIAWARDDT DIAWARDDT AWARDDT SSIELIGDT DIELIGDT
        ELIGDT YEAR4.;
   TABLE SSIAWARDDT / MISSING;
   TABLE DIAWARDDT  / MISSING;
   TABLE AWARDDT    / MISSING;
   TABLE POSSERIAL  / MISSING;

   TABLE SSIELIGDT  / MISSING;
   TABLE DIELIGDT   / MISSING;
   TABLE ELIGDT     / MISSING;
RUN;

PROC CONTENTS DATA=OUT.AWARDEE;
RUN;

%MEND DOIT;
%DOIT;

//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD DUMMY
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD SYSOUT=(B,SMTP)
```

Appendix B.5
JCL/SAS Code: FINADM

```
//SYSUT1   DD *
HELO MVSHOST
MAIL FROM:<SLUKASHANETS@MATHEMATICA-MPR.COM>
RCPT TO:<SLUKASHANETS@MATHEMATICA-MPR.COM>
DATA
FROM:   <SLUKASHANETS@MATHEMATICA-MPR.COM>
TO:     <SLUKASHANETS@MATHEMATICA-MPR.COM>
SUBJECT: SUBMISSION DAF18 FINADM IS COMPLETE
DAF18 FINADM IS COMPLETE.
```

Appendix B.6
JCL/SAS Code: DIFLAGS

```
*****************************************************;
********** DIFLAGS INCLUDE PROGRAM ******************;
*****************************************************;

%LET BEGYR=1994;
%LET ENDYR=&ENDYR; /* UPDATED IN MASTER PROGRAM */
%LET ENDMN=12;

%MACRO FLAG_DI_BENES;

%INCLUDE "OPDR.TG.PRD.ETTW.#7429.DAF18.UTILITY.PRDLIB(YYMMMACR)";

DATA TEMP1.ADMDIAWD;
  MERGE ADM.COMBANN(IN=ADM
              WHERE = (ADM_SSDI = 1)) /*KEEP DI BENES ONLY*/
      DEMO.DMG(KEEP=SSN SSDI_ONSET)
      ;
  BY SSN;
  IF ADM;

  /* SET UP ARRAYS FOR PROCESSING */
  ARRAY PAYD{*} %DO MM=1 %TO &TOTMOS; PAYD&&YY&MM %END;;
  ARRAY LAFCODE{*}  %DO MM=1 %TO &TOTMOS;  LAF&&YY&MM %END;;

  /* PSTYYMM ONLY POPULATED FROM 1996 ON */
  ARRAY PST{*}  %DO MM=1 %TO &TOTMOS;  PST&&YY&MM %END;;

  /* CREATE A FLAG FOR CASES WHOSE DOEI IS BEFORE JAN, 1994 */
  SUSPECT = 0;
  IF DOEI LT '01JAN1994'D THEN SUSPECT = 1;

  /* COMPUTE AGE AT DATE OF INITIAL ENTITLEMENT */
  DOEIAGE = INTCK('MONTH',DOBBEST,DOEI,'C')/12;

  /* IF DOEI IS BEFORE 18TH BIRTHDAY THEN START LOOKING
    AT 18TH BIRTHDAT. OTHERWISE START LOOKING AT DOEI.
    CREATE A DATE THAT EXPRESSES THIS CHOICE */
  IF DOEIAGE LT 18 THEN DO;
    STDT = INTNX('YEAR',DOBBEST,18,'SAMEDAY');
    STARTDT = INTNX('MONTH',STDT,0,'BEGINNING');
  END;
  ELSE STARTDT = DOEI;

  /* CREATE A DATE VARIABLE FROM THE ARRAY OF VARIABLE NAMES
```

Appendix B.6
JCL/SAS Code: DIFLAGS

```
  USE IT TO COMPARE TO STARTDT TO GET A START POINT TO LOOK
  FOR AWARD DATE */
ARRAY ARRDATE{*}  %DO MM=1 %TO &TOTMOS; ARRDATE&&YY&MM %END;;
LENGTH ARRNAME $8;
ARRNAME = ' ';

