A RAND NOTE

The Benchmark Separation Projection Method for Predicting Monthly Losses of Air Force Enlisted Personnel

C. Peter Rydell, Kevin L. Lawson

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Prepared for the
United States Air Force

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PREFACE

RAND is helping to design an Enlisted Force Management System (EFMS) for the Air Force.[1] The EFMS is a decision support system designed to assist managers of the enlisted force in setting and meeting force targets. The system contains computer models that project the force resulting from given management actions, so actions that meet targets can be found. Some of those models analyze separate job specialties (disaggregate models) and others analyze the total enlisted force across all specialties (aggregate models); some models make annual projections (middle-term models) and others make monthly projections.

The Short-Term Aggregate Inventory Projection Model (SAM) is the component of the EFMS that makes monthly projections (for the rest of the current fiscal year) of the aggregate enlisted force.

The overall SAM model contains five modules:

Module P: Preprocessor.
Module 1: Separation Projection.
Module 2: Inventory and Cost Projection.
Module 3: Computer Aided Design.
Module 4: Plan Comparison.

SAM is documented in C. Peter Rydell and Kevin L. Lawson, *Short-term Aggregate Model for Projecting Air Force Enlisted Personnel (SAM)*, RAND, N-3166-AF, 1991. That Note gives detailed specifications for modules P and 2 through 4. Module 1 (the Separation Projection module) projects monthly loss and reenlistment behavior. The detailed specifications for alternative versions of Module 1 are presented in separate publications. These describe three promising methods of predicting the separations required from Module 1:

- Time series forecasting.

[1]For an overview of the EFMS see Grace Carter, Jan Chaiken, Michael Murray, and Warren Walker, *Conceptual Design of an Enlisted Force Management System for the Air Force*, RAND, N-2005-AF, August 1983.

- Robust separation projection.
- Benchmark separation projection.

All three methods predict the monthly losses and reenlistment flows that are needed as inputs to Module 2. They predict "policy-free" flows--the losses and reenlistments that would occur in the absence of early release and early reenlistment programs. (Module 2 accounts for the effect of past and present management actions on losses and reenlistments.) However, in spite of having the same objectives, the three methods differ fundamentally in the way they accomplish those objectives.

The time series forecasting method uses an models such as constant rate, regression, autoregressive, and straight line running average. These models are documented in Marygail K. Brauner, Kevin L. Lawson, William T. Mickelson, Joseph Adams, and Jan M. Chaiken, *Time Series Models for Predicting Monthly Losses of Air Force Enlisted Personnel,* RAND, N-3167-AF, 1991.

The robust separation projection method uses data on past losses and reenlistments to estimate separation rates for a model that predicts loss and reenlistment flows one month at a time for each of a mutually exclusive set of about 500 cohorts. After these flows are predicted for a projection month, the inventory is updated and the models are applied to the updated inventories to predict the flows for the following month. This process is repeated until the inventory for the last month of the fiscal year is projected. Thus, it applies separation rates to a series of different inventories. The robust method is specified in Marygail K. Brauner and Daniel A. Relles, *The Robust Separation Projection Method for Predicting Monthly Losses of Air Force Enlisted Personnel,* RAND, N-3169-AF, 1991.

The benchmark separation projection (BSP) method uses data on past losses and reenlistments to estimate a set of separation rates for each month of the fiscal year for a mutually exclusive set of about 280 "decision groups." Those separation rates are then applied to the current inventory to predict monthly loss and reenlistment flows for the rest of the fiscal year. Thus, the BSP method applies different sets of

separation rates to a single inventory (that single inventory is the inventory at the start of the projection period). The BSP method is documented in this Note.

The names "robust" and "benchmark" are historical artifacts. "Robust" refers to a particular method of averaging past separation rates that is not unduly influenced by outliers in the historical data. "Benchmark" refers to the method's original purpose: to serve as a standard of comparison for the accuracy, reliability, and runtime of alternative methods for Module 1. The benchmark model became an attractive alternative in its own right.

This Note documents RAND's research that led to the mathematical specification for the BSP method. It should be of interest to the Air Force members of the EFMP who are building the EFMS. It should also be of interest to modelers and analysts who are involved in manpower and personnel research for the uniformed services. This specification was presented to the Air Force as one possible solution to the problem of predicting the short-term behavior of airmen. The Air Force is using this and other specifications as the point of departure for developing a method for predicting the monthly losses of enlisted personnel in Module 1 of SAM. As a consequence, the version of Module 1 that will be used in the EFMS is likely to differ considerably from that presented in this Note.

The work described here is part of the Enlisted Force Management Project (EFMP), a joint effort of the Air Force (through the Deputy Chief of Staff for Personnel) and RAND. RAND's work falls within the Resource Management Program of Project AIR FORCE. The EFMP is part of a larger body of work in that program concerned with the effective utilization of human resources in the Air Force.

Peter Rydell is a RAND staff member. Kevin Lawson is a Major in the Air Force.

SUMMARY

The Short-Term Aggregate Inventory Projection Model (SAM) is one component of the Enlisted Force Management System (EFMS). SAM makes monthly projections (for the rest of the current fiscal year) of the aggregate force (the total enlisted force across all specialties). SAM can be used to analyze the total size, grade composition, and budget cost of the enlisted force during a fiscal year. It supports planning of management actions to achieve user-specified end-of-year force levels (known as "end strengths") and user-specified end-of-year grade levels (known as "grade strengths").

The SAM model contains five modules:

Module P: Preprocessor
Module 1: Separation Projection
Module 2: Inventory and Cost Projection
Module 3: Computer Aided Design
Module 4: Plan Comparison

Module 1 (the Separation Projection module) predicts "policy-free" monthly losses and reenlistments of Air Force enlisted personnel for the rest of the current fiscal year. "Policy-free" means that the predictions assume zero early releases and zero early reenlistments caused by actions of enlisted force managers. The Benchmark Separation Projection (BSP) method is one way of predicting the separations required from Module 1.

The predictions are inputs to Module 2 of SAM, which adds the effects of early release and early reenlistment programs (and other management actions) to convert the predictions of policy-free losses and reenlistments into predictions of actual losses and reenlistments.

The BSP method uses data on past losses and reenlistments to estimate a set of separation rates for each month of the fiscal year for a mutually exclusive set of about 280 "decision groups." Those separation rates are then applied to the current inventory to predict monthly loss and reenlistment flows for the rest of the fiscal year. Thus, the BSP method applies different sets of separation rates to a single inventory (that single inventory is the inventory at the start of the projection period.)

The following example shows how the BSP model works. Air Force enlisted personnel are classified into "decision groups" on the basis of differential loss (and reenlistment) behavior. The actual BSP model uses 279 decision groups, but for simplicity the illustration uses only two.

The data collection part of the BSP model looks at the inventory one year ago, classifies it into the decision groups, and finds how many people from each group left the Air Force (or reenlisted into a new category of enlistment) in each month during the past year. (Only three months are shown in the illustration.)

		Past Losses		
Decision Group	Inventory One Year Ago	First Month	Second Month	Third Month
1	1000	10	20	30
2	2000	80	100	120
Total	3000	90	120	150

The monthly losses are then divided by the starting inventory to estimate monthly loss proportions. Note that the losses on each line all come from that line's inventory (defined by inventory characteristics at one point in time). To obtain the proportions, the model divides all losses on each line by that same (beginning) inventory count. In other words, the proportions are parallel loss rates to be applied to the same base, rather than serial loss rates to be applied to a changing base.

		Past Loss Proportions		
Decision Group	Inventory One Year Ago	First Month	Second Month	Third Month
1	1000	0.01	0.02	0.03
2	2000	0.04	0.05	0.06

Finally, future monthly losses are predicted by multiplying the current inventory (classified into decision groups by current characteristics) by the historical loss proportions. To dramatize how

the model reacts to changed inventory counts, the illustration's current inventory has the same count as last year for the first decision group and double last year's count for the second decision group.

Decision Group	Current Inventory	Loss Predictions		
		First Month	Second Month	Third Month
1	1000	10	20	30
2	4000	160	200	240
Total	5000	170	220	270

The distinguishing feature of this separation projection method is that it places no constraints on the definition of decision groups. In particular, there is no necessity for one month's decision groups to map into next month's decision groups.

Thus, the BSP model can (and does) take advantage of the Air Force requirement that personnel formally announce the date of their retirement or separation from the Air Force several months in advance. It also includes (a) months to date of separation distinctions for a 12-month countdown to the date of separation, and (b) month of service distinctions with multiple month of year ranges.

ACKNOWLEDGMENTS

Much research by many people in the Air Force and at RAND lies behind the benchmark separation projection (BSP) method. In general, the Air Force concentrated on issues related to data, and was responsible for programming and testing the model; RAND concentrated on the mathematical specifications.

Jan Chaiken was responsible for the seminal ideas that guided all of the short-term loss modeling on the Enlisted Force Management Project. Additional contributions to this body of knowledge were made by Marygail Brauner, William Mickelson, and Dan Relles.

On the Air Force side, we were assisted by many members of the Washington Area Personnel Systems Division of the Air Force Military Personnel Center (AFMPC/DPMDW). Special thanks go to Tech. Sergeant Robbie Robertson, who programmed the BSP model.

Warren Walker, project leader of the Enlisted Force Management Project, supported and guided the modeling effort. Allan Abrahamse provided helpful comments on an earlier version of this Note.

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I. INTRODUCTION

OVERVIEW OF SPECIFICATIONS

This introductory section explains what the Benchmark Separation Projection (BSP) model does and how it works. Section II presents the action diagram that specifies the required calculations precisely. Section III shows how to obtain necessary facts about the effect of Air Force policies on loss behavior. Sections IV and V show how to obtain the necessary facts about the effect of Air Force policies on reenlistment behavior. Appendixes A and B explain notation. Appendix C provides details of the inventory classification used in Secs. II through V. Appendix D presents illustrative data, and Appendix E presents summary counts of illustrative data.

PURPOSE OF THE BSP MODEL

The BSP model predicts monthly separations (losses and reenlistments) of Air Force enlisted personnel from the active force, for up to 12 months into the future. These monthly separation projections are the inputs required by Module 2 of the Short-Term Aggregate Inventory Projection Model (SAM2). For a description of context within which Module 1 of SAM (SAM1) has to operate, see Brauner, Lawson, and Mickelson, 1991, Sec. I.

Specifically, the BSP model produces the following items, by calendar month and category of enlistment, to pass on to SAM2.

INVATT	Attrition losses from inventory existing at the start of the projection period.
PFETSLOSS	Policy-free ETS losses.
RETIREMENT	Retirement losses.
PFREENLISTOUT	Policy-free reenlistments out of each category of enlistment.
RETELIGOUT	Flow out of the career category into the retirement-eligible category from becoming retirement eligible.

By definition, only one type of separation is possible in a month. An airman who reenlists during a month and then leaves the enlisted force during that month is classified as a loss. An airman who becomes retirement eligible during a month and then leaves the enlisted force during that month is classified as a loss (either an attrition loss or, more likely, a retirement loss). Attrition losses and expiration-of-term-of service (ETS) losses are distinguished by different codes on the airman records. In general, ETS losses are voluntary losses of airmen who have reached the expiration of their obligated term of service and choose not to reenlist; attrition losses are involuntary losses due to death, disability, or failure to perform adequately (such as not passing a training course).

Reenlistments "out of" the career category of enlistment go back into that category, and reenlistments "out of" the retirement-eligible category go back into that category. They are still called "reenlistments out." The precise definition of "flow to retirement eligibility" during a month is personnel who reach month of service (MOS) = 240 during the month and who do not leave the enlisted force during the month.

"Policy-free" means that the loss or reenlistment flow has been adjusted to remove the effects of the following Air Force policies: early releases (Rollups and Early Outs), forced early reenlistments (those caused by the "leave or reenlist" program), and allowing reenlistments to occur earlier than three months before the original ETS. The BSP model predicts the losses and reenlistments that would occur if those programs did not exist.

After the policy-free predictions have been passed to SAM2 from SAM1, SAM2 accounts for the effects of the early release and forced early reenlistment programs and estimates the losses and reenlistments that will actually occur in a given month. SAM2 does not enable users to adjust the size of the reenlistment window (currently set at three months before original ETS). However, if the window should change again (the change from a 12 month to a 3 month window occurred in FY88), the BSP model can be easily revised to generate policy-free reenlistments

under the new policy. (See Sec. V for the details of how the size of the reenlistment window is built into the BSP model.)

PROJECTION METHOD

The BSP model projects separation flows by multiplying the starting inventory by separation proportions obtained from the behavior of the enlisted force during the 12 months before the start of the projection period.[1] This projection method has the virtue that the most recent behavior of Air Force personnel is being used to predict near-term future behavior, and it automatically captures any seasonal behavior. In other words, the BSP model looks back to the inventory of 12 months ago and finds the proportion of that inventory that separated during each month after the inventory date. Then it applies those separation proportions to the current inventory to estimate the separations that will occur during the next 12 months.

The BSP model does these calculations by groupings of the initial inventory called "decision groups" (see the tables at the end of this section for an overview, and see App. C for the detailed definition).[2] The decision groups have been chosen so that the separation behavior in each group is as homogeneous as possible.

The retirement/separation date (RTS) enables construction of decision groups that will perform very well for the first three projection months, and the date of separation (DOS) and other variables enable construction of decision groups that will perform very well for the following 9 months. The distinction between the DOS and the RTS is important for understanding how the BSP model works and why it can be expected to yield excellent short-term predictions. The DOS is the date on which an airman will leave the Air Force if he does not choose to reenlist before that date. However, decisions to leave the Air Force must be communicated to, and approved by, the Military Personnel Center

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[1]The Air Force has generalized this calculation to base each month's loss rates on the loss rate experienced in other months. They are testing various possibilities for their predictive power.

[2]The Air Force is also testing various decision group structures for their predictive power.

at least three months before the departure date (five months in the case of first termers).

Once such an approved departure is scheduled, it is recognized on the airman record as the RTS date. If the RTS date is on the airman record, it is a very good predictor of loss behavior. When it is not on the airman record, DOS becomes the best predictor of loss behavior. That is why the BSP decision groups are built with the RTS date where it exists, and the DOS date (and other characteristics) otherwise.

A given part of the initial inventory (a particular decision group) can have more than one type of separation during the 12 months analyzed (or projected). This is not a problem, since each type of separation is projected separately, with its own separation proportion.

Personnel who reenlist during a month and then leave the enlisted force during a subsequent projection month contribute to the reenlistment proportion in the reenlistment month and to a loss proportion in the loss month. (The loss will, of course, be incorrectly classified in the former category of enlistment; but total losses will be correctly estimated. This incorrect classification will not be large because few airmen leave the Air Force in the months immediately following a reenlistment.)

Personnel who become retirement eligible during a month and then leave the enlisted force during a subsequent projection month contribute to the retirement eligibility proportion during the month they became retirement eligible, and they contribute to a loss proportion (either an attrition loss or a retirement loss) in the loss month.

Before we turn to the detailed definition of all the decision groups used in the BSP model, two concrete examples will help make clear what decision groups are and how they are used in the model. The examples are of decision groups defined by RTS date, for first-term personnel (Table 1) and for retirement-eligible personnel (Table 2). These tables use actual data on the enlisted force for the eight-month period from February 1988 through September 1988. They are extracts from a complete set of illustrative data in App. E.

The decision group labels in the left column of the tables give the category of enlistment (C1 for first term, C4 for retirement-eligible term) and the decision group number within that category of enlistment (6 through 13 in both tables).

The second column gives the months to the RTS date. The third column gives the inventory count in each decision group at the start of February 1988. The remainder of the columns give actual monthly losses (top panel) and monthly loss rates (bottom panel). The flows on each line all come from that line's starting inventory, and the flow rates on each line are all percentages of that starting inventory (rather than being percentages of survived inventory, as they would be in a Markov model). The flows and flow rates are those that occurred during the rest of the fiscal year--that is, from February 1988 through September 1988.

Both tables have strong diagonals (from the lower left to the upper right), because people tend to leave the Air Force in the month they say they are going to leave. For example, of the 1570 first termers at the start of February 1988 who said they would leave in February, 1194 or 76 percent did so (see Table 1). Of the 809 retirement eligibles at the start of February 1988 who said they would retire in February, 806 or 99 percent did so (see Table 2).

If one were using the BSP model in February 1989, these proportions of the February 1988 inventory that were lost each month during the rest of fiscal year 1988 (bottom panels of Tables 1 and 2) would be multiplied by the February 1989 inventory to generate predictions of monthly losses during the rest of fiscal year 1989.