DO I=1 TO DIM(PAYD);
  /* CONTSRUCT DATE FOR THE ARRAY ELEMENT */
  ARRNAME = VNAME(PAYD(I));
  /*PRIOR LOGIC NO LONGER WORKING, UPDATING HERE*/
  YR = INPUT(SUBSTR(ARRNAME,5,2),8.);
  MO = INPUT(SUBSTR(ARRNAME,7,2),8.);
  DAY = 1;
  ARRDATE(I) = MDY(MO,DAY,YR);
END;

/* ESTABLISH THE ARRAY POSITION FOR STARTING */
STARTP = 0;

DO I = 1 TO DIM(ARRDATE) UNTIL (STARTP GT 0);
  IF STARTDT = ARRDATE(I) THEN STARTP = I;
END;

/* FIND THE EARLIEST DATE FROM STARTDT WHERE BENE IN CURRENT
  PAY AND RECEIVED A PAYMENT-THIS IS HIS AWARD DATE.
  ELIMINATE ANY BENE WITH A PAYMENT IN 1994 OR 1995.
  SET THE AWARD STATE ACCORDING TO PST IN THAT MONTH.
  FLAG THE ARRAY POSITION FOR THE MONTH */

/* INITIALIZE AWARD DATE AND AWARD STATE TO MISSING
  AMD FOUNDAWARD TO 0 */
LENGTH DIAWARDST FSTATE BSTATE $2;
DIAWARDDT = .;
DIAWARDST = ' ';
FOUNDAWARD = 0;

/* DROP BENES WITH PAYMENTS IN 1994 OR 1995 */
DROP_BENE = 0;
DO I = 1 TO 24;
  IF SUBSTR(LAFCODE(I),1,1) IN ('C' 'E') AND PAYD(I) GT 0
    THEN DROP_BENE = 1;
END;

/* SET AN AWARD DATE ONLY IF THE PAYMENT IS AFTER 1996
  EXCLUDING BENE WITH A PAYMENT IN 1994 OR 1995 */
```

Appendix B.6
JCL/SAS Code: DIFLAGS

```
IF STARTP GT 0 AND DROP_BENE = 0 THEN DO;
  DO I = STARTP TO DIM(ARRDATE) UNTIL (DIAWARDDT NE .);
    IF SUBSTR(LAFCODE(I),1,1) IN ('C' 'E') AND PAYD(I) GT 0 THEN DO;
        DIAWARDDT = ARRDATE(I);
        DIAWARDST = PST(I);
        FOUNDAWARD = I;
      END;
  END;
END;

/* IF NO VALUE FOR STATE IS FOUND IN THE AWARD MONTH-SEARCH
  FOR THE CLOSEST NON-MISSING STATE VALUE. LOOK FORWARD AND
  BACKWARD FROM THE AWARD MONTH. TAKE THE STATE FOUND AFTER
  THE FEWEST MONTHS */
IF DIAWARDST = ' ' AND FOUNDAWARD GT 0 THEN DO;
  /* GOING FORWARD */
  COUNTF = 0;

  DO I = FOUNDAWARD TO DIM(PST) UNTIL (FSTATE NE ' ');
    IF PST(I) NE ' ' THEN DO;
      FSTATE = PST(I);
      COUNTF = I - FOUNDAWARD;
    END;
  END;

  /* GOING BACKWARD */
  COUNTB = 0;

  DO I = FOUNDAWARD TO 1 BY -1 UNTIL (BSTATE NE ' ');
    IF PST(I) NE ' ' THEN DO;
      BSTATE = PST(I);
      COUNTB = (FOUNDAWARD - I);
    END;
  END;

  /* SELECT THE CLOSEST STATE */

  /* IF STATE IS FOUND IN 1 DIRECTION AND NOT THE OTHER */
  IF COUNTF GT 0 AND COUNTB EQ 0 THEN DIAWARDST = FSTATE;
    ELSE IF COUNTB GT 0 AND COUNTF EQ 0 THEN DIAWARDST = BSTATE;

  /* IF STATE IS FOUND IN BOTH DIRECTIONS */
    ELSE IF COUNTF GT 0 AND COUNTB GT 0 THEN DO;
      IF COUNTF LE COUNTB THEN DIAWARDST = FSTATE;
      ELSE DIAWARDST = BSTATE;
```

Appendix B.6
JCL/SAS Code: DIFLAGS

```
        END;

    END; /* LOOP TO LOOK FOR MISSING STATE */

    /* COMPUTE AGE AT DIAWARDDT */
    DIAWARDAGE = INTCK('MONTH',DOBBEST,DIAWARDDT,'C')/12;

    /* FLAG BENES WHOSE DOEI IS BEFORE HIS 18TH BIRTHDAT */
    IF DOEIAGE LT 18 THEN DIAWARDDAC = 1;
      ELSE DIAWARDDAC = 0;

    YEAR_AWARD = YEAR(DIAWARDDT);

    /* DELETE RECORDS WHERE NO PAYMENT WAS MADE AFTER 1996.
      THESE CASES ARE MISSING AWARDDATE */
    IF DIAWARDDT = . THEN DELETE;

    * SET SSDI ELIGIBILITY DATE;
    * FIND THE FIRST MONTH OF ELIGIBILITY BASED ON MONTH OF ONSET;
    * FIND FIVE FULL MONTHS AFTER DISABILITY ONSET;
    IF SSDI_ONSET NE . THEN DO;
      IF DAY(SSDI_ONSET)=1
        THEN SO5_BEG=INTNX('MONTH',SSDI_ONSET,5,'BEG');
        ELSE SO5_BEG=INTNX('MONTH',SSDI_ONSET,6,'BEG');
    END;
  RUN;

   * USING ONE DATA STEP FROM OLD CODE NO LONGER WORKING;
   * GETTING ERROR MESSAGE ABOUT LAF VARIABLE ALREADY DEFINED;
   * SEPARATING INTO TWO SEPARATE DATA STEPS;
  DATA TEMP2.ADMDIAWD;
    SET TEMP1.ADMDIAWD;

    * FIND THE FIRST LAF IN C,E AND THE FIRST DUED NE ZERO;
    ARRAY LAFCODE (1994:&ENDYR.,1:12) %DO YEAR=1994 %TO &ENDYR.;
                          %LET YR=%SUBSTR(&YEAR.,3,2);
                              LAF&YR.01-LAF&YR.12
                          %END;;

    ARRAY DUED (1994:&ENDYR.,1:12) %DO YEAR=1994 %TO &ENDYR.;
                        %LET YR=%SUBSTR(&YEAR.,3,2);
                            DUED&YR.01-DUED&YR.12
                        %END;;

    DIELIGDT=.;
```

Appendix B.6
JCL/SAS Code: DIFLAGS

```
  START=MAX('01JAN1994'D,SO5_BEG);

  DO YR2=YEAR(START) TO &ENDYR. UNTIL (DIELIGDT NE .);
    IF YR2=YEAR(START) THEN STARTMO=MONTH(START);
    ELSE STARTMO=1;

    DO MO=STARTMO TO 12 UNTIL (DIELIGDT NE .);
      IF SUBSTR(LAFCODE(YR2,MO),1,1) IN ('C' 'E')
        AND DUED(YR2,MO) NOTIN (0,.)
        THEN DIELIGDT=MDY(MO,1,YR2);
    END; * END MONTH LOOP;
  END; * END YEAR LOOP

  * SET AGE AT ELIGIBILITY;
  DIELIGAGE=INTCK('MONTHS',DOBBEST,DIELIGDT,'C')/12;

  LABEL DIAWARDDT = 'Date of Award-in current pay and paid'
      DIAWARDAGE = 'Age at DI Award (DIAWARDDT)'
      DIAWARDST = 'State of Residence at Di Award Date'
      DIAWARDDAC = 'DOEI before 18th birthday'
      SUSPECT = 'DOEI earlier than Jan 1994'
      DIELIGDT = 'Date of Eligibility'
      DIELIGAGE='AGE AT DI ELIGIBILITY (DIELIGDT)';
RUN;