Table 1

POLICY-FREE ETS LOSSES: FEBRUARY 1988 THROUGH SEPTEMBER 1988, BY SELECTED "RTS" DECISION GROUPS

Decision Group	Characteristics on Feb. 1, 1988		Month During Rest of Fiscal Year							
	MRTS	Inventory	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Starting Inventory and Monthly Flows										
C1DG006	8	23	--	--	--	--	1	--	--	13
C1DG007	7	31	--	--	--	--	--	--	15	--
C1DG008	6	46	--	--	--	--	1	20	3	1
C1DG009	5	124	--	--	--	12	95	--	--	--
C1DG010	4	1096	--	5	30	612	4	2	2	2
C1DG011	3	2816	1	6	744	119	86	104	83	85
C1DG012	2	3451	3	1187	336	327	292	307	253	303
C1DG013	1	1570	1194	12	4	7	3	3	5	6
Starting Inventory and Monthly Percentage Flow Rates										
C1DG006	8	23	--	--	--	--	4	--	--	56
C1DG007	7	31	--	--	--	--	--	--	48	--
C1DG008	6	46	--	--	--	--	2	43	7	2
C1DG009	5	124	--	--	--	10	77	--	--	--
C1DG010	4	1096	--	--	3	56	--	--	--	--
C1DG011	3	2816	--	--	26	4	3	4	3	3
C1DG012	2	3451	--	34	9	9	8	9	7	9
C1DG013	1	1570	76	1	--	--	--	--	--	--

SOURCE: Table D.2 in App. D.

NOTE: RTS decision group = inventory group defined by the time to the retirement/separation date. MRTS = Months to retirement/separation date. Inventory is the policy-free first-term inventory at the start of February 1988 that has MRTS of from 1 to 8. The flows in the body of the table are policy-free ETS losses from that inventory during the subsequent eight months.

Table 2

RETIREMENT LOSSES: FEBRUARY 1988 THROUGH SEPTEMBER 1988,
BY SELECTED "RTS" DECISION GROUPS

Decision Group	Characteristics on Feb. 1, 1988		Month During Rest of Fiscal Year							
	MRTS	Inventory	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
C4DG006	8	381	--	--	4	1	4	7	6	341
C4DG007	7	571	--	--	4	4	6	9	525	2
C4DG008	6	485	--	--	--	3	2	466	2	3
C4DG009	5	242	--	--	1	2	220	11	1	1
C4DG010	4	250	--	1	--	235	1	8	--	1
C4DG011	3	342	--	--	329	1	1	4	1	--
C4DG012	2	413	1	379	4	4	5	5	7	4
C4DG013	1	809	806	--	1	--	--	--	--	--
	Starting Inventory and Monthly Percentage Flow Rates									
C4DG006	8	381	--	--	1	--	1	2	2	90
C4DG007	7	571	--	--	1	1	1	2	92	--
C4DG008	6	485	--	--	--	1	--	96	--	1
C4DG009	5	242	--	--	--	1	91	11	--	--
C4DG010	4	250	--	1	--	94	--	3	--	--
C4DG011	3	342	--	--	96	--	--	1	--	--
C4DG012	2	413	1	92	1	1	1	1	2	1
C4DG013	1	809	99	--	--	--	--	--	--	--

SOURCE: Table D.4 in App. D.

NOTE: RTS decision group = inventory group defined by the time to the retirement/separation date. MRTS = Months to retirement/separation date. Inventory is the actual retirement-eligible inventory at the start of February 1988 that has MRTS of from 1 to 8. The flows in the body of the table are retirement losses from that inventory during the subsequent eight months.

DECISION GROUPS

Inventory accounting in the BSP model is done by decision group. The model does flow accounting by recognizing the inventory decision group from which the flow occurred and the projection month in which the flow occurs.

The decision groups in the BSP model are a mutually exclusive and exhaustive classification of the initial inventory. The groups are defined with distinctions that EFMP research has shown to be useful predictors of separation behavior. Those distinctions are:

- Months to the retirement/separation date (MRTS).
- Months to the date of separation (MDOS).
- Relationship among inventory date (ID), original expiration of term of service (OETS), and date of separation (DOS).
- Months of service in Air Force (MOS).
- Months to high year of tenure (MHYT).
- Category of enlistment (Catenl).
- Term of enlistment (TOE).
- Pay grade (Grade).

The following tables illustrate decision groups (DGs). Appendix C presents the same information in outline form. The decision groups are numbered within each category of enlistment. (Hence, the subscript for each set of DGs.) There are 279 decision groups overall: 105 for the first term, 65 for the second term, 53 for the career terms, and 56 for retirement-eligible personnel. The Air Force has continued to adjust the definition of these groups to improve the accuracy and efficiency of the model's predictions.

Each table has a column for counting the starting inventory and then 12 columns for counting separations in each projection month. The same tables with the same initial inventories are used for each of the separation flows listed at the start of this section. The ratio of the separation flow in a given projection month to the initial inventory is that month's separation proportion.

The separation flows during a given projection month are classified by their characteristics in the inventory at the start of the projection period. For example, the MOS at the time of the initial inventory determines the line in the tables on which a separation gets entered, not the MOS at the time of separation.

The point just made is the key to the whole BSP estimation strategy. The inventory can be classified into decision groups in any way that leads to good predictions of separations. The classification is not constrained by a need to map the surviving inventory from one month into the same decision groups in the following month, as would have been the case with a Markovian modeling strategy.

When estimating separation proportions for policy-free ETS losses and for policy-free reenlistments, the researcher must use a "policy-free" inventory rather than the actual inventory. The policy-free inventory is the actual inventory adjusted for the inventory changes that have been caused by early release programs, the forced early reenlistment program, and a 12-month (rather than the current three-month) reenlistment window.

Separation proportions for attrition losses, retirement losses, and flows to retirement eligibility, however, are estimated with the actual inventory. The reasons for not using policy-free inventories to estimate those separations are: (1) only actual inventory is available to attrit, and (2) the early release and forced early reenlistment programs do not affect personnel who are late enough in their career to be eligible to retire.

First Term, ret/sep date exists (MRTS = 1 through 13)

MRTS	Starting Inventory	Projection Month 1	2	3	4	5	6	7	8	9	10	11	12	DG(1)
13														1
12													RTS	2
11												RTS		3
10											RTS			4
9										RTS				5
8									RTS					6
7								RTS						7
6							RTS							8
5						RTS								9
4					RTS									10
3				RTS										11
2			RTS											12
1		RTS												13

First Term, no ret/sep date (MRTS > 13 or < 1)
TOE ≤ 4, Pre-decision-year inventory (MDOS > 13 or <1)

MOS	Starting Inventory	Projection Month 1	2	3	4	5	6	7	8	9	10	11	12	DG(1)
0														14
1														15
2														16
3-11														17
12-23														18
24-35														19
36+														20

NOTE: The last line is an open interval containing all first-term inventory that has MOS ≥ 36 and meets the other conditions of the table.

First Term, no ret/sep date (MRTS > 13 or < 1),
TOE ≤ 4, decision-year inventory (MDOS ≤ 13)

MDOS	Starting Inventory	Projection Month 1	2	3	4	5	6	7	8	9	10	11	12	DG(1)
Plans to separate at OETS (OETS in future, DOS ≤ OETS)														
13														21
12													DOS	22
11												DOS		23
10											DOS			24
9										DOS				25
8									DOS					26
7								DOS						27
6							DOS							28
5						DOS								29
4					DOS									30
3				DOS										31
2			DOS											32
1		DOS												33
Plans to separate after OETS (OETS in future, DOS > OETS)														
13														34
12													DOS	35
11												DOS		36
10											DOS			37
9										DOS				38
8									DOS					39
7								DOS						40
6							DOS							41
5						DOS								42
4					DOS									43
3				DOS										44
2			DOS											45
1		DOS												46
Will separate after OETS (OETS in past)														
13														47
12													DOS	48
11												DOS		49
10											DOS			50
9										DOS				51
8									DOS					52
7								DOS						53
6							DOS							54
5						DOS								55
4					DOS									56
3				DOS										57
2			DOS											58
1		DOS												59

First Term, no ret/sep date (MRTS > 13 or < 1)
TOE ≥ 5, pre-decision-year inventory (MDOS > 13 or <1)

MOS	Starting Inventory	Projection Month 1	2	3	4	5	6	7	8	9	10	11	12	DG(1)
0														60
1														61
2														62
3-11														63
12-23														64
24-35														65
36+														66

NOTE: The last line is an open interval containing all first-term inventory that has MOS ≥ 36 and meets the other conditions of the table.

First Term, no ret/sep date (MRTS > 13 or < 1),
TOE ≥ 5, decision-year inventory (MDOS ≤ 13)

MDOS	Starting Inventory	Projection Month 1	2	3	4	5	6	7	8	9	10	11	12	DG(1)
Plans to separate at OETS (OETS in future, DOS ≤ OETS)														
13														67
12													DOS	68
11												DOS		69
10											DOS			70
9										DOS				71
8									DOS					72
7								DOS						73
6							DOS							74
5						DOS								75
4					DOS									76
3				DOS										77
2			DOS											78
1		DOS												79
Plans to separate after OETS (OETS in future, DOS > OETS)														
13														80
12													DOS	81
11												DOS		82
10											DOS			83
9										DOS				84
8									DOS					85
7								DOS						86
6							DOS							87
5						DOS								88
4					DOS									89
3				DOS										90
2			DOS											91
1		DOS												92
Will separate after OETS (OETS in past)														
13														93
12													DOS	94
11												DOS		95
10											DOS			96
9										DOS				97
8									DOS					98
7								DOS						99
6							DOS							100
5						DOS								101
4					DOS									102
3				DOS										103
2			DOS											104
1		DOS												105

Second Term, ret/sep date exists (MRTS = 1 through 13)

MRTS	Starting Inventory	Projection Month 1	2	3	4	5	6	7	8	9	10	11	12	DG(2)
13														1
12													RTS	2
11												RTS		3
10											RTS			4
9										RTS				5
8									RTS					6
7								RTS						7
6							RTS							8
5						RTS								9
4					RTS									10
3				RTS										11
2			RTS											12
1		RTS												13

Second Term, no ret/sep date (MRTS > 13 or < 1)
Pre-decision-year inventory (MDOS > 13 or <1)

MOS	Starting Inventory	Projection Month 1	2	3	4	5	6	7	8	9	10	11	12	DG(2)
0-47														14
48-59														15
60-71														16
72-83														17
84-95														18
96-107														19
108-119														20
120-131														21
132-143														22
144-155														23
156-167														24
168-179														25
180+														26

NOTE: The last line is an open interval containing all first-term inventory that has MOS ≥ 180 and meets the other conditions of the table.

Second Term, no ret/sep date (MRTS > 13 or < 1),
Decision-year inventory (MDOS ≤ 13)

MDOS	Starting Inventory	Projection Month 1	2	3	4	5	6	7	8	9	10	11	12	DG(2)
	Plans to separate at OETS (OETS in future, DOS ≤ OETS)													
13														27
12													DOS	28
11												DOS		29
10											DOS			30
9										DOS				31
8									DOS					32
7								DOS						33
6							DOS							34
5						DOS								35
4					DOS									36
3				DOS										37
2			DOS											38
1		DOS												39
	Plans to separate after OETS (OETS in future, DOS > OETS)													
13														40
12													DOS	41
11												DOS		42
10											DOS			43
9										DOS				44
8									DOS					45
7								DOS						46
6							DOS							47
5						DOS								48
4					DOS									49
3				DOS										50
2			DOS											51
1		DOS												52
	Will separate after OETS (OETS in past)													
13														53
12													DOS	54
11												DOS		55
10											DOS			56
9										DOS				57
8									DOS					58
7								DOS						59
6							DOS							60
5						DOS								61
4					DOS									62
3				DOS										63
2			DOS											64
1		DOS												65

Career Term, ret/sep date exists (MRTS = 1 through 13)

MRTS	Starting Inventory	Projection Month 1	2	3	4	5	6	7	8	9	10	11	12	DG(3)
13														1
12													RTS	2
11												RTS		3
10											RTS			4
9										RTS				5
8									RTS					6
7								RTS						7
6							RTS							8
5						RTS								9
4					RTS									10
3				RTS										11
2			RTS											12
1		RTS												13

Career Terms, no ret/sep date exists,
Pre-retirement-decision-year (MOS < 228)

MDOS	Starting Inventory	Projection Month 1	2	3	4	5	6	7	8	9	10	11	12	DG(3)
≥14													14	
13														15
12													DOS	16
11												DOS		17
10											DOS			18
9										DOS				19
8									DOS					20
7								DOS						21
6							DOS							22
5						DOS								23
4					DOS									24
3				DOS										25
2			DOS											26
1		DOS												27

NOTE: All the decision groups in this table exclude personnel in their retirement decision year--i.e., personnel with MOS ≥ 228.

Career Terms, no ret/sep date exists,
Retirement decision year (MOS ≥ 228)
Grade ≥ 6

MOS	Starting Inventory	Projection Month 1	2	3	4	5	6	7	8	9	10	11	12	DG(3)
228														28
229													RE	29
230												RE		30
231											RE			31
232										RE				32
233									RE					33
234								RE						34
235							RE							35
236						RE								36
237					RE									37
238				RE										38
239			RE											39
240		RE												40

NOTE: "RE" indicates the projection month in which personnel first become eligible to retire.

Career Terms, no ret/sep date exists,
Retirement decision year (MOS ≥ 228)
Grade ≤ 5

MOS	Starting Inventory	Projection Month 1	2	3	4	5	6	7	8	9	10	11	12	DG(3)
228														41
229													RE	42
230												RE		43
231											RE			44
232										RE				45
233									RE					46
234								RE						47
235							RE							48
236						RE								49
237					RE									50
238				RE										51
239			RE											52
240		RE												53

NOTE: "RE" indicates the projection month in which personnel first become eligible to retire.

Retirement eligible (MOS ≥ 241)
ret/sep date exists (MRTS = 1 through 13)

MRTS	Starting Inventory	Projection Month 1	2	3	4	5	6	7	8	9	10	11	12	DG(4)
13														1
12													RTS	2
11												RTS		3
10											RTS			4
9										RTS				5
8									RTS					6
7								RTS						7
6							RTS							8
5						RTS								9
4					RTS									10
3				RTS										11
2			RTS											12
1		RTS												13

Retirement eligible (MOS ≥ 241), no ret/sep date exits, and MHYT ≥ 14

MOS	Starting Inventory	Projection Month 1	2	3	4	5	6	7	8	9	10	11	12	DG(4)
First Year of Retirement Eligibility (by MOS)														
241														14
242														15
243														16
244-252														17
Subsequent Years of Retirement Eligibility (by MOS)														
253													PI	18
254												PI		19
255											PI			20
256										PI				21
257									PI					22
258								PI						23
259							PI							24
260						PI								25
261					PI									26
262				PI										27
263			PI											28
264		PI												29
265-300														30
301													PI	31
302												PI		32
303											PI			33
304										PI				34
305									PI					35
306								PI						36
307							PI							37
308						PI								38
309					PI									39
310				PI										40
311			PI											41
312		PI												42
313+														43

NOTE: This classification scheme "counts down" to the months where pay increases occur (MOS = 264 and MOS = 312). Retirement-eligible personnel frequently wait to retire in the month when their pay increases, because retirement benefits depend on the highest pay rate achieved. "PI" indicates a month in which a pay increase occurs.

Retirement eligible (MOS ≥ 241) and MHYT ≤ 13

MHYT	Starting Inventory	Projection Month 1	2	3	4	5	6	7	8	9	10	11	12	DG(4)
13														44
12													HYT	45
11												HYT		46
10											HYT			47
9										HYT				48
8									HYT					49
7								HYT						50
6							HYT							51
5						HYT								52
4					HYT									53
3				HYT										54
2			HYT											55
1		HYT												56

II. BENCHMARK SEPARATION PROJECTION

This section presents the action diagram that will enable the construction of the BSP model. Action diagrams lie part way between prose and programming. They are designed to show model users how the model works and computer programmers how to write the computer code for the model. The action diagram presents inputs (by source), required calculations (in processing order), and outputs generated. It uses the following general notation (for explanations of other variables, see App. A):

FPM	Sequential month number (see App. B) of the first projection month.
FPM - 12	Sequential month number of the month 12 months before the first projection month.
PM	Projection month (PM equals "1" in the FPM month (or, in the historical analysis, PM equals "1" in the FPM - 12 month).
STARTINV	Inventory at the start of the first projection month (or, in the historical analysis, at the start of the FPM - 12 month).
DG(Catenl)	Decision Group in the indicated category of enlistment (see App. C).

When separations are classified by DG, their classification at the time of the starting inventory should be used. Thus, INVATT <Catenl = 1, DG(1) = 5, FPM, PM = 4> means attrition losses during the fourth projection month that came from inventory that (1) existed at the start of the projection period (at the start of month FPM), and (2) then had the characteristics of first-term, Decision Group 5.

INPUTS

Inputs Describing Inventory at Start of First Projection Month

STARTINV <Catenl, DG(Catenl), FPM>

Inputs Describing Separations During Past 12 Months

STARTINV <Catenl, DG(Catenl), FPM - 12>
INVATT <Catenl, DG(Catenl), FPM - 12, PM>
ETSLOSS <Catenl, DG(Catenl), FPM - 12, PM>
RETIREMENT <Catenl, DG(Catenl), FPM - 12, PM>
REENLISTOUT <Catenl, DG(Catenl), FPM - 12, PM>
RETELIGOUT <Catenl = 3, DG(Catenl), FPM - 12, PM>

Inputs from Sec. III: Early Release Programs

For Past 12 Months.