TITLE "CHECKS BEFORE OUTPUTTING SSDI FINAL DATA";
PROC FREQ DATA=TEMP2.ADMDIAWD; TABLES YEAR_AWARD; RUN;
PROC PRINT DATA=TEMP2.ADMDIAWD (OBS=25);
  FORMAT DOEI LDWDAT: DIAWARDDT DOBBEST STARTDT YYMMDD.;
  VAR DOEI DOEIAGE STARTDT DOBBEST FOUNDAWARD DIAWARDDT
     DIAWARDST DIAWARDAGE DIAWARDDAC COUNTF COUNTB PST:
     LAF: PAYD:;
  WHERE DOEIAGE LT 18 ;
RUN;

 /* OUTPUT DATASET */
DATA OUT1.ADMDIAWD (KEEP=SSN DIAWARDDT DIAWARDST DIAWARDAGE
                DIAWARDDAC SUSPECT DIELIGDT DIELIGAGE
                START SO5_BEG SSDI_ONSET
                FRA DOBBEST);
  SET TEMP2.ADMDIAWD;
RUN;

TITLE "CHECK VARIABLES IN FINAL SSDI DATASET";
```

Appendix B.6
JCL/SAS Code: DIFLAGS

```
PROC FREQ DATA=OUT1.ADMDIAWD;
  TABLES DIAWARDST DIAWARDAGE DIAWARDDAC SUSPECT / MISSING;
  TABLES DIAWARDDT / LIST MISSING;
  FORMAT DIAWARDDT YEAR4.;
RUN;
TITLE;
%MEND FLAG_DI_BENES;
%FLAG_DI_BENES;
```

Appendix B.7
JCL/SAS Code: SSIFLAGS

```
*****************************************************;
********** SSIFLAGS INCLUDE PROGRAM ******************;
*****************************************************;

%LET DAFYR=&ENDYR; /* UPDATED IN THE MASTER PROGRAM*/

%MACRO FLAG_SSI_BENES;

DATA OUT2.ADMSSIAWD(KEEP=SSIAWARDDT SSIAWARDST SSICHILD SSICHILDAT18
              SSN SSIAWARDAGE DOBBEST DODBEST PST: PSTA:
              PAYS: FPMT: SPMT: PAIDPRE94 FRA
              SSIELIGDT SSIELIGAGE);
  SET ADM.COMBANN(IN=ADM
             WHERE = (ADM_SSI = 1)) /*KEEP SSI BENES ONLY*/
             ;

  ARRAY PSTA (1974:&DAFYR.,1:12) %DO YEAR=1974 %TO &DAFYR.;
                  %LET YR=%SUBSTR(&YEAR.,3,2);
                  PSTA&YR.01-PSTA&YR.12
                %END;;
  ARRAY PAYS (1974:&DAFYR.,1:12) %DO YEAR=1974 %TO &DAFYR.;
                %LET YR=%SUBSTR(&YEAR.,3,2);
                PAYS&YR.01-PAYS&YR.12
              %END;;
  ARRAY FPMT (1974:1993,1:12) %DO YEAR=1974 %TO 1993;
                %LET YR=%SUBSTR(&YEAR.,3,2);
                FPMT&YR.01-FPMT&YR.12
              %END;;
  ARRAY SPMT (1974:1993,1:12) %DO YEAR=1974 %TO 1993;
                %LET YR=%SUBSTR(&YEAR.,3,2);
                SPMT&YR.01-SPMT&YR.12
              %END;;

  * COUNT NUMBER OF PAYMENTS BEFORE 1994;
  DO YR=1974 TO 1993;
    DO MO=1 TO 12;
      PAYS(YR,MO)=SUM(FPMT(YR,MO),SPMT(YR,MO));
      IF INTCK('MONTH',DOBBEST,MDY(MO,1,YR),'C')/12>18
      AND PSTA(YR,MO) IN ('C01','M01','M02')
      AND PAYS(YR,MO)>0 THEN PAIDPRE94=SUM(PAIDPRE94,1);
    END;
  END;