RUINVRED <Catenl, DG(Catenl), FPM - 12>
EOINVRED <Catenl, DG(Catenl), FPM - 12>
PCINVRED <Catenl, DG(Catenl), FPM - 12>
RUSHIFT <Catenl, DG(Catenl), FPM - 12, PM>
EOSHIFT <Catenl, DG(Catenl), FPM - 12, PM>
PCSHIFT <Catenl, DG(Catenl), FPM - 12, PM>

For First Projection Month.

RUINVRED <Catenl, DG(Catenl), FPM>
EOINVRED <Catenl, DG(Catenl), FPM>
PCINVRED <Catenl, DG(Catenl), FPM>

Inputs from Sec. IV: Forced Early Reenlistments

For Past 12 Months.

FERINVRED <Catenl, DG(Catenl), FPM - 12>
FERINVADD <Catenl, DG(Catenl), FPM - 12>
FERSHIFT <Catenl, DG(Catenl), FPM - 12, PM>
FEROUT <Catenl, DG(Catenl), FPM - 12, PM>

For First Projection Month.

FERINVRED <Catenl, DG(Catenl), FPM>

FERINVADD <Catenl, DG(Catenl), FPM>

Inputs from Sec. V: Window Early Reenlistments

For Past 12 Months.

WERINVRED <Catenl, DG(Catenl), FPM - 12>

WERINVADD <Catenl, DG(Catenl), FPM - 12>

WERSHIFT <Catenl, DG(Catenl), FPM - 12, PM>

WEROUT <Catenl, DG(Catenl), FPM - 12, PM>

For First Projection Month.

WERINVRED <Catenl, DG(Catenl), FPM>

WERINVADD <Catenl, DG(Catenl), FPM>

CALCULATIONS

Attrition from Inventory at Start of Projection Period

```
INVATTPROP <Catenl, DG(Catenl), FPM - 12, PM> =
        INVATT <Catenl, DG(Catenl), FPM - 12, PM>
      / STARTINV <Catenl, DG(Catenl), FPM - 12>

INVATT <Catenl, DG(Catenl), FPM, PM> =
        INVATTPROP <Catenl, DG(Catenl), FPM - 12, PM>
      * STARTINV <Catenl, DG(Catenl), FPM>

INVATT <Catenl, FPM, PM> =
        tINVATT <Catenl, tDG(Catenl), FPM, PM>
```

Retirement

```
RETIREMENTPROP <Catenl, DG(Catenl), FPM - 12, PM> =
        RETIREMENT <Catenl, DG(Catenl), FPM - 12, PM>
      / STARTINV <Catenl, DG(Catenl), FPM - 12>
```

```
RETIREMENT <Catenl, DG(Catenl), FPM, PM> =
        RETIREMENTPROP <Catenl, DG(Catenl), FPM - 12, PM>
      * STARTINV <Catenl, DG(Catenl), FPM>

RETIREMENT <Catenl, FPM, PM> =
        tRETIREMENT <Catenl, tDG(Catenl), FPM, PM>
```

Flow out to Retirement Eligibility

```
RETELIGOUTPROP <Catenl = 3, DG(Catenl), FPM - 12, PM> =
        RETELIGOUT <Catenl = 3, DG(Catenl), FPM - 12, PM>
      / STARTINV <Catenl = 3, DG(Catenl), FPM - 12>

RETELIGOUT <Catenl = 3, DG(Catenl), FPM, PM> =
        RETELIGOUTPROP <Catenl = 3, DG(Catenl), FPM - 12, PM>
      * STARTINV <Catenl = 3, DG(Catenl), FPM>

RETELIGOUT <Catenl = 3, FPM, PM> =
        tRETELIGOUT <Catenl = 3, tDG(Catenl), FPM, PM>
```

Policy-Free Inventory at FPM - 12

```
PFSTARTINV <Catenl, DG(Catenl), FPM - 12> =
        STARTINV <Catenl, DG(Catenl), FPM - 12>
      + RUINVRED <Catenl, DG(Catenl), FPM - 12>
      + EOINVRED <Catenl, DG(Catenl), FPM - 12>
      + PCINVRED <Catenl, DG(Catenl), FPM - 12>
      + FERINVRED <Catenl, DC(Catenl), FPM - 12>
      - FERINVADD <Catenl, DC(Catenl), FPM - 12>
      + WERINVRED <Catenl, DC(Catenl), FPM - 12>
      - WERINVADD <Catenl, DC(Catenl), FPM - 12>
```

Policy-Free ETS Loss During Historical 12 Months

```
PFETSLOSS <Catenl, DG(Catenl), FPM - 12, PM> =
        ETSLOSS <Catenl, DG(Catenl), FPM - 12, PM>
      + RUSHIFT <Catenl, DG(Catenl), FPM - 12, PM>
      + EOSHIFT <Catenl, DG(Catenl), FPM - 12, PM>
      + PCSHIFT <Catenl, DG(Catenl), FPM - 12, PM>
```

```
PFETSLOSSPROP <Catenl, DG(Catenl), FPM - 12, PM> =
        PFETSLOSS <Catenl, DG(Catenl), FPM - 12, PM>
      / PFSTARTINV <Catenl, DG(Catenl), FPM - 12>
```

Policy-Free Reenlistments Out During Historical 12 Months

```
PFREENLISTOUT <Catenl, DG(Catenl), FPM - 12, PM> =
        REENLISTOUT <Catenl, DG(Catenl), FPM - 12, PM>
      + FERSHIFT <Catenl, DG(Catenl), FPM - 12, PM>
      - FEROUT <Catenl, DG(Catenl), FPM - 12, PM>
      + WERSHIFT <Catenl, DG(Catenl), FPM - 12, PM>
      - WEROUT <Catenl, DG(Catenl), FPM - 12, PM>

PFREENLISTOUTPROP <Catenl, DG(Catenl), FPM - 12, PM> =
        PFREENLISTOUT <Catenl, DG(Catenl), FPM - 12, PM>
      / PFSTARTINV <Catenl, DG(Catenl), FPM - 12>
```

Policy-Free Inventory at FPM

```
PFSTARTINV <Catenl, DG(Catenl), FPM> =
        STARTINV <Catenl, DG(Catenl), FPM>
      + RUINVRED <Catenl, DG(Catenl), FPM>
      + EOINVRED <Catenl, DG(Catenl), FPM>
      + PCINVRED <Catenl, DG(Catenl), FPM>
      + FERINVRED <Catenl, DC(Catenl), FPM>
      - FERINVADD <Catenl, DC(Catenl), FPM>
      + WERINVRED <Catenl, DC(Catenl), FPM>
      - WERINVADD <Catenl, DC(Catenl), FPM>
```

Policy-Free ETS Losses During Projection Period

```
PFETSLOSS <Catenl, DG(Catenl), FPM, PM> =
        PFETSLOSSPROP <Catenl, DG(Catenl), FPM - 12, PM>
      * PFSTARTINV <Catenl, DG(Catenl), FPM>

PFETSLOSS <Catenl, FPM, PM> =
        tPFETSLOSS <Catenl, tDG(Catenl), FPM, PM>
```

Policy-Free Reenlistments Out During Projection Period

```
PFREENLISTOUT <Catenl, DG(Catenl), FPM, PM> =
        PFREENLISTOUTPROP <Catenl, DG(Catenl), FPM - 12, PM>
      * PFSTARTINV <Catenl, DG(Catenl), FPM>

PFREENLISTOUT <Catenl, FPM, PM> =
        tPFREENLISTOUT <Catenl, tDG(Catenl), FPM, PM>
```

OUTPUTS

INVATT <Catenl, FPM, PM>

PFETSLOSS <Catenl, FPM, PM>

RETIREMENT <Catenl, FPM, PM>

PFREENLISTOUT <Catenl, FPM, PM>

RETELIGOUT <Catenl = 3, FPM, PM>

III. EARLY RELEASE PROGRAMS

The purpose of this section is to produce the information on early release programs required for the calculations in Sec. II. Early releases never occur from the retirement-eligible category of enlistment, so there is no need to carry any information on MHYT in this section's work. Furthermore, early releases are never recoded into DGs based on MRTS date (because there is no way to know what RTS date, if any, the early releases would have had at the time of the inventory counts), so there is no need to carry any information on MRTS in this section's work. The early release shifts and inventory reductions should all be assigned to DGs based on MDOS or on MOS.

INPUTS

Assemble the following counts, where the "loss month" (LM), ranges over the 60 months before the first projection month (FPM). That is, count all early release losses, by type, for LM = FPM - 60 through FPM - 1. The reason for the long reach into the past is that the Palace Chase program can shift losses from up to four years into the future, and a fifth year is needed to obtain projection proportions during the 12 months before the first projection month.

RULOSS <Grade, Catenl, TOE, LMOS, LM, OETS, DOS>
EOLOSS <Grade, Catenl, TOE, LMOS, LM, OETS, DOS>
PCLOSS <Grade, Catenl, TOE, LMOS, LM, OETS, DOS>

When the database administrator is creating the data file for counting the early release losses, records need to be created that have loss counts with the following subscripts:

Grade	Pay grade (E-1 through E-9).
Catenl	Category of enlistment (1 through 4).
TOE	Term of enlistment (either 4 or 6 years).
LMOS	MOS at time of early release loss.
LM	Loss month (month in which early release occurs).

OETS Original expiration of term of service.

DOS Date of separation.

Note that LM, OETS, and DOS should all be given by Sequential Month Number (see App. B).

CALCULATIONS

Step 1: Add the Subscripts ID, DG(Catenl), and MDOS to All Records

For a given ID (which is the first day of a month) define:

MOS = LMOS + (ID - LM) MOS at inventory date.

MDOS = DOS - ID + 1 Months to DOS at inventory date.

then note the following subscripts on a record

Catenl

OETS

DOS

and using those five characteristics (MOS, MDOS, Catenl, OETS, and DOS), consult App. C to find the DG(Catenl) as of that inventory date.

This assignment of Decision Groups must be done for each inventory date of interest. In any specific application of the BSP model, this work must be done twice: once for the first projection month and again for the month one year earlier than the first projection month (FPM - 12).

Append ID, DG(Catenl) and MDOS to each input record, to get:

RULOSS <Grade, Catenl, TOE, LMOS, LM, OETS, DOS, ID, DG(Catenl), MDOS>

EOLOSS <Grade, Catenl, TOE, LMOS, LM, OETS, DOS, ID, DG(Catenl), MDOS>

PCLOSS <Grade, Catenl, TOE, LMOS, LM, OETS, DOS, ID, DG(Catenl), MDOS>

Note that no new records are created. Each existing input record gets unique ID, DG(Catenl), and MDOS numbers. Keep in mind that DG(Catenl) and MDOS are characteristics at the chosen inventory date.

Step 2: Count Inventory Reductions and Shifts

Counting inventory reductions caused by early release programs is a matter of identifying all early releases that have their loss month (month in which early release occurs) before the inventory date and their shift month (month in which loss would have occurred without the early release program) at or following the inventory date.

RUINVRED <Catenl, DG(Catenl), ID> =

Sum of all RULOSS records that match on Catenl,
DG(Catenl), and ID, and that also satisfy the conditions
LM < ID and
DOS ≥ ID

EOINVRED <Catenl, DG(Catenl), ID> =

Sum of all EOLOSS records that match on Catenl,
DG(Catenl), and ID, and that also satisfy the conditions
LM < ID and
DOS ≥ ID

PCINVRED <Catenl, DG(Catenl), ID> =

Sum of all PCLOSS records that match on Catenl,
DG(Catenl), and ID, and that also satisfy the conditions
LM < ID and
DOS ≥ ID

Counting shifts caused by early release programs is simply a matter of identifying all early releases that have their DOS in a given month, where that DOS month is indicated by the months to DOS from the given inventory date.

RUSHIFT <Catenl, DG(Catenl), ID, MDOS> =

Sum of all RULOSS records that match on Catenl,
DG(Catenl), ID, and MDOS

EOSHIFT <Catenl, DG(Catenl), ID, MDOS> =

Sum of all EOLOSS records that match on Catenl, DG(Catenl), ID, and MDOS

PCSHIFT <Catenl, DG(Catenl), ID, MDOS> =
Sum of all PCLOSS records that match on Catenl, DG(Catenl), ID, and MDOS

Step 3: Find Inventory Reductions and Shifts for Specific Months

To supply information of the calculations in Sec. II for separation projections that have first projection month FPM, do Steps 1 and 2 for ID = FPM - 12 and again for ID = FPM, and report the following results:

Rollup Program:

RUINVRED <Catenl, DG(Catenl), FPM - 12> =
RUINVRED <Catenl, DG(Catenl), ID = FPM - 12>

RUSHIFT <Catenl, DG(Catenl), FPM - 12, PM> =
RUSHIFT <Catenl, DG(Catenl), ID = FPM - 12, MDOS = PM>

RUINVRED <Catenl, DG(Catenl), FPM> =
RUINVRED <Catenl, DG(Catenl), ID = FPM>

Early Out Program:

EOINVRED <Catenl, DG(Catenl), FPM - 12> =
EOINVRED <Catenl, DG(Catenl), ID = FPM - 12>

EOSHIFT <Catenl, DG(Catenl), FPM - 12, PM> =
EOSHIFT <Catenl, DG(Catenl), ID = FPM - 12, MDOS = PM>

EOINVRED <Catenl, DG(Catenl), FPM> =
EOINVRED <Catenl, DG(Catenl), ID = FPM>

Palace Chase Program:

```
PCINVRED <Catenl, DG(Catenl), FPM - 12> =
        PCINVRED <Catenl, DG(Catenl), ID = FPM - 12>

PCSHIFT <Catenl, DG(Catenl), FPM - 12, PM> =
        PCSHIFT <Catenl, DG(Catenl), ID = FPM - 12, MDOS = PM>

PCINVRED <Catenl, DG(Catenl), FPM> =
        PCINVRED <Catenl, DG(Catenl), ID = FPM>
```

OUTPUTS TO SEC. II: SEPARATION PROJECTION

Shifts and Inventory Reductions for Past 12 Months

```
RUINVRED <Catenl, DG(Catenl), FPM - 12>
EOINVRED <Catenl, DG(Catenl), FPM - 12>
PCINVRED <Catenl, DG(Catenl), FPM - 12>
RUSHIFT <Catenl, DG(Catenl), FPM - 12, PM>
EOSHIFT <Catenl, DG(Catenl), FPM - 12, PM>
PCSHIFT <Catenl, DG(Catenl), FPM - 12, PM>
```

Inventory Reductions for First Projection Month

```
RUINVRED <Catenl, DG(Catenl), FPM>
EOINVRED <Catenl, DG(Catenl), FPM>
PCINVRED <Catenl, DG(Catenl), FPM>
```

IV. FORCED EARLY REENLISTMENT PROGRAM

The purpose of this section is to produce information on forced early reenlistment programs required by the calculations in Sec. II. Forced early reenlistments never occur from the retirement-eligible category of enlistment, so there is no need to carry any information on MHYT in this section's work. Forced early reenlistments are never recoded into Decision Groups based on MTRS date (because the retirement/separation date is only assigned to airmen who intend to leave the Air Force, never to those who plan to reenlist), so there is no need to carry any information on MRTS in this section's work. The forced early reenlistment variables should all be assigned to DGs based on MDOS or on MOS.

DEFINITION OF FORCED EARLY REENLISTMENT

"Forced early reenlistments" are reenlistments that occur in a specific month because certain airmen are told to leave the Air Force or reenlist in that month. This program was exercised six times during FY86, FY87, and FY88. Each time it had different specifications. These are described below.

Forced Early Reenlistments in FY86

- First termers (located in the Continental United States (CONUS), not receiving a Selective Reenlistment Bonus (SRB)) with DOS in August or September 1986 had to either leave or reenlist in June or July 1986.
- First termers (CONUS, non-SRB specialties) with DOS in October, November, or December 1986 had to either leave or reenlist in September 1986.

Forced Early Reenlistments in FY87

- First termers (CONUS) with DOS in May through September 1987 had to either leave or reenlist in April 1987.
- First termers (non-CONUS) with DOS in May through September 1987 had to either leave or reenlist in April or May 1987.

Forced Early Reenlistments in FY88

- First and second termers with DOS in April through September 1988 had to either leave or reenlist in March 1988.
- First and second termers with DOS in October 1988 through March 1989 (with a few specialties excepted) had to either leave or reenlist in April 1988.

INPUTS

Assemble the following counts of forced early reenlistments (FERs), where the "reenlistment month" (RM) ranges over the 36 months before the first projection month. That is, count all FERs for RM = FPM - 36 through FPM - 1. The reason for the three-year reach into the past is that FERs in one fiscal year can come from the next fiscal year.

We define a reenlistment to be an FER if (1) it occurs in a month when some airmen were told to leave or reenlist, (2) the airman's DOS occurred in the specified range (see above), and (3) the airman met the other criteria for being in the program that month (e.g., first termer).

FEROUT <Grade, Catenl, TOE, RMOS, RM, OETS, DOS>

For the data file for counting the FERs, records need to be created that have reenlistment counts with the following subscripts:

Grade	Pay grade (E-1 through E-9).
Catenl	Category of enlistment (1 through 4).
TOE	Term of enlistment (either 4 or 6 years).
RMOS	MOS at time of forced early reenlistment.
RM	Reenlistment month (month in which forced early

reenlistment occurs).

OETS — Original expiration of term of service.

DOS — Date of separation.

RM, OETS, and DOS should all be given by Sequential Month Number (see App. B).

CALCULATIONS

Step 1: Add the Subscripts ID, DG(Catenl), and MDOS to All Records

For a given inventory date, ID, (define the month).

MOS = RMOS + (ID - RM)	MOS at inventory date
MDOS = DOS - ID + 1	Months to DOS at inventory date

then note the following subscripts on a record

Catenl
OETS
DOS

and using those five characteristics (MOS, MDOS, Catenl, OETS, and DOS), consult App. C to find the Decision Group from which the reenlistment occurs (DG(Catenl) as of ID) and find the Decision Group to which the reenlistment occurs (DG(Catenl + 1) as of ID).

Forced early reenlistments occur only in the first and second categories of enlistment, so the DG(Catenl) Decision Groups will be in either the first or second categories of enlistment, and the DG(Catenl + 1) Decision Groups will be in either the second or career categories of enlistment.

As noted at the start of this section, reenlistments can never occur in the Decision Groups defined by MRTS date. A further restriction on Decision Group possibilities is that the reenlistment into a category of enlistment can only occur for Decision Groups at the start of a term of enlistment (those defined by MOS) and never in the Decision Groups defined at the end of a term of enlistment (those defined by OETS and DOS).

This assignment of Decision Groups must be done for each inventory date of interest. In any specific application of the BSP model, this work must be done twice: once for the FPM and again for the month one year earlier than the first projection month (FPM - 12).

Append ID, DG(Catenl), DG(Catenl + 1) and MDOS to each input record to get:

FEROUT <Grade, Catenl, TOE, RMOS, RM, OETS, DOS, ID, DG(Catenl), DG(Catenl + 1), MDOS>

Note that no new records are created. Each existing input record gets a unique set of ID, DG(Catenl), DG(Catenl + 1), and MDOS numbers. Keep in mind that DG(Catenl), DG(Catenl + 1) and MDOS are characteristics at the chosen inventory date.

Step 2: Count Forced Reenlistments, Shifts, Inventory Reductions, and Inventory Additions

"Shifts" are reenlistments-out that did not occur in a given month because the FER program made them occur in an earlier month. "Inventory reductions" are decreases in inventory that occurred in the original category of enlistment because of the forced early reenlistment. "Inventory additions" are increases in inventory that occurred in the destination category of enlistment because of the forced early reenlistment.

Counting inventory reductions and inventory additions caused by forced early reenlistments is a matter of identifying all forced early reenlistments that have their reenlistment month before the inventory date, and their shift month at or following the inventory date.

Note that the shift month, SM, is OETS if the forced early reenlistment occurs on or before OETS, and it is DOS if the forced early reenlistment occurs after OETS. (Earlier months have lower sequential month numbers, so the forced early reenlistment occurs on or before OETS if RM $\leq$ OETS).

SM = OETS if RM $\leq$ OETS
= DOS if RM > OETS

Note also that inventory reductions occur in the category of enlistment from which the forced early reenlistment occurred, so they should be assigned to a DG(Catenl) Decision Group; and inventory additions occur in the category of enlistment to which the forced early reenlistment occurred, so they should be assigned to a DG(Catenl + 1) decision group).

FERINVRED <Catenl, DG(Catenl), ID> =
Sum of all FEROUT records that match on Catenl,
DG(Catenl + 1), and ID, and that also satisfy the conditions
RM < ID and
SM ≥ ID

FERINVADD <Catenl+1, DG(Catenl+1), ID> =
Sum of all FEROUT records that match on Catenl,
DG(Catenl + 1), and ID, and that also satisfy the conditions
RM < ID and
SM ≥ ID

Counting shifts caused by forced early reenlistments is simply a matter of identifying all forced early reenlistments that have their shift month in a given month, as indicated by the months to the shift month (MSM) from the given inventory date.

MSM = SM - ID + 1

FERSHIFT <Catenl, DG(Catenl), ID, MSM> =
Sum of all FEROUT records that match on Catenl,
DG(Catenl), ID, and MSM = SM - ID + 1

Counting forced early reenlistments is just a matter of aggregating the basic FEROUT records

FEROUT <Catenl, DG(Catenl), ID, MSM>
Sum of all FEROUT records that match on Catenl,
DG(Catenl), ID, and MSM = SM - ID + 1

Step 3: Find Inventory Reductions and Additions, Shifts and Forced Early Reenlistments for Specific Months

To supply information to the calculations in Sec. II for making separation projections that have first projection month FPM, do Steps 1 and 2 for ID = FPM - 12 and again for ID = FPM, and report the following results:

FERINVRED <Catenl, DG(Catenl), FPM - 12> =
FERINVRED <Catenl, DG(Catenl), ID = FPM - 12>

FERINVADD <Catenl, DG(Catenl), FPM - 12> =
FERINVRED <Catenl, DG(Catenl), ID = FPM - 12>

FERSHIFT <Catenl, DG(Catenl), FPM - 12, PM> =
FERSHIFT <Catenl, DG(Catenl), ID = FPM - 12, MSM = PM>

FEROUT <Catenl, DG(Catenl), FPM - 12, PM> =
FEROUT <Catenl, DG(Catenl), ID = FPM - 12, MSM = PM>

FERINVRED <Catenl, DG(Catenl), FPM> =
FERINVRED <Catenl, DG(Catenl), ID = FPM>

FERINVADD <Catenl, DG(Catenl), FPM> =
FERINVADD <Catenl, DG(Catenl), ID = FPM>

OUTPUTS TO SEC. II: SEPARATION PROJECTION

For Past 12 Months

FERINVRED <Catenl, DG(Catenl), FPM - 12>
FERINVADD <Catenl, DG(Catenl), FPM - 12>
FERSHIFT <Catenl, DG(Catenl), FPM - 12, PM>
FEROUT <Catenl, DG(Catenl), FPM - 12, PM>

For First Projection Month

FERINVRED <Catenl, DG(Catenl), FPM>
FERINVADD <Catenl, DG(Catenl), FPM>

V. WINDOW EARLY REENLISTMENTS

The purpose of this section is to produce information on "window" early reenlistments required by the calculations in Sec. II. The treatment of window early reenlistments is analogous to the treatment of forced early reenlistments, so much of the computer code developed from the previous section can be used to implement the calculations in this section. The only differences are in the definitions of the early reenlistments themselves and of the "shift" month (the month in which the reenlistments would have occurred if they had not occurred early).

Window early reenlistments never occur from the retirement-eligible category of enlistment, so there is no need to carry any information on MHYT in this section's work. Also, window early reenlistments are never recoded into Decision Groups based on MRTS date (because the retirement/separation date is only assigned to airmen who intend to leave the Air Force, never to those who plan to reenlist), so there is no need to carry any information on MRTS in this section's work. The window early reenlistment variables should all be assigned to Decision Groups based on MDOS or MOS.

DEFINITION OF "WINDOW" REENLISTMENTS

Before FY 1988 airmen could reenlist up to 12 months before their OETS. During FY88 this rule was changed to allow reenlistments a maximum of three months before OETS. This rule is defined in cohort time. In calendar time the new rule actually allows reenlistments in four calendar months: the month in which OETS falls and the three previous months.)

Because the BSP model uses historical data to project future reenlistments, we need to adjust inventories and reenlistments so that they follow the new rule consistently.

We define "window reenlistments" to be all reenlistments that are not forced early reenlistments that occur more than three months before OETS.

RM < OETS - 3

We define the "shift" month of these window early reenlistments (the month in which these reenlistments would have occurred under the new rules) by proportionately shrinking the 12-month early reenlistment period to a three-month early reenlistment period.

Months before OETS of window reenlistment	Months before OETS of shift
11 or more	4
8, 9, or 10	3
5, 6, or 7	2

Note that only reenlistments that are not forced early reenlistments can be window reenlistments and that months to OETS is defined to equal 1 in the month in which OETS occurs.

INPUTS

Assemble the following counts of window early reenlistments, where the reenlistment month ranges over the 24 months before the first projection month. That is, count all window early reenlistments for RM = FPM - 24 through FPM - 1. The reason for the two year reach into the past is that window early reenlistments can occur up to one year early.

A reenlistment is a window early reenlistment (WER) if (1) it is not a forced early reenlistment, (2) the reenlistment month is more than three months before the original expiration of term of reenlistment, RM < OETS - 3.

WEROUT <Grade, Catenl, TOE, RMOS, RM, OETS, DOS>

When the user is creating the data file for counting the window early reenlistments, the following information records need to be created that have reenlistment counts with the following subscripts:

Grade	Pay grade (E-1 through E-9).
Catenl	Category of enlistment (1 through 4).

TOE	Term of enlistment (either 4 or 6 years).
RMOS	MOS at time of window early reenlistment.
RM	Reenlistment month (month in which the window early reenlistment occurs).
OETS	Original expiration of term of service.
DOS	Date of separation.

Note that RM, OETS, and DOS should all be given by Sequential Month Number (see App. B).

CALCULATIONS

Step 1: Add the Subscripts ID, DG(Catenl), and MDOS to All Records

For a given inventory date, ID, define

MOS = RMOS + (ID - RM)	MOS at inventory date
MDOS = DOS - ID + 1	Months to DOS at inventory date

then note the following subscripts on a record

Catenl
OETS
DOS

and using those five characteristics (MOS, MDOS, Catenl, OETS, and DOS), consult App. C to find the Decision Group from which the reenlistment occurs (DG(Catenl) as of the inventory date) and find the Decision Group to which the reenlistment occurs (DG(Catenl + 1) as of the inventory date).

Window early reenlistments occur only in the first, second, or career categories of enlistment, so the DG(Catenl) Decision Groups will be in either the first, second, or career categories of enlistment, and the DG(Catenl + 1) Decision Groups will be in either the second or career categories of enlistment.

Reenlistments can never occur in the Decision Groups defined by MRTS date. A further restriction is that the reenlistment into a category of enlistment can occur for Decision Groups only at the start

of a term of enlistment (those defined by MOS) and never at the end (those defined by OETS and DOS).

This assignment of decision groups must be done for each inventory date of interest. In any specific application of the BSP model, this work must be done twice: once for the first projection month and again for the month one year earlier than the first projection month (FPM - 12).

Append ID, DG(Catenl), DG(Catenl + 1) and MDOS to each input record to get:

WEROUT <Grade, Catenl, TOE, RMOS, RM, OETS, DOS; ID, DG(Catenl), DG(Catenl + 1), MDOS>

Note that no new records are created. Each existing input record gets unique ID, DG(Catenl), DG(Catenl + 1), and MDOS numbers. Keep in mind that DG(Catenl), DG(Catenl + 1) and MDOS are characteristics at the chosen ID.

Step 2: Count window reenlistments, shifts, inventory reductions, and inventory additions

"Shifts" are reenlistments-out that did not occur in a given month because the window early reenlistment program made them occur in an earlier month. "Inventory reductions" are decreases in inventory that occurred in the original category of enlistment because of the window early reenlistment. "Inventory additions" are increases in inventory that occurred in the destination category of enlistment because of the window early reenlistment.

Counting inventory reductions and inventory additions caused by window early reenlistments is a matter of identifying all window early reenlistments that have their loss month before the inventory date and their shift month at or following the inventory date.

The shift month is determined by shrinking a 12-month reenlistment window to a three-month reenlistment window.

SM = OETS - 3 if RM $\leq$ OETS - 11
= OETS - 2 if RM = OETS - 8, OETS - 9, or OETS - 10
= OETS - 1 if RM = OETS - 5, OETS - 6, or OETS - 7

Also, inventory reductions occur in the category of enlistment from which the window early reenlistment occurred, so they should be assigned to a DG(Catenl) Decision Group; and inventory additions occur in the category of enlistment to which the window early reenlistment occurred, so they should be assigned to a DG(Catenl + 1) Decision Group.

WERINVRED <Catenl, DG(Catenl), ID> =
Sum of all WEROUT records that match on Catenl,
DG(Catenl + 1) and ID, and that also satisfy the conditions
RM < ID and
SM ≥ ID

WERINVADD <Catenl + 1, DG(Catenl + 1), ID> =
Sum of all WEROUT records that match on Catenl,
DG(Catenl + 1), and ID, and that also satisfy the conditions
RM < ID and
SM ≥ ID

Counting shifts caused by window early reenlistments is simply a matter of identifying all window early reenlistments that have their shift month in a given month, as indicated by the months to the shift month (MSM) from the given inventory date.

MSM = SM - ID + 1

WERSHIFT <Catenl, DG(Catenl), ID, MSM> =
Sum of all WEROUT records that match on Catenl,
DG(Catenl), ID, and MSM = SM - ID + 1

Counting window early reenlistments is just a matter of aggregating the basic WEROUT records

WEROUT <Catenl, DG(Catenl), ID, MSM>
Sum of all WEROUT records that match on Catenl,
DG(Catenl), ID, and MSM = SM - ID + 1

Step 3: Find Inventory Reductions and Additions, Shifts and Window Early Reenlistments for Specific Months

To supply information to the calculation in Sec. II for making separation projections that have first projection month FPM, do Steps 1 and 2 for ID = FPM - 12 and again for ID = FPM, and report the following results:

WERINVRED <Catenl, DG(Catenl), FPM - 12> =
WERINVRED <Catenl, DG(Catenl), ID = FPM - 12>

WERINVADD <Catenl, DG(Catenl), FPM - 12> =
WERINVRED <Catenl, DG(Catenl), ID = FPM - 12>

WERSHIFT <Catenl, DG(Catenl), FPM - 12, PM> =
WERSHIFT <Catenl, DG(Catenl), ID = FPM - 12, MSM = PM>

WEROUT <Catenl, DG(Catenl), FPM - 12, PM> =
WEROUT <Catenl, DG(Catenl), ID = FPM - 12, MSM = PM>

WERINVRED <Catenl, DG(Catenl), FPM> =
WERINVRED <Catenl, DG(Catenl), ID = FPM>

WERINVADD <Catenl, DG(Catenl), FPM> =
WERINVADD <Catenl, DG(Catenl), ID = FPM>

OUTPUTS TO SEC. II: SEPARATION PROJECTION

For Past 12 Months

WERINVRED <Catenl, DG(Catenl), FPM - 12>
WERINVADD <Catenl, DG(Catenl), FPM - 12>
WERSHIFT <Catenl, DG(Catenl), FPM - 12, PM>
WEROUT <Catenl, DG(Catenl), FPM - 12, PM>

For First Projection Month

WERINVRED <Catenl, DG(Catenl), FPM>
WERINVADD <Catenl, DG(Catenl), FPM>

Appendix A

GLOSSARY

This glossary explains the notation used in specifying the BSP model. The notation used in defining the Decision Groups is explained in App. C.

SUBSCRIPTS

Catenl	Category of enlistment (1 = first term, 2 = second term, 3 = career terms, not retirement eligible, 4 = retirement eligible).
DG(Catenl)	Decision Groups in a given category of enlistment (see App. C for details).
DOS	Date of separation, the month in which the enlisted person currently expects to separate (either leave or reenlist), which will be later than OETS if the enlisted person has extended or has announced plans to extend (expressed as a Sequential Month Number --SMN--see App. B).
FPM	First projection month (used to indicate the Sequential Month (see App. B) during which projections start).
Grade	Pay grade: (E-1 through E-9).
ID	Inventory date (used to indicate the date on which inventory reductions due to early release programs are being counted, expressed as a Sequential Month Number

(see App. B).

LM	Loss month (used to indicate the month in which an early release loss occurs, expressed as a Sequential Month Number, see App. B).
LMOS	Months of service at the time of an early release loss.
MDOS	Months to DOS, (MDOS = 1 if DOS occurs in the current month).
MOS	Months of service (at the end of the first, partial, calendar month in the service enlisted persons have MOS = 0, meaning that they have not yet been in the service for a full month).
OETS	Date of the original expiration of term of service (expressed as a Sequential Month Number, see App. B).
PM	Projection month (used to indicate the number of months after FPM, where PM = 1 during the FPM).
RM	Reenlistment month (used to indicate a month in which an early reenlistment occurs, expressed as a Sequential Month Number, see App. B).
RMOS	Months of service at the time of an early reenlistment.
SMN	Sequential month number (see App. B).

TOE	Term of enlistment (4 years or 6 years).

PREFIXES

t	A "t" prefix on a variable indicates summation over one or more dimensions to create a total, a "d" prefix on a subscript inside a total variable indicates a dimension over which the summation was done.

VARIABLES

Change in Inventory

STARTINV	Inventory at the start of a month.