  * SET SSI AWARD DATE, CHILD, AND PAYMENTS AT 18TH BIRTHDAY FLAGS;
```

Appendix B.7
JCL/SAS Code: SSIFLAGS

```
STOPLOOP=MIN("31DEC&DAFYR."D,DODBEST,
        INTNX('MONTHS',DOBBEST,FRA*12,'SAMEDAY'));

DO YR=1974 TO YEAR(STOPLOOP) UNTIL(SSIAWARDDT NE .);
   IF YR=YEAR(STOPLOOP) THEN ENDMO=MONTH(STOPLOOP);
   ELSE ENDMO=12;

   DO MO=1 TO ENDMO UNTIL(SSIAWARDDT NE .);

      * CREATE PAYS FOR 1974 THRU 1993;
      IF YR<1994 THEN PAYS(YR,MO)=SUM(FPMT(YR,MO),SPMT(YR,MO));

      * IF BENE IN CURRENT PAY AND RECEIVING A PAYEMNT THEN
        SET FLAGS;
      IF PSTA(YR,MO) IN ('C01','M01','M02')
      AND PAYS(YR,MO)>0 THEN DO;

         * SET FLAG FOR BENES WHO RECEIVED SSI AS A CHILD;
         IF INTCK('MONTH',DOBBEST,MDY(MO,1,YR),'C')/12<18
         THEN SSICHILD=1;

         ELSE DO;
            * SET SSI AWARD DATE FOR BENES WHO RECEIVE A
              PAYMENT AS AN ADULT (18 OR OVER);
            SSIAWARDDT=MDY(MO,1,YR);

            * SET FLAG FOR CHILD BENES WHO WERE RECEIVING SSI
              AT TIME OF 18TH BIRTHDAY;
            IF INTCK('MONTH',DOBBEST,MDY(MO,1,YR),'C')/12=18
            AND SSICHILD=1 THEN SSICHILDAT18=1;

         END;
      END;
   END;
END;

* DELETE BENES WHO RECEIVE THEIR FIRST PAYMENT AS AN ADULT BEFORE
  1996 OR WHO HAVE NO SSI AWARD;
IF SSIAWARDDT<'01JAN1996'D THEN DELETE;

* SET AGE AT AWARD;
SSIAWARDAGE=INTCK('MONTHS',DOBBEST,SSIAWARDDT,'C')/12;

* SET STATE AT AWARD;
ARRAY PST (1994:&DAFYR.,1:12) %DO YEAR=1994 %TO &DAFYR.;
```

Appendix B.7
JCL/SAS Code: SSIFLAGS

```
                    %LET YR=%SUBSTR(&YEAR.,3,2);
                    PST&YR.01-PST&YR.12
                 %END;;
SSIAWARDST=PST(YEAR(SSIAWARDDT),MONTH(SSIAWARDDT));

* IF AWARD STATE IS MISSING THEN SEARCH FORWARD FOR A STATE;
IF SSIAWARDST='' THEN DO YR=YEAR(SSIAWARDDT) TO &DAFYR.
UNTIL(SSIAWARDST NE '');
  IF YR=YEAR(SSIAWARDDT) THEN STARTMO=MONTH(SSIAWARDDT);
  ELSE STARTMO=1;

  DO MO=STARTMO TO 12 UNTIL(SSIAWARDST NE '');
    SSIAWARDST=PST(YR,MO);
  END;
END;

* IF AWARD STATE IS MISSING THEN SEARCH BACKWARD FOR A STATE;
IF SSIAWARDST='' THEN DO YR=YEAR(SSIAWARDDT) TO 1994 BY -1
UNTIL(SSIAWARDST NE '');
  IF YR=YEAR(SSIAWARDDT) THEN STARTMO=MONTH(SSIAWARDDT);
  ELSE STARTMO=12;

  DO MO=STARTMO TO 1 BY -1 UNTIL(SSIAWARDST NE '');
    SSIAWARDST=PST(YR,MO);
  END;
END;