Losses from the Enlisted Force

INVATT	Attrition from inventory that existed at the start of the projection period.
RULOSS	Rollup loss (ETS losses shifted to this month from later months in the fiscal year to reduce personnel costs in the fiscal year); equal to the sum of RULOSSFROMOCT though RULOSSFROMSEP, when controlling on given loss month.
EOLOSS	Early Out loss (losses shifted to this month from months in the next fiscal year to reduce this fiscal year's end strength).
PCLOSS	Palace Chase loss (ETS losses shifted to this month from later months to send personnel to the reserve forces before the expiration of their obligated active service).
RETIREMENT	Retirement losses.

Definition of Policy-Free ETS Loss

RUSHIFT	Rollup shifts (ETS losses shifted to previous months by the Rollup program).
EOSHIFT	Early Out shifts (ETS losses shifted to previous months by the Early Out program).
PCSHIFT	Palace Chase shifts (ETS losses shifted to previous months by the Palace Chase program).
PFETSLOSS	Policy-free ETS losses (the ETS losses that would have occurred if there had been no early release programs: ETSLOSS + RUSHIFT + EOSHIFT + PCSHIFT).

Definition of Policy-Free Reenlistments

REENLISTOUT	Actual reenlistments-out of a category of enlistment. Note that this flow includes any forced early reenlistments (caused by the leave or reenlist program) and any "window" reenlistments (reenlistments that occur more than three months before OETS).
FEROUT	Forced early reenlistments-out of a category of enlistment (reenlistments whose timing is caused by the program that forces airmen to either leave the Air Force or reenlist in a specified month).
WEROUT	"Window" early reenlistments-out of a category of enlistment (reenlistments that occur earlier than three months before OETS).
FERSHIFT	Forced early reenlistment shifts (reenlistments shifted to an earlier month by the forced early reenlistment program).

WERSHIFT	Window early reenlistment shifts (reenlistments shifted to an earlier month by the policy that allows reenlistments up to a year before OETS, as opposed to the current policy of allowing reenlistments only three months before OETS).
PFREENLISTOUT	Policy-free reenlistments out of a category of enlistment (REENLISTOUT + FERSHIFT + WERSHIFT - FEROUT - WEROUT).

Definition of Policy-Free Inventory

STARTINV	Inventory at the start of the month.
PCINVRED	Inventory reduction caused by the Palace Chase program having shifted losses from after to before the inventory date.
EOINVRED	Inventory reduction caused by the Early Out program having shifted losses from after to before the inventory date.
RUINVRED	Inventory reduction caused by the Rollup program having shifted losses from after to before the inventory date.
FERINVRED	Inventory reductions caused by the forced early reenlistment program (in the origin category of enlistment).
FERINVADD	Inventory additions caused by the forced early reenlistment program (in the destination category of enlistment).
WERINVRED	Inventory reductions caused by window early reenlistments (in the origin category of enlistment).

WERINVADD	Inventory additions caused by window early reenlistment (in the destination category of enlistment).
PFSTARTINV	Inventory that would have existed if there were no early release programs and no early reenlistment programs (STARTINV + PCINVRED + EOINVRED + RUINVRED + FERINVRED + WERINVRED - FERINVADD - WERINVADD).

Changes in Category of Enlistment

RETELIGOUT	Flow out of the careers category (category 3) into the retirement-eligibility category.

Historical Loss Proportions

INVATTPROP

RETIREMENTPROP

RETELIGOUTPROP

PFETSLOSSPROP

PFREENLISTOUTPROP

Appendix B

SEQUENTIAL MONTH NUMBER

Different analyses of monthly inventories and flows must be able to transfer information without making errors in lining up the different systems of naming months. Those different naming systems include:

- Month in a calendar year.
- Month in a fiscal year.
- Month in a projection period.

To enable different analyses (or parts of one analysis) to communicate without error, a uniform method of numbering months is needed. The uniform method adopted is to number months sequentially, starting with "1" for January 1980. A simple "greater than" check then enables a computer program to tell whether one month is later than another.

The following formula translates the standard YYMM date found on airman records into the sequential month number needed for SAM.

$$SMN = 12(YY-80) + MM$$

where

SMN = Sequential Month Number.
YY = last two digits of calendar year.
MM = number of month in calendar year.

As an example use of the sequential numbering system, suppose the BSP model has predicted policy-free ETS losses for 12 projection months starting with February 1987, and that this information is to be reported in fiscal year time.

The above formula (or Table B.1) shows that the first projection month's number is 12(87 - 80) + 2 = 86, so the predictions are for months 86 through 97.

Then, Table B.2 shows that the predictions begin in the fifth month of FY87 and only the predictions for months 86 through 93 are needed to fill out FY87 accounts.

To get the computer to translate a sequential month number into fiscal year and month in fiscal year, use the following formulas:

$$FY = \{\text{Integer Part of } [(SMN + 2)/12]\} + 80$$

$$NN = SMN - 12(FY - 80) + 3$$

where

SMN = Sequential Month Number.
FY = last two digits of fiscal year.
NN = month in fiscal year.

Table B.1

SEQUENTIAL MONTH NUMBER BY CALENDAR YEAR

Calendar Year	Month in Calendar Year											
	1 Jan	2 Feb	3 Mar	4 Apr	5 May	6 Jun	7 Jul	8 Aug	9 Sep	10 Oct	11 Nov	12 Dec
80	1	2	3	4	5	6	7	8	9	10	11	12
81	13	14	15	16	17	18	19	20	21	22	23	24
82	25	26	27	28	29	30	31	32	33	34	35	36
83	37	38	39	40	41	42	43	44	45	46	47	48
84	49	50	51	52	53	54	55	56	57	58	59	60
85	61	62	63	64	65	66	67	68	69	70	71	72
86	73	74	75	76	77	78	79	80	81	82	83	84
87	85	86	87	88	89	90	91	92	93	94	95	96
88	97	98	99	100	101	102	103	104	105	106	107	108
89	109	110	111	112	113	114	115	116	117	118	119	120
90	121	122	123	124	125	126	127	128	129	130	131	132
91	133	134	135	136	137	138	139	140	141	142	143	144

Table B.2

SEQUENTIAL MONTH NUMBER BY FISCAL YEAR

Fiscal Year	Month in Fiscal Year											
	1 Oct	2 Nov	3 Dec	4 Jan	5 Feb	6 Mar	7 Apr	8 May	9 Jun	10 Jul	11 Aug	12 Sep
81	10	11	12	13	14	15	16	17	18	19	20	21
82	22	23	24	25	26	27	28	29	30	31	32	33
83	34	35	36	37	38	39	40	41	42	43	44	45
84	46	47	48	49	50	51	52	53	54	55	56	57
85	58	59	60	61	62	63	64	65	66	67	68	69
86	70	71	72	73	74	75	76	77	78	79	80	81
87	82	83	84	85	86	87	88	89	90	91	92	93
88	94	95	96	97	98	99	100	101	102	103	104	105
89	106	107	108	109	110	111	112	113	114	115	116	117
90	118	119	120	121	122	123	124	125	126	127	128	129
91	130	131	132	133	134	135	136	137	138	139	140	141
92	142	143	144	145	146	147	148	149	150	151	152	153

Appendix C

DECISION GROUPS

The separation projections made by the BSP model depend upon the separation proportions being portable. That is, the proportions of inventory that separate are assumed to be the same for the next 12 months as they were during the past 12 months. This assumption will be able to be used if the parts of the inventory that have different (but predictable) separation behavior are classified into different Decision Groups.

The following inventory classification uses the major distinctions that have been found by EFMP research to affect separation behavior.[1] The classification divides each category of enlistment into mutually exclusive and exhaustive Decision Groups. Note that the classification differs by category of enlistment, and that the Decision Groups are numbered sequentially within each category of enlistment.

Elsewhere in this document these Decision Groups are referred to with the subscript notation DG(Catenl). For example, DG(2) = 15 denotes the 15th decision group in the second-term inventory.

The Decision Groups are defined with the following inventory characteristics:

ID	Inventory date (the month during which the starting inventory is being classified into decision groups, expressed as a Sequential Month Number, see App. B).
OETS	Date of the original Expiration of Term of Service, expressed as a Sequential Month Number, see App. B).

[1]These are not necessarily the Decision Groups that will be used in the EFMS. The Air Force is testing alternative groupings to improve the accuracy and efficiency of the model's predictions.

DOS	Date of separation, the month in which the enlisted person currently expects to separate (either leave or reenlist), which will be later than OETS if the enlisted person has extended or has announced plans to extend (expressed as a Sequential Month Number, see App. B).
MDOS	Months to DOS (MDOS = 1 if DOS occurs in the current month). Note that MDOS = DOS - ID + 1.
RTS	Retirement/separation date, referred to as "RET/SEP". This date exists on airman records only if the airman has said he is leaving the Air Force on that date, and the Air Force has approved that departure. The RTS, when it exists, is often the same as the DOS. But the RTS contains the additional information that a loss is almost certain, while the DOS leaves open the possibility that the airman may reenlist at or before the DOS. (This date must be expressed as a Sequential Month Number, see App. B.)
MRTS	Months to RTS (MRTS = 1 if RTS occurs in the current month). Note that MRTS = RTS - ID + 1.
MOS	Months of Service (at the end of the first, partial, calendar month in the service enlisted persons have MOS = 0, meaning that they have not yet been in the service for a full month).
TOE	Term of enlistment (4 years or 6 years).

Grade	Pay grade.
HYT	Month in which high year of tenure occurs (depends upon grade).
MHYT	Months to high year of tenure (MHYT = 1 if HYT is in the current month).

FIRST-TERM DECISION GROUPS (CATENL=1)

	DG(1)
RET/SEP date exists (MRTS = 1 through 13)	
MRTS = 13	1
MRTS = 12	2
MRTS = 11	3
MRTS = 10	4
MRTS = 9	5
MRTS = 8	6
MRTS = 7	7
MRTS = 6	8
MRTS = 5	9
MRTS = 4	10
MRTS = 3	11
MRTS = 2	12
MRTS = 1	13
No RET/SEP date (MRTS > 13 or < 1)	
Four-Year Term of Enlistment (TOE ≤ 4)	
Pre Decision-Year: MDOS > 13 or < 1	
MOS = 0	14
MOS = 1	15
MOS = 2	16
MOS = 3-11	17
MOS = 12-23	18
MOS = 24-35	19
MOS ≥ 36	20

Decision Year: MDOS ≤ 13

Plans to separate at OETS: OETS ≥ ID and DOS ≤ OETS

MDOS = 13	21
MDOS = 12	22
MDOS = 11	23
MDOS = 10	24
MDOS = 9	25
MDOS = 8	26
MDOS = 7	27
MDOS = 6	28
MDOS = 5	29
MDOS = 4	30
MDOS = 3	31
MDOS = 2	32
MDOS = 1	33

Plans to separate after OETS: OETS ≥ ID and DOS > OETS

MDOS = 13	34
MDOS = 12	35
MDOS = 11	36
MDOS = 10	37
MDOS = 9	38
MDOS = 8	39
MDOS = 7	40
MDOS = 6	41
MDOS = 5	42
MDOS = 4	43
MDOS = 3	44
MDOS = 2	45
MDOS = 1	46

Will separate after OETS: OETS < ID

MDOS = 13	47
MDOS = 12	48
MDOS = 11	49
MDOS = 10	50
MDOS = 9	51

MDOS = 8 52
MDOS = 7 53
MDOS = 6 54
MDOS = 5 55
MDOS = 4 56
MDOS = 3 57
MDOS = 2 58
MDOS = 1 59

No RET/SEP date (MRTS > 13 or < 1)
Six-Year Term of Enlistment (TOE ≥5)
Pre Decision-Year: MDOS ≥ 13 or < 1
MOS = 0 60
MOS = 1 61
MOS = 2 62
MOS = 3-11 63
MOS = 12-23 64
MOS = 24-35 65
MOS ≥ 36 66
Decision Year: MDOS ≤ 12
Plans to separate at OETS: OETS ≥ ID and DOS ≤ OETS
MDOS = 13 67
MDOS = 12 68
MDOS = 11 69
MDOS = 10 70
MDOS = 9 71
MDOS = 8 72
MDOS = 7 73
MDOS = 6 74
MDOS = 5 75
MDOS = 4 76
MDOS = 3 77
MDOS = 2 78
MDOS = 1 79
Plans to separate after OETS: OETS ≥ ID and DOS > OETS
MDOS = 13 80
MDOS = 12 81

MDOS = 11	82
MDOS = 10	83
MDOS = 9	84
MDOS = 8	85
MDOS = 7	86
MDOS = 6	87
MDOS = 5	88
MDOS = 4	89
MDOS = 3	90
MDOS = 2	91
MDOS = 1	92
Will separate after OETS: OETS < ID	
MDOS = 13	93
MDOS = 12	94
MDOS = 11	95
MDOS = 10	96
MDOS = 9	97
MDOS = 8	98
MDOS = 7	99
MDOS = 6	100
MDOS = 5	101
MDOS = 4	102
MDOS = 3	103
MDOS = 2	104
MDOS = 1	105

SECOND-TERM DECISION GROUPS (CATENL = 2)

	DG(2)
RET/SEP date exists (MRTS = 1 through 13)	
MRTS = 13	1
MRTS = 12	2
MRTS = 11	3
MRTS = 10	4
MRTS = 9	5

MRTS = 8 6
MRTS = 7 7
MRTS = 6 8
MRTS = 5 9
MRTS = 4 10
MRTS = 3 11
MRTS = 2 12
MRTS = 1 13

No RET/SEP date (MRTS > 13 or < 1)

Pre Decision-Year: MDOS > 13 or < 1
MOS = 0-47 14
MOS = 48-59 15
MOS = 60-71 16
MOS = 72-83 17
MOS = 84-95 18
MOS = 96-107 19
MOS = 108-119 20
MOS = 120-131 21
MOS = 132-143 22
MOS = 144-155 23
MOS = 156-167 24
MOS = 168-179 25
MOS = 180+ 26

Decision Year: MDOS ≤ 13
Plans to separate at OETS: OETS ≥ ID and DOS ≤ OETS
MDOS = 13 27
MDOS = 12 28
MDOS = 11 29
MDOS = 10 30
MDOS = 9 31
MDOS = 8 32
MDOS = 7 33

MDOS = 6	34
MDOS = 5	35
MDOS = 4	36
MDOS = 3	37
MDOS = 2	38
MDOS = 1	39
Plans to separate after OETS: OETS ≥ ID and DOS > OETS	
MDOS = 13	40
MDOS = 12	41
MDOS = 11	42
MDOS = 10	43
MDOS = 9	44
MDOS = 8	45
MDOS = 7	46
MDOS = 6	47
MDOS = 5	48
MDOS = 4	49
MDOS = 3	50
MDOS = 2	51
MDOS = 1	52
Will separate after OETS: OETS < ID	
MDOS = 13	53
MDOS = 12	54
MDOS = 11	55
MDOS = 10	56
MDOS = 9	57
MDOS = 8	58
MDOS = 7	59
MDOS = 6	60
MDOS = 5	61
MDOS = 4	62
MDOS = 3	63
MDOS = 2	64
MDOS = 1	65

CAREER-TERM DECISION GROUPS (CATENL ≥ 3 AND MOS ≤ 240)

	DG(3)
RET/SEP date exists (MRTS = 1 through 13)	
MRTS = 13	1
MRTS = 12	2
MRTS = 11	3
MRTS = 10	4
MRTS = 9	5
MRTS = 8	6
MRTS = 7	7
MRTS = 6	8
MRTS = 5	9
MRTS = 4	10
MRTS = 3	11
MRTS = 2	12
MRTS = 1	13
No RET/SEP date (MRTS > 13 or < 1)	
Pre Retirement-Decision-Year: MOS < 228	
MDOS ≥ 14	14
MDOS = 13	15
MDOS = 12	16
MDOS = 11	17
MDOS = 10	18
MDOS = 9	19
MDOS = 8	20
MDOS = 7	21
MDOS = 6	22
MDOS = 5	23
MDOS = 4	24
MDOS = 3	25
MDOS = 2	26
MDOS = 1	27

Retirement Decision Year: MOS ≥ 228
Grade ≥ 6

MOS = 228	28
MOS = 229	29
MOS = 230	30
MOS = 231	31
MOS = 232	32
MOS = 233	33
MOS = 234	34
MOS = 235	35
MOS = 236	36
MOS = 237	37
MOS = 238	38
MOS = 239	39
MOS = 240	40

Retirement-Decision-Year: MOS ≥ 228
Grade ≤ 5

MOS = 228	41
MOS = 229	42
MOS = 230	43
MOS = 231	44
MOS = 232	45
MOS = 233	46
MOS = 234	47
MOS = 235	48
MOS = 236	49
MOS = 237	50
MOS = 238	51
MOS = 239	52
MOS = 240	53

RETIREMENT-ELIGIBLE DECISION GROUPS (MOS ≥ 241)

	DG(4)
RET/SEP date exists (MRTS = 1 through 13)	
MRTS = 13	1
MRTS = 12	2
MRTS = 11	3
MRTS = 10	4
MRTS = 9	5
MRTS = 8	6
MRTS = 7	7
MRTS = 6	8
MRTS = 5	9
MRTS = 4	10
MRTS = 3	11
MRTS = 2	12
MRTS = 1	13
No RET/SEP date (MRTS > 13 or < 1)	
MHYT ≥ 14	
MOS = 241	14
MOS = 242	15
MOS = 243	16
MOS = 244-252	17
MOS = 253	18
MOS = 254	19
MOS = 255	20
MOS = 256	21
MOS = 257	22
MOS = 258	23
MOS = 259	24
MOS = 260	25
MOS = 261	26
MOS = 262	27

MOS = 263	28
MOS = 264	29
MOS = 265-300	30
MOS = 301	31
MOS = 302	32
MOS = 303	33
MOS = 304	34
MOS = 305	35
MOS = 306	36
MOS = 307	37
MOS = 308	38
MOS = 309	39
MOS = 310	40
MOS = 311	41
MOS = 312	42
MOS ≥ 313	43

No RET/SEP date (MRTS > 13 or < 1)
MHYT ≤ 13

MHYT = 13	44
MHYT = 12	45
MHYT = 11	46
MHYT = 10	47
MHYT = 9	48
MHYT = 8	49
MHYT = 7	50
MHYT = 6	51
MHYT = 5	52
MHYT = 4	53
MHYT = 3	54
MHYT = 2	55
MHYT = 1	56

Appendix D

ILLUSTRATIVE DATA FOR THE BSP MODEL

The following five tables contain illustrative data for the Benchmark Separation Projection model. The tables give starting inventories as of the beginning of February 1988 and actual monthly flows for February through the end of the fiscal year in September 1988.

The numbers in these tables are accurate enough to show the relative size of Decision Groups and patterns of flows out of the Decision Groups. However, the BSP data collection algorithms continue to be improved over time, so the data in this appendix may not always reflect the latest detailed understanding of historical events.

The right hand column of the tables gives the Decision Group, indicated by a code. The first two digits of the code are the category of enlistment, and the remaining digits are the Decision Group number within that category of enlistment (e.g., "C4DG001" is Decision Group 1 in category of enlistment 4).

The second and third columns of each table give two starting inventory counts: actual inventory and policy-free inventory. The latter is the actual inventory adjusted to remove the effects of early release and early reenlistment programs.

The remaining columns of the tables give monthly flows out of the inventories in each Decision Group. The flows on each line all come from the same starting inventory. Adding flows across all eight months on a line gives the total outflow from that Decision Group during the eight months.

The tables present flow data in the following order:

Table D.1	Inventory attrition losses
Table D.2	Policy-free ETS losses
Table D.3	Policy-free reenlistments out
Table D.4	Retirement losses
Table D.5	Flows out to retirement eligibility

In using the BSP model, one divides the historical monthly flow by the historical starting inventory to get a flow rate. Then one multiplies the current inventory by this historical flow rate to estimate the future monthly flow. For policy-free flows, one uses the policy-free inventory. For all other flows, one uses the actual inventory (which for those flows usually is the same as the policy-free inventory).

Note that the following Decision Groups have been added to those defined in Sec. I and App. C:

C1DG106	Cat. 1, grade E-1, more than 36 months of service
C2DG066	Cat. 2, grade E-1, more than 36 months of service
C3DG054	Cat. 3, grade E-1, more than 36 months of service
C4DG057	Cat. 4, grade E-1, more than 36 months of service

These Decision Groups collect personnel who have been demoted to the lowest possible grade, often as a preliminary step to separation from the Air Force. Consequently, these groups have very high attrition rates.

In addition, during development of the BSP data collection algorithms, personnel who fell through the cracks of the classification system were assigned to even higher-numbered Decision Groups in each category of enlistment. However, these miscellaneous Decision Groups are no longer used because the data algorithms now classify all personnel into the existing Decision Groups.

Table D.1

INVENTORY ATTRITION LOSSES: FEBRUARY 1988 THROUGH SEPTEMBER 1988, BY DECISION GROUP

Decision Group	Starting Inventory		Month During Rest of Fiscal Year							
	Actual	Policy Free	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
C1DG001	2	2	--	--	--	--	--	--	--	--
C1DG002	2	2	--	--	--	--	--	--	--	--
C1DG003	9	9	--	--	--	--	--	--	--	--
C1DG004	12	12	--	--	--	--	--	1	--	--
C1DG005	14	14	--	1	--	--	--	--	--	--
C1DG006	23	23	--	1	--	--	--	--	--	--
C1DG007	31	31	1	--	--	--	1	1	1	--
C1DG008	46	46	--	1	1	--	1	--	--	1
C1DG009	124	124	--	1	2	1	--	--	--	--
C1DG010	1,096	1,096	4	7	3	3	2	2	--	--
C1DG011	2,816	2,816	9	16	28	5	1	1	1	2
C1DG012	3,451	3,451	14	89	2	6	3	2	4	2
C1DG013	1,570	1,570	196	4	1	2	--	1	--	--
C1DG014	2,878	2,878	125	60	21	24	15	13	23	7
C1DG015	3,698	3,699	57	32	33	28	24	8	3	10
C1DG016	2,613	2,613	24	29	24	17	11	7	11	13
C1DG017	30,554	30,556	151	154	168	142	132	127	161	130
C1DG018	44,790	45,608	196	254	219	234	234	238	218	220
C1DG019	42,717	43,055	165	227	225	196	206	204	205	189
C1DG020	12,452	12,535	18	42	26	35	38	37	31	45
C1DG021	2,450	2,550	9	9	6	5	5	5	5	5
C1DG022	2,893	2,989	12	7	8	3	5	10	10	8
C1DG023	2,467	2,602	7	9	3	4	8	3	6	2
C1DG024	1,961	2,065	8	6	3	4	1	5	6	7
C1DG025	2,192	2,311	5	9	3	2	1	8	3	7
C1DG026	1,950	2,120	7	8	--	6	4	2	--	5
C1DG027	1,619	1,748	8	5	2	2	4	1	1	3
C1DG028	1,712	1,846	5	8	1	4	1	3	2	4
C1DG029	1,395	1,547	9	3	3	--	4	2	4	1
C1DG030	893	1,035	5	3	3	2	2	1	1	2
C1DG031	788	956	4	1	1	--	2	1	2	--
C1DG032	544	755	1	2	--	--	--	1	--	2
C1DG033	356	521	1	1	--	--	1	--	--	1
C1DG034	322	323	1	2	--	1	1	2	--	1
C1DG035	457	458	--	2	--	--	--	3	--	1
C1DG036	294	299	--	1	--	--	--	--	--	--
C1DG037	273	273	3	1	1	--	--	1	1	1

Table D.1 (cont'd)

C1DG039	222	223	1	--	1	1	1	--	--	1
C1DG040	190	192	--	1	1	--	--	--	--	--
C1DG041	173	175	--	2	--	--	--	--	--	1
C1DG042	111	112	1	2	1	--	--	1	--	1
C1DG043	29	32	--	--	--	--	--	--	--	--
C1DG044	17	20	--	--	--	--	--	--	--	--
C1DG045	9	9	--	--	--	--	--	--	--	--
C1DG046	--	0	--	--	--	--	--	--	--	--
C1DG047	328	330	1	3	2	--	--	1	--	1
C1DG048	488	489	3	--	1	1	2	--	1	--
C1DG049	362	366	2	--	--	--	--	2	1	--
C1DG050	397	398	--	--	2	--	--	1	1	--
C1DG051	370	371	--	--	--	--	1	3	4	--
C1DG052	441	449	--	5	1	2	2	1	1	--
C1DG053	303	314	1	2	1	1	2	--	--	1
C1DG054	463	467	1	2	2	2	--	2	1	--
C1DG055	357	365	--	4	1	--	1	--	--	--
C1DG056	191	199	--	--	1	--	--	--	1	1
C1DG057	134	146	1	1	--	2	1	1	--	1
C1DG058	105	113	3	2	1	--	1	1	1	--
C1DG059	63	75	--	1	--	2	1	2	--	--
C1DG060	506	506	27	7	7	1	1	4	4	2
C1DG061	758	758	8	14	8	7	2	1	4	3
C1DG062	853	853	8	12	6	10	5	3	3	5
C1DG063	4,984	4,984	19	39	29	51	165	36	29	27
C1DG064	8,732	8,736	56	56	36	59	63	72	60	59
C1DG065	5,019	5,029	23	27	37	32	20	19	28	23
C1DG066	8,995	9,104	20	22	33	45	41	27	41	39
C1DG067	292	303	1	--	--	1	--	--	--	1
C1DG068	252	260	--	--	1	--	--	--	--	--
C1DG069	221	230	--	1	--	1	2	1	--	--
C1DG070	222	242	2	--	--	1	--	--	--	1
C1DG071	216	233	--	--	--	--	--	1	1	--
C1DG072	207	226	--	1	1	1	--	--	--	1
C1DG073	208	221	1	--	--	1	--	--	--	--
C1DG074	148	172	--	1	1	--	--	1	2	--
C1DG075	194	210	--	--	--	--	1	--	--	--
C1DG076	112	139	1	--	--	--	--	--	--	--
C1DG077	104	116	--	--	--	--	--	1	--	--
C1DG078	48	68	--	1	--	--	--	--	--	--
C1DG079	33	56	--	--	--	--	--	--	--	--
C1DG080	56	56	--	--	--	--	--	--	--	--
C1DG081	49	49	--	--	--	1	--	--	--	--
C1DG082	37	38	--	1	1	--	--	--	--	--
C1DG083	46	46	--	--	--	--	--	--	--	--
C1DG084	30	30	--	--	--	--	--	--	--	--
C1DG085	36	36	1	--	--	--	--	1	--	--
C1DG086	26	27	--	--	--	--	--	--	--	--
C1DG087	19	19	2	--	--	--	--	1	--	--

Table D.1 (cont'd)

C1DG088	16	16	--	--	--	--	--	--	--	--
C1DG089	10	10	1	--	--	--	--	--	--	--
C1DG090	3	3	--	--	--	--	--	--	--	--
C1DG091	--	0	--	--	--	--	--	--	--	--
C1DG092	--	0	--	--	--	--	--	--	--	--
C1DG093	29	29	--	--	--	--	--	--	--	--
C1DG094	36	38	--	--	--	--	--	--	--	--
C1DG095	26	26	--	--	--	--	--	--	1	--
C1DG096	33	33	--	1	2	--	--	--	--	--
C1DG097	36	36	--	--	--	--	1	--	--	--
C1DG098	31	31	--	--	--	--	--	--	--	--
C1DG099	28	28	--	--	--	--	--	--	1	--
C1DG100	35	35	1	--	--	--	--	--	--	--
C1DG101	23	23	1	--	--	--	--	--	--	--
C1DG102	17	17	--	--	--	--	--	--	--	--
C1DG103	17	18	--	--	1	--	--	--	--	--
C1DG104	8	10	--	--	--	--	--	--	--	--
C1DG105	5	6	--	--	--	--	--	--	--	--
C1DG106	134	134	29	21	16	7	1	11	3	6
C2DG001	--	0	--	--	--	--	--	--	--	--
C2DG002	3	3	--	--	1	--	1	--	--	--
C2DG003	2	2	--	--	1	--	--	--	--	--
C2DG004	4	4	--	--	--	--	--	--	--	--
C2DG005	4	4	--	1	--	--	--	--	--	--
C2DG006	61	61	--	--	--	--	--	--	--	--
C2DG007	15	15	--	--	--	--	--	--	--	--
C2DG008	12	12	--	--	--	--	--	1	--	--
C2DG009	76	76	--	1	--	--	1	--	--	--
C2DG010	174	174	--	1	1	--	--	--	1	1
C2DG011	804	804	--	4	10	2	--	2	--	--
C2DG012	819	819	2	34	2	--	--	--	--	--
C2DG013	371	371	72	--	1	--	--	1	--	--
C2DG014	5,787	5,800	2	5	14	8	9	4	9	7
C2DG015	17,952	18,069	21	27	38	30	45	37	42	45
C2DG016	22,539	22,729	31	36	44	51	64	45	56	64
C2DG017	24,574	24,722	30	54	38	53	62	74	62	48
C2DG018	15,788	15,867	21	41	31	45	40	42	39	33
C2DG019	9,581	9,606	11	19	25	29	23	26	25	19
C2DG020	3,878	3,885	4	6	13	13	7	5	6	6
C2DG021	1,622	1,622	2	2	3	2	2	2	2	3
C2DG022	670	672	1	--	--	--	--	2	--	1
C2DG023	241	241	--	1	--	2	--	--	--	1
C2DG024	109	109	--	--	--	--	--	--	--	--
C2DG025	21	21	--	--	--	--	--	--	--	--
C2DG026	11	11	--	--	--	--	--	--	--	--
C2DG027	1,139	1,218	3	3	--	1	3	2	1	3
C2DG028	1,121	1,151	4	6	1	--	2	2	3	4
C2DG029	1,156	1,201	2	4	1	2	3	4	1	3
C2DG030	1,082	1,104	2	2	1	2	1	2	2	--

Table D.1 (cont'd)

C2DG031	713	758	3	2	2	--	2	--	--	2
C2DG032	1,183	1,212	1	2	4	--	2	5	3	2
C2DG033	863	902	3	3	1	1	--	4	3	1
C2DG034	942	982	--	3	2	--	1	1	2	1
C2DG035	922	964	--	1	1	1	1	1	2	--
C2DG036	700	748	2	1	2	2	--	1	1	2
C2DG037	532	580	2	--	--	--	1	--	--	--
C2DG038	527	577	2	2	--	--	1	1	--	--
C2DG039	279	331	1	--	--	--	--	1	--	--
C2DG040	281	283	--	--	--	--	1	2	--	1
C2DG041	363	364	--	--	1	--	--	--	--	2
C2DG042	208	211	--	--	--	--	1	--	--	--
C2DG043	226	227	1	--	2	2	1	1	--	--
C2DG044	165	165	--	1	--	--	--	--	--	1
C2DG045	167	168	--	--	--	--	1	1	1	--
C2DG046	135	135	2	--	--	--	--	--	1	--
C2DG047	123	126	--	1	1	1	--	--	--	--
C2DG048	78	78	--	--	--	--	--	--	1	--
C2DG049	57	58	--	--	--	1	--	--	--	--
C2DG050	23	23	--	--	--	--	--	--	--	--
C2DG051	7	7	--	--	--	--	--	--	--	--
C2DG052	--	0	--	--	--	--	--	--	--	--
C2DG053	159	159	--	--	1	--	--	--	--	--
C2DG054	208	208	--	1	2	1	--	--	--	1
C2DG055	132	132	--	--	--	--	--	--	1	1
C2DG056	167	167	--	--	1	--	--	--	--	1
C2DG057	173	173	--	--	--	1	1	--	--	1
C2DG058	160	162	--	--	--	--	1	1	--	--
C2DG059	157	157	--	1	1	--	1	--	2	--
C2DG060	191	192	1	--	1	--	--	--	1	1
C2DG061	189	193	--	1	--	1	--	--	--	--
C2DG062	214	216	--	--	1	1	--	--	--	--
C2DG063	139	145	1	--	--	1	--	1	2	--
C2DG064	134	136	--	1	2	--	--	--	--	--
C2DG065	95	97	1	--	--	--	--	--	1	--
C2DG066	73	73	14	13	13	7	3	4	2	3
C3DG001	--	0	--	--	--	--	--	--	--	--
C3DG002	113	113	--	--	--	--	--	--	--	--
C3DG003	156	156	--	--	--	--	1	--	--	--
C3DG004	320	320	--	1	--	--	--	--	--	--
C3DG005	325	325	--	--	--	--	--	--	--	--
C3DG006	476	476	--	--	--	--	--	--	2	1
C3DG007	509	509	--	--	--	--	--	--	--	--
C3DG008	332	332	--	--	1	--	--	--	--	--
C3DG009	215	215	--	--	1	--	2	1	--	--
C3DG010	196	196	--	--	1	--	--	--	--	--
C3DG011	361	361	--	1	7	--	--	--	1	--
C3DG012	366	366	1	12	--	1	--	--	1	--
C3DG013	108	108	29	--	2	--	--	1	--	--

Table D.1 (cont'd)