* SET SSI ELIGIBILITY DATE;
STOPLOOP=MIN("31DEC&DAFYR."D,DODBEST,
        INTNX('MONTHS',DOBBEST,FRA*12,'SAMEDAY'));

DO YR=1994 TO YEAR(STOPLOOP) UNTIL(SSIELIGDT NE .);
  IF YR=YEAR(STOPLOOP) THEN ENDMO=MONTH(STOPLOOP);
  ELSE ENDMO=12;

  DO MO=1 TO ENDMO UNTIL(SSIELIGDT NE .);
    * IF BENE IN CURRENT PAY AND RECEIVE A PAYMENT AS AN ADULT
     (18 OR OVER);
    IF PSTA(YR,MO) IN ('C01','M01','M02') AND
    INTCK('MONTH',DOBBEST,MDY(MO,1,YR),'C')/12>=18
    THEN SSIELIGDT=MDY(MO,1,YR);
  END;
END;

* SET AGE AT ELIGIBILITY;
```

Appendix B.7
JCL/SAS Code: SSIFLAGS

```
    SSIELIGAGE=INTCK('MONTHS',DOBBEST,SSIELIGDT,'C')/12;

    LABEL SSIAWARDAGE='AGE AT SSI AWARD'
        SSIAWARDDT='DATE OF SSI AWARD'
        SSIAWARDST='STATE AT SSI AWARD'
        SSICHILD='RECEIVED SSI CHILD PMTS'
        SSICHILDAT18='RECEIVING SSI CHILD PMTS AT 18TH BIRTHDAY'
        ;
  RUN;

  PROC FREQ DATA=OUT2.ADMSSIAWD;
    FORMAT SSIAWARDDT DOBBEST YEAR4.;
    TABLE PAIDPRE94 / MISSING;
    TABLE SSIAWARDDT / MISSING;
    TABLE SSIAWARDDT*DOBBEST / LIST MISSING;
  RUN;

  PROC CONTENTS DATA=OUT2.ADMSSIAWD;
  RUN;

  %MEND FLAG_SSI_BENES;
  %FLAG_SSI_BENES;
```

Appendix B.8
JCL/SAS Code: CPYADM

```
//#6502ADM JOB (12510000,T715,,SAS,,ITC9FL),BRYCE,
//          MSGCLASS=1,MSGLEVEL=(1,1),NOTIFY=#6502
//*****************************************************************
//* PROJECT:     DAF 50214
//* DIRECTOR:    JODY SCHIMMEL HYDE
//* PROGRAM:     OPDR.TG.PRD.ETTW.#6502.DAF18.ADM.PRDLIB(CPYADM)
//* DESCRIPTION: COPY ADM FROM DRAFT TO FINAL
//*****************************************************************
//*
//* COPYING FILES
//* ADM AWARDEE DRAFT TO ADM AWARDEE FINAL
//P2011C  EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD DSN=OPDR.TG.PRD.ETTW.DRAFT.DAF18D.AWARDEE,DISP=SHR,
//          UNIT=TSILO
//SYSUT2   DD DSN=OPDR.TG.PRD.ETTW.FINAL.DAF18D.AWARDEE,
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSILO
//SYSIN    DD DUMMY
//*************************************************
//* SENDING EMAIL FROM HOST USING IEBGENER
//*************************************************
//SENDNOTE EXEC PGM=IEBGENER
//SYSIN    DD   DUMMY
//SYSPRINT DD   SYSOUT=*
//SYSUT2   DD   SYSOUT=(B,SMTP)
//SYSUT1   DD   *
HELO MVSHOST
MAIL FROM:<ABRYCE@MATHEMATICA-MPR.COM>
RCPT TO:<ABRYCE@MATHEMATICA-MPR.COM>
DATA
FROM:   <ABRYCE@MATHEMATICA-MPR.COM>
TO:     <ABRYCE@MATHEMATICA-MPR.COM>
SUBJECT: COPYADM  COMPLETE
```

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