C3DG014	111,689	111,830	67	110	116	126	120	117	126	139
C3DG015	1,389	1,412	--	1	--	1	2	2	1	--
C3DG016	1,525	1,531	2	1	2	--	--	1	1	3
C3DG017	1,314	1,320	2	--	1	2	1	3	2	2
C3DG018	1,200	1,208	1	1	2	1	1	--	1	1
C3DG019	1,030	1,034	2	1	1	3	3	4	--	3
C3DG020	1,562	1,572	1	11	1	1	--	2	1	3
C3DG021	1,099	1,117	2	2	--	2	--	--	1	--
C3DG022	1,093	1,096	1	3	1	2	2	1	--	1
C3DG023	1,009	1,019	1	--	1	--	1	1	--	2
C3DG024	930	935	1	1	--	--	--	1	--	--
C3DG025	752	760	3	1	3	--	--	1	2	--
C3DG026	561	570	--	1	1	--	--	--	--	--
C3DG027	403	411	1	1	--	--	1	--	1	--
C3DG028	843	843	--	--	--	--	--	--	--	--
C3DG029	980	980	--	--	--	--	--	1	--	--
C3DG030	929	929	--	1	--	--	1	--	1	1
C3DG031	808	808	--	--	--	--	--	1	--	--
C3DG032	1,039	1,039	--	--	--	--	--	--	1	--
C3DG033	1,004	1,004	--	--	1	--	--	--	--	--
C3DG034	1,068	1,068	--	--	--	--	--	--	1	--
C3DG035	1,006	1,006	--	--	--	--	--	--	--	--
C3DG036	641	641	--	--	--	--	--	--	--	--
C3DG037	598	598	--	1	--	--	--	--	--	--
C3DG038	454	454	--	--	--	--	--	--	--	--
C3DG039	507	507	--	--	1	--	--	--	--	--
C3DG040	587	587	--	--	--	--	--	--	--	--
C3DG041	56	56	1	--	--	--	--	1	--	--
C3DG042	53	53	--	--	--	--	--	--	--	1
C3DG043	54	54	--	--	1	--	--	--	--	--
C3DG044	45	45	--	1	--	--	--	--	--	--
C3DG045	44	44	--	--	--	--	--	1	--	--
C3DG046	29	29	--	--	--	--	--	--	--	--
C3DG047	26	26	--	--	--	--	--	1	--	--
C3DG048	18	18	--	1	--	--	--	1	--	--
C3DG049	10	10	--	--	--	--	--	--	--	--
C3DG050	12	12	--	1	--	--	--	1	--	--
C3DG051	3	3	--	--	--	--	--	--	--	--
C3DG052	1	1	--	--	--	--	--	--	--	--
C3DG053	2	2	--	--	--	--	--	--	--	--
C3DG054	39	39	6	7	2	2	--	7	3	1
C4DG001	--	0	--	--	--	--	--	--	--	--
C4DG002	33	33	--	--	--	--	--	--	--	--
C4DG003	80	80	--	--	--	--	--	--	--	--
C4DG004	116	116	--	--	--	--	--	--	--	--
C4DG005	232	232	--	--	--	--	--	--	1	--
C4DG006	381	381	--	--	--	--	--	--	--	--
C4DG007	571	571	--	--	--	--	--	1	--	--
C4DG008	485	485	--	--	--	--	--	--	--	--

Table D.1 (cont'd)

C4DG009	242	242	--	--	--	--	--	--	--	--
C4DG010	250	250	--	--	--	--	--	--	--	--
C4DG011	342	342	--	--	--	--	--	--	--	--
C4DG012	413	413	--	--	--	--	--	--	--	--
C4DG013	809	809	--	--	--	--	--	--	--	--
C4DG014	530	530	--	--	--	--	--	--	--	--
C4DG015	488	488	--	--	--	--	--	--	--	--
C4DG016	460	460	--	--	--	--	--	--	--	--
C4DG017	4,435	4,435	--	3	1	--	1	1	--	--
C4DG018	260	260	--	--	--	--	--	--	--	--
C4DG019	233	233	--	--	--	--	--	--	--	--
C4DG020	258	258	--	--	--	--	--	--	--	--
C4DG021	353	353	--	--	--	--	1	1	--	--
C4DG022	365	365	--	--	--	--	--	--	--	--
C4DG023	362	362	--	--	--	--	--	--	--	--
C4DG024	552	552	--	--	--	--	--	--	--	--
C4DG025	395	395	--	--	--	--	--	--	--	--
C4DG026	382	382	--	--	--	--	--	--	--	--
C4DG027	301	301	--	--	--	--	--	1	--	--
C4DG028	168	168	--	--	--	--	--	--	--	--
C4DG029	228	228	--	--	--	--	--	--	--	--
C4DG030	5,883	5,883	--	--	--	--	--	1	--	--
C4DG031	54	54	--	--	--	--	--	--	--	--
C4DG032	63	63	--	--	--	--	--	--	--	--
C4DG033	87	87	--	--	--	--	--	--	--	--
C4DG034	93	93	--	--	--	--	--	--	--	--
C4DG035	100	100	--	--	--	--	--	--	--	--
C4DG036	111	111	--	--	--	--	--	--	--	--
C4DG037	113	113	--	--	--	--	--	--	--	--
C4DG038	87	87	--	--	--	--	--	--	--	--
C4DG039	54	54	--	--	--	--	--	--	--	--
C4DG040	61	61	--	--	--	--	--	--	--	--
C4DG041	92	92	--	--	--	--	--	--	--	--
C4DG042	110	110	--	--	--	--	--	--	--	--
C4DG043	1,932	1,932	--	--	--	--	--	--	--	--
C4DG044	122	122	--	--	--	--	--	--	--	--
C4DG045	50	50	--	--	--	--	--	--	--	--
C4DG046	63	63	--	--	--	--	--	--	--	--
C4DG047	75	75	--	--	--	--	--	--	--	--
C4DG048	70	70	--	--	--	--	--	--	--	--
C4DG049	67	67	--	--	--	--	--	--	--	--
C4DG050	65	65	--	--	--	--	--	--	--	--
C4DG051	60	60	--	--	--	--	--	--	--	--
C4DG052	23	23	--	--	--	--	--	--	--	--
C4DG053	19	19	--	--	--	--	--	--	--	--
C4DG054	12	12	--	--	--	--	--	--	--	--
C4DG055	16	16	--	--	--	--	--	--	--	--
C4DG056	12	12	--	--	--	--	--	--	--	--
C4DG057	3	3	--	1	--	--	--	1	--	--

Table D.2

POLICY-FREE ETS LOSSES: FEBRUARY 1988 THROUGH SEPTEMBER 1988, BY DECISION GROUP

Decision Group	Starting Inventory		Month During Rest of Fiscal Year							
	Actual	Policy Free	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
C1DG001	2	2	--	--	--	--	--	--	--	--
C1DG002	2	2	--	--	--	--	--	--	--	--
C1DG003	9	9	--	--	--	--	--	--	--	--
C1DG004	12	12	--	--	--	--	--	--	--	--
C1DG005	14	14	--	--	--	--	--	--	--	2
C1DG006	23	23	--	--	--	--	1	--	--	13
C1DG007	31	31	--	--	--	--	--	--	15	--
C1DG008	46	46	--	--	--	--	1	20	3	1
C1DG009	124	124	--	--	--	12	95	--	--	--
C1DG010	1,096	1,096	--	5	30	612	4	2	2	2
C1DG011	2,816	2,816	1	6	744	119	86	104	83	85
C1DG012	3,451	3,451	3	1,187	336	327	292	307	253	303
C1DG013	1,570	1,570	1,194	12	4	7	3	3	5	6
C1DG014	2,878	2,878	--	--	--	--	--	--	--	--
C1DG015	3,698	3,699	--	--	--	--	--	--	--	--
C1DG016	2,613	2,613	--	--	--	--	--	--	1	--
C1DG017	30,554	30,556	1	--	--	--	--	--	--	--
C1DG018	44,790	45,608	55	--	--	--	--	--	--	1
C1DG019	42,717	43,055	73	--	--	--	--	--	1	1
C1DG020	12,452	12,535	79	4	3	2	4	5	9	8
C1DG021	2,450	2,550	1	--	--	--	--	--	--	--
C1DG022	2,893	2,989	--	--	--	--	--	--	--	--
C1DG023	2,467	2,602	--	--	--	--	--	--	2	2
C1DG024	1,961	2,065	--	--	--	--	--	--	3	1
C1DG025	2,192	2,311	--	--	--	1	--	3	3	--
C1DG026	1,950	2,120	--	--	--	--	--	2	1	1,022
C1DG027	1,619	1,748	--	--	--	--	--	--	851	129
C1DG028	1,712	1,846	--	--	--	--	--	962	138	--
C1DG029	1,395	1,547	--	--	--	--	724	154	1	1
C1DG030	893	1,035	--	2	--	357	151	2	2	--
C1DG031	788	956	--	--	301	168	--	1	--	--
C1DG032	544	755	--	181	214	1	1	--	1	--
C1DG033	356	521	62	177	--	--	--	--	--	--
C1DG034	322	323	1	1	--	--	--	--	--	--
C1DG035	457	458	--	--	--	--	--	--	1	--
C1DG036	294	299	--	--	--	--	--	--	--	1
C1DG037	273	273	--	--	--	--	--	--	--	--

Table D.2 (cont'd)

C1DG038	279	279	--	--	--	--	--	1	1	1
C1DG039	222	223	--	--	--	--	--	--	--	103
C1DG040	190	192	--	--	--	--	--	1	106	3
C1DG041	173	175	--	1	--	--	--	79	3	--
C1DG042	111	112	--	1	--	--	58	2	--	--
C1DG043	29	32	--	--	--	8	3	--	--	--
C1DG044	17	20	--	--	7	3	--	--	--	--
C1DG045	9	9	--	4	--	--	--	--	--	--
C1DG046	--	--	--	--	--	--	--	--	--	--
C1DG047	328	330	--	--	--	--	--	--	--	--
C1DG048	488	489	--	--	--	--	--	--	--	--
C1DG049	362	366	--	--	--	--	--	--	1	1
C1DG050	397	398	--	--	--	--	--	--	2	--
C1DG051	370	371	--	--	--	--	--	--	--	--
C1DG052	441	449	--	--	--	--	--	--	--	202
C1DG053	303	314	--	--	--	--	--	--	154	13
C1DG054	463	467	1	--	--	--	--	253	4	--
C1DG055	357	365	--	1	--	--	163	8	1	1
C1DG056	191	199	--	--	1	78	11	--	--	--
C1DG057	134	146	--	2	51	12	3	--	--	--
C1DG058	105	113	--	33	9	--	--	--	--	--
C1DG059	63	75	7	18	--	--	--	--	--	--
C1DG060	506	506	--	--	--	--	--	--	--	--
C1DG061	758	758	--	--	--	--	--	--	--	--
C1DG062	853	853	--	--	--	--	--	--	--	--
C1DG063	4,984	4,984	--	--	--	--	--	--	--	--
C1DG064	8,732	8,736	--	--	--	--	--	--	--	1
C1DG065	5,019	5,029	--	--	--	--	--	--	--	--
C1DG066	8,995	9,104	8	2	--	--	1	--	--	2
C1DG067	292	303	--	--	--	--	--	--	--	--
C1DG068	252	260	--	--	--	--	--	--	--	--
C1DG069	221	230	--	--	--	--	--	--	--	--
C1DG070	222	242	--	--	--	--	--	--	--	--
C1DG071	216	233	--	--	--	--	--	--	--	--
C1DG072	207	226	--	--	--	--	--	--	--	97
C1DG073	208	221	--	--	--	--	--	--	93	13
C1DG074	148	172	--	--	--	--	--	72	24	--
C1DG075	194	210	1	--	--	--	95	17	--	--
C1DG076	112	139	--	--	--	27	28	--	--	--
C1DG077	104	116	--	--	34	12	--	--	--	--
C1DG078	48	68	--	15	21	--	--	--	--	--
C1DG079	33	56	5	25	--	--	--	--	--	--
C1DG080	56	56	--	--	--	--	--	--	1	--
C1DG081	49	49	--	--	--	--	--	--	--	--
C1DG082	37	38	--	--	--	--	--	--	--	--
C1DG083	46	46	--	--	--	--	--	--	--	--
C1DG084	30	30	--	--	--	--	--	--	--	--
C1DG085	36	36	--	--	--	--	--	--	--	14

Table D.2 (cont'd)

C1DG086	26	27	--	--	--	--	--	--	4	2
C1DG087	19	19	--	--	--	--	--	7	--	--
C1DG088	16	16	--	--	--	--	4	--	--	--
C1DG089	10	10	--	--	--	2	--	--	--	--
C1DG090	3	3	--	--	2	--	--	--	--	--
C1DG091	--	--	--	--	--	--	--	--	--	--
C1DG092	--	--	--	--	--	--	--	--	--	--
C1DG093	29	29	--	--	--	--	--	--	--	--
C1DG094	36	38	--	--	--	--	--	--	--	--
C1DG095	26	26	--	--	--	--	--	--	--	--
C1DG096	33	33	--	--	--	--	--	--	--	--
C1DG097	36	36	--	--	--	--	--	--	--	--
C1DG098	31	31	--	--	--	--	--	--	--	10
C1DG099	28	28	--	--	--	--	--	--	8	--
C1DG100	35	35	--	--	--	--	--	13	--	--
C1DG101	23	23	--	--	--	--	9	--	--	--
C1DG102	17	17	--	--	--	1	--	--	--	--
C1DG103	17	18	--	--	7	1	--	--	--	--
C1DG104	8	10	--	3	2	--	--	--	--	--
C1DG105	5	6	2	1	--	--	--	--	--	--
C1DG106	134	134	3	3	1	1	--	2	1	--
C2DG001	--	--	--	--	--	--	--	--	--	--
C2DG002	3	3	--	--	--	--	--	--	--	--
C2DG003	2	2	--	--	--	--	--	--	--	--
C2DG004	4	4	--	--	--	--	--	--	--	--
C2DG005	4	4	--	1	--	--	--	--	--	--
C2DG006	61	61	--	--	--	--	--	--	--	4
C2DG007	15	15	--	--	--	--	--	--	5	--
C2DG008	12	12	--	--	--	--	1	4	--	--
C2DG009	76	76	--	--	--	8	34	--	1	--
C2DG010	174	174	--	1	5	46	1	--	--	--
C2DG011	804	804	--	1	104	29	32	35	28	48
C2DG012	819	819	2	279	61	61	51	80	66	63
C2DG013	371	371	231	4	3	1	1	1	2	2
C2DG014	5,787	5,800	1	--	--	--	1	--	--	--
C2DG015	17,952	18,069	6	--	--	--	1	--	--	--
C2DG016	22,539	22,729	7	--	--	--	1	2	--	1
C2DG017	24,574	24,722	14	--	--	--	1	--	2	--
C2DG018	15,788	15,867	12	1	1	2	--	--	--	--
C2DG019	9,581	9,606	6	--	1	1	1	1	1	1
C2DG020	3,878	3,885	4	1	--	--	--	--	1	--
C2DG021	1,622	1,622	--	--	--	1	--	1	--	--
C2DG022	670	672	--	--	1	--	--	--	--	--
C2DG023	241	241	--	--	--	--	--	--	--	--
C2DG024	109	109	--	--	--	--	--	--	--	--
C2DG025	21	21	--	--	--	--	--	--	--	--
C2DG026	11	11	--	--	--	--	--	--	--	--
C2DG027	1,139	1,218	--	--	--	--	--	--	--	--
C2DG028	1,121	1,151	--	--	--	--	--	--	--	--

Table D.2 (cont'd)

C2DG029	1,156	1,201	--	--	--	--	--	--	--	--
C2DG030	1,082	1,104	--	--	--	--	1	--	--	1
C2DG031	713	758	--	--	--	--	--	--	--	--
C2DG032	1,183	1,212	--	--	--	--	--	--	--	263
C2DG033	863	902	--	--	--	--	--	1	217	39
C2DG034	942	982	--	--	--	--	--	226	46	--
C2DG035	922	964	--	1	--	1	248	42	--	1
C2DG036	700	748	--	1	1	148	49	--	--	--
C2DG037	532	580	--	--	94	48	--	--	--	--
C2DG038	527	577	--	67	56	1	--	--	--	--
C2DG039	279	331	21	57	1	--	--	--	--	--
C2DG040	281	283	--	--	--	--	--	--	--	--
C2DG041	363	364	--	--	--	--	--	--	--	--
C2DG042	208	211	--	--	--	--	--	--	--	--
C2DG043	226	227	--	--	--	--	--	--	--	--
C2DG044	165	165	--	--	1	--	--	--	--	--
C2DG045	167	168	--	--	--	--	--	--	--	28
C2DG046	135	135	--	--	--	--	--	--	23	--
C2DG047	123	126	--	--	--	--	--	30	3	--
C2DG048	78	78	--	--	--	--	21	--	--	--
C2DG049	57	58	--	--	--	9	1	--	--	--
C2DG050	23	23	--	--	7	--	--	--	--	--
C2DG051	7	7	--	1	--	--	--	--	--	--
C2DG052	--	--	--	--	--	--	--	--	--	--
C2DG053	159	159	--	--	--	--	--	--	--	--
C2DG054	208	208	--	--	--	--	--	--	--	--
C2DG055	132	132	--	--	--	--	--	--	--	--
C2DG056	167	167	--	--	--	--	--	--	--	--
C2DG057	173	173	--	--	--	--	--	--	--	--
C2DG058	160	162	--	--	--	--	--	--	--	32
C2DG059	157	157	--	--	--	--	--	--	33	--
C2DG060	191	192	--	--	--	--	--	33	2	--
C2DG061	189	193	--	--	--	--	28	6	--	--
C2DG062	214	216	--	1	--	52	2	--	--	--
C2DG063	139	145	--	2	25	6	--	--	--	--
C2DG064	134	136	--	12	3	--	1	--	--	--
C2DG065	95	97	8	3	--	--	1	--	--	--
C2DG066	73	73	--	1	--	1	--	--	--	--
C3DG001	--	--	--	--	--	--	--	--	--	--
C3DG002	113	113	--	--	--	--	--	--	--	--
C3DG003	156	156	--	--	--	--	--	--	--	--
C3DG004	320	320	--	--	--	--	--	--	--	--
C3DG005	325	325	--	--	--	--	--	--	--	--
C3DG006	476	476	--	--	--	--	--	--	--	--
C3DG007	509	509	--	--	--	--	--	--	--	--
C3DG008	332	332	--	--	--	--	--	1	--	--
C3DG009	215	215	--	--	--	--	3	--	--	--
C3DG010	196	196	--	--	1	4	--	--	--	1
C3DG011	361	361	--	1	14	6	5	4	4	4

Table D.2 (cont'd)

C3DG012	366	366	--	46	2	1	--	2	5	7
C3DG013	108	108	41	1	1	2	2	--	--	--
C3DG014	111,689	111,830	5	--	1	--	2	--	1	3
C3DG015	1,389	1,412	--	--	--	--	--	--	2	--
C3DG016	1,525	1,531	--	--	--	--	--	--	1	--
C3DG017	1,314	1,320	--	--	--	--	--	--	--	--
C3DG018	1,200	1,208	--	--	--	--	--	--	--	1
C3DG019	1,030	1,034	--	--	--	--	--	--	--	--
C3DG020	1,562	1,572	--	--	--	--	1	--	--	79
C3DG021	1,099	1,117	--	--	--	--	--	--	54	23
C3DG022	1,093	1,096	--	--	--	--	--	54	5	--
C3DG023	1,009	1,019	1	--	--	--	39	13	--	1
C3DG024	930	935	--	--	--	42	6	--	2	--
C3DG025	752	760	--	--	18	9	--	1	--	--
C3DG026	561	570	--	12	11	1	1	--	1	--
C3DG027	403	411	1	11	1	--	2	--	--	--
C3DG028	843	843	--	--	--	--	--	--	--	--
C3DG029	980	980	--	--	--	--	--	--	--	--
C3DG030	929	929	--	--	--	--	--	--	--	--
C3DG031	808	808	--	--	--	--	--	--	--	--
C3DG032	1,039	1,039	--	--	--	--	--	--	1	--
C3DG033	1,004	1,004	--	--	--	--	--	--	--	--
C3DG034	1,068	1,068	--	--	--	--	--	--	--	--
C3DG035	1,006	1,006	--	--	--	--	--	--	--	--
C3DG036	641	641	--	--	--	--	--	--	--	--
C3DG037	598	598	--	--	--	--	--	--	--	--
C3DG038	454	454	--	--	--	--	--	--	--	--
C3DG039	507	507	--	--	--	--	--	--	--	--
C3DG040	587	587	--	--	--	--	--	--	--	--
C3DG041	56	56	--	--	--	--	--	--	--	--
C3DG042	53	53	--	--	--	--	--	--	--	--
C3DG043	54	54	--	--	--	--	--	--	--	--
C3DG044	45	45	--	--	--	--	--	--	--	--
C3DG045	44	44	--	--	--	--	--	--	--	--
C3DG046	29	29	--	--	--	--	--	--	--	--
C3DG047	26	26	--	--	--	--	--	--	--	--
C3DG048	18	18	--	--	--	--	--	--	--	--
C3DG049	10	10	--	--	--	--	--	--	--	--
C3DG050	12	12	--	--	--	--	--	--	--	--
C3DG051	3	3	--	--	--	--	--	--	--	--
C3DG052	1	1	--	--	--	--	--	--	--	--
C3DG053	2	2	--	--	--	--	--	--	--	--
C3DG054	39	39	--	--	--	--	--	--	--	--
C4DG001	--	--	--	--	--	--	--	--	--	--
C4DG002	33	33	--	--	--	--	--	--	--	--
C4DG003	80	80	--	--	--	--	--	--	--	--
C4DG004	116	116	--	--	--	--	--	--	--	--
C4DG005	232	232	--	--	--	--	--	--	--	--

Table D.2 (cont'd)

C4DG006	381	381	--	--	--	--	--	--	--	--
C4DG007	571	571	--	--	--	--	--	--	--	--
C4DG008	485	485	--	--	--	--	--	--	--	--
C4DG009	242	242	--	--	--	--	--	--	--	--
C4DG010	250	250	--	--	--	--	--	--	--	--
C4DG011	342	342	--	--	--	--	--	--	--	--
C4DG012	413	413	--	--	--	--	--	--	--	--
C4DG013	809	809	1	--	--	--	--	--	--	--
C4DG014	530	530	--	--	--	--	--	--	--	--
C4DG015	488	488	--	--	--	--	--	--	--	--
C4DG016	460	460	--	--	--	--	--	--	--	--
C4DG017	4,435	4,435	--	--	--	--	--	--	--	--
C4DG018	260	260	--	--	--	--	--	--	--	--
C4DG019	233	233	--	--	--	--	--	--	--	--
C4DG020	258	258	--	--	--	--	--	--	--	--
C4DG021	353	353	--	--	--	--	--	--	--	--
C4DG022	365	365	--	--	--	--	--	--	--	--
C4DG023	362	362	--	--	--	--	--	--	--	--
C4DG024	552	552	--	--	--	--	--	--	--	--
C4DG025	395	395	--	--	--	--	--	--	--	--
C4DG026	382	382	--	--	--	--	--	--	--	--
C4DG027	301	301	--	--	--	--	--	--	--	--
C4DG028	168	168	--	--	--	--	--	--	--	--
C4DG029	228	228	--	--	--	--	--	--	--	--
C4DG030	5,883	5,883	--	--	--	--	--	--	--	1
C4DG031	54	54	--	--	--	--	--	--	--	--
C4DG032	63	63	--	--	--	--	--	--	--	--
C4DG033	87	87	--	--	--	--	--	--	--	--
C4DG034	93	93	--	--	--	--	--	--	--	--
C4DG035	100	100	--	--	--	--	--	--	--	--
C4DG036	111	111	--	--	--	--	--	--	--	--
C4DG037	113	113	--	--	--	--	--	--	--	--
C4DG038	87	87	--	--	--	--	--	--	--	--
C4DG039	54	54	--	--	--	--	--	--	--	--
C4DG040	61	61	--	--	--	--	--	--	--	--
C4DG041	92	92	--	--	--	--	--	--	--	--
C4DG042	110	110	--	--	--	--	--	--	--	--
C4DG043	1,932	1,932	--	--	--	--	--	--	--	--
C4DG044	122	122	--	--	--	--	--	--	--	--
C4DG045	50	50	--	--	--	--	--	--	--	--
C4DG046	63	63	--	--	--	--	--	--	--	--
C4DG047	75	75	--	--	--	--	--	--	--	--
C4DG048	70	70	--	--	--	--	--	--	--	--
C4DG049	67	67	--	--	--	--	--	--	--	--
C4DG050	65	65	--	--	--	--	--	--	--	--
C4DG051	60	60	--	--	--	--	--	--	--	--
C4DG052	23	23	--	--	--	--	--	--	--	--
C4DG053	19	19	--	--	--	--	--	--	--	--

Table D.2 (cont'd)

C4DG054	12	12	--	--	--	--	--	--	--	--
C4DG055	16	16	--	--	--	--	--	--	--	--
C4DG056	12	12	--	--	--	--	--	--	--	--
C4DG057	3	3	--	--	--	--	--	--	--	--

Table D.3

POLICY-FREE REENLISTMENTS OUT: FEBRUARY 1988 THROUGH SEPTEMBER 1988
BY DECISION GROUP

Decision Group	Starting Inventory		Month During Rest of Fiscal Year							
	Actual	Policy Free	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
C1DG001	2	2	--	--	--	--	--	--	--	--
C1DG002	2	2	--	--	--	--	--	--	--	--
C1DG003	9	9	--	--	--	--	--	--	--	--
C1DG004	12	12	--	--	--	--	--	--	--	--
C1DG005	14	14	--	--	--	--	--	--	--	--
C1DG006	23	23	--	--	--	--	--	--	--	2
C1DG007	31	31	--	--	--	--	--	--	1	--
C1DG008	46	46	--	--	1	1	--	2	1	--
C1DG009	124	124	--	1	1	--	1	--	--	--
C1DG010	1,096	1,096	4	6	26	40	2	2	1	--
C1DG011	2,816	2,816	5	4	32	22	4	1	4	3
C1DG012	3,451	3,451	3	24	7	3	7	1	2	5
C1DG013	1,570	1,570	3	3	1	--	--	--	--	--
C1DG014	2,878	2,878	--	1	--	1	--	--	--	--
C1DG015	3,698	3,699	--	--	--	--	--	--	--	--
C1DG016	2,613	2,613	--	--	--	--	--	--	1	--
C1DG017	30,554	30,556	--	--	--	--	--	--	--	--
C1DG018	44,790	45,608	1	--	--	--	1	--	--	--
C1DG019	42,717	43,055	3	42	64	294	114	124	151	224
C1DG020	12,452	12,535	478	595	374	455	345	335	374	425
C1DG021	2,450	2,550	13	72	18	192	7	3	4	6
C1DG022	2,893	2,989	57	98	14	271	4	4	6	9
C1DG023	2,467	2,602	48	61	9	206	1	5	4	17
C1DG024	1,961	2,065	17	56	6	168	4	5	4	9
C1DG025	2,192	2,311	32	48	8	203	--	3	9	21
C1DG026	1,950	2,120	27	5	145	15	8	4	10	580
C1DG027	1,619	1,748	18	7	115	15	9	4	515	2
C1DG028	1,712	1,846	17	3	107	4	3	530	6	3
C1DG029	1,395	1,547	24	1	106	5	449	3	2	1
C1DG030	893	1,035	54	8	80	339	1	1	1	1
C1DG031	788	956	67	3	381	4	4	--	--	1
C1DG032	544	755	81	260	1	1	--	--	1	1
C1DG033	356	521	238	34	--	--	--	--	--	--
C1DG034	322	323	26	30	7	24	5	11	10	9
C1DG035	457	458	18	55	13	30	12	15	9	14
C1DG036	294	299	17	36	9	32	10	15	7	5
C1DG037	273	273	16	21	5	23	10	14	4	5

Table D.3 (cont'd)

C1DG038	279	279	14	27	18	24	10	10	7	4
C1DG039	222	223	15	17	29	10	6	5	9	5
C1DG040	190	192	9	8	19	10	8	4	7	--
C1DG041	173	175	19	16	15	10	10	4	--	1
C1DG042	111	112	6	7	16	6	6	--	--	--
C1DG043	29	32	3	6	9	1	--	--	--	--
C1DG044	17	20	6	2	1	--	--	--	--	--
C1DG045	9	9	5	1	--	--	--	--	--	--
C1DG046	--	--	--	--	--	--	--	--	--	--
C1DG047	328	330	24	34	4	38	--	1	--	3
C1DG048	488	489	34	56	9	42	2	1	3	4
C1DG049	362	366	29	31	6	36	--	7	6	1
C1DG050	397	398	31	43	8	26	2	2	1	5
C1DG051	370	371	30	34	6	28	2	2	1	1
C1DG052	441	449	34	16	25	10	3	4	6	112
C1DG053	303	314	20	5	20	4	3	3	78	1
C1DG054	463	467	36	9	38	2	1	109	--	1
C1DG055	357	365	30	14	28	5	99	--	1	2
C1DG056	191	199	34	3	18	50	--	--	1	--
C1DG057	134	146	21	1	49	--	--	1	1	--
C1DG058	105	113	23	36	--	--	--	--	--	--
C1DG059	63	75	37	4	1	--	--	--	--	--
C1DG060	506	506	--	--	--	--	--	--	--	--
C1DG061	758	758	--	--	--	--	--	--	--	--
C1DG062	853	853	--	--	--	--	--	--	--	--
C1DG063	4,984	4,984	--	--	--	--	--	--	--	--
C1DG064	8,732	8,736	--	--	--	--	--	--	--	--
C1DG065	5,019	5,029	--	--	--	--	1	--	--	--
C1DG066	8,995	9,104	43	97	51	119	80	70	94	84
C1DG067	292	303	4	12	2	31	--	--	--	2
C1DG068	252	260	10	7	2	26	2	--	--	1
C1DG069	221	230	6	4	1	18	--	2	--	--
C1DG070	222	242	13	7	--	19	1	--	1	3
C1DG071	216	233	9	6	--	24	--	--	--	2
C1DG072	207	226	4	--	18	1	2	--	3	72
C1DG073	208	221	5	--	24	2	--	--	75	--
C1DG074	148	172	3	1	8	1	--	47	--	2
C1DG075	194	210	2	2	13	1	70	--	--	--
C1DG076	112	139	10	1	13	56	--	--	--	--
C1DG077	104	116	18	--	47	--	1	--	1	--
C1DG078	48	68	6	24	1	--	--	--	--	--
C1DG079	33	56	25	1	--	--	--	--	--	--
C1DG080	56	56	6	6	3	4	--	2	2	--
C1DG081	49	49	6	4	--	6	1	2	3	--
C1DG082	37	38	5	2	--	3	1	1	1	2
C1DG083	46	46	7	4	--	5	--	1	4	2
C1DG084	30	30	6	5	2	1	2	--	1	1
C1DG085	36	36	3	2	1	2	1	5	4	1

Table D.3 (cont'd)

C1DG086	26	27	4	--	7	1	4	2	--	--
C1DG087	19	19	4	2	1	1	1	1	--	--
C1DG088	16	16	4	1	2	5	--	--	--	--
C1DG089	10	10	1	--	5	--	--	--	--	--
C1DG090	3	3	--	1	--	--	--	--	--	--
C1DG091	--	--	--	--	--	--	--	--	--	--
C1DG092	--	--	--	--	--	--	--	--	--	--
C1DG093	29	29	1	3	2	4	--	--	--	1
C1DG094	36	38	5	3	--	4	1	--	--	--
C1DG095	26	26	2	--	--	1	--	--	--	1
C1DG096	33	33	5	4	--	3	--	--	--	--
C1DG097	36	36	3	5	--	6	--	--	--	--
C1DG098	31	31	4	2	1	1	--	--	1	12
C1DG099	28	28	3	1	1	--	--	--	14	--
C1DG100	35	35	3	1	3	--	--	12	--	--
C1DG101	23	23	2	1	3	--	5	--	--	--
C1DG102	17	17	7	--	2	6	--	--	--	--
C1DG103	17	18	4	--	5	--	--	--	--	--
C1DG104	8	10	2	3	--	--	--	--	--	--
C1DG105	5	6	2	1	--	--	--	--	--	--
C1DG106	134	134	--	--	1	1	1	--	1	1
C2DG001	--	--	--	--	--	--	--	--	--	--
C2DG002	3	3	--	--	--	--	--	--	--	--
C2DG003	2	2	--	--	--	--	--	--	--	--
C2DG004	4	4	--	--	--	--	--	--	1	--
C2DG005	4	4	--	--	--	--	--	--	--	--
C2DG006	61	61	1	--	--	--	--	--	--	--
C2DG007	15	15	--	--	--	--	--	--	--	--
C2DG008	12	12	--	--	--	--	1	1	--	1
C2DG009	76	76	--	1	1	1	3	--	--	--
C2DG010	174	174	--	--	--	4	--	--	1	--
C2DG011	804	804	1	2	7	8	2	--	1	--
C2DG012	819	819	1	18	2	3	1	3	1	3
C2DG013	371	371	2	--	1	--	1	--	--	--
C2DG014	5,787	5,800	--	10	1	2	2	--	--	--
C2DG015	17,952	18,069	1	5	2	5	6	6	8	--
C2DG016	22,539	22,729	9	13	8	19	21	14	25	43
C2DG017	24,574	24,722	40	44	53	128	62	74	86	97
C2DG018	15,788	15,867	158	194	144	244	111	87	108	100
C2DG019	9,581	9,606	111	166	99	385	91	89	98	101
C2DG020	3,878	3,885	107	152	84	182	59	61	72	86
C2DG021	1,622	1,622	47	65	57	97	36	29	37	22
C2DG022	670	672	33	39	37	26	12	22	19	16
C2DG023	241	241	12	8	6	10	3	3	5	3
C2DG024	109	109	6	6	7	6	6	11	10	7
C2DG025	21	21	6	--	--	1	1	--	--	3
C2DG026	11	11	3	1	1	--	--	2	--	--
C2DG027	1,139	1,218	17	15	4	166	--	3	2	4
C2DG028	1,121	1,151	24	24	6	177	3	1	2	2

Table D.3 (cont'd)

C2DG029	1,156	1,201	17	27	6	192	2	3	1	7
C2DG030	1,082	1,104	13	23	4	169	2	--	8	7
C2DG031	713	758	6	15	5	103	--	7	5	3
C2DG032	1,183	1,212	20	8	141	5	6	3	6	696
C2DG033	863	902	19	7	82	4	2	1	510	--
C2DG034	942	982	15	2	101	8	3	563	1	2
C2DG035	922	964	9	5	126	6	507	1	3	--
C2DG036	700	748	62	2	71	399	--	1	1	2
C2DG037	532	580	80	1	344	2	2	--	--	--
C2DG038	527	577	94	321	19	4	1	1	--	2
C2DG039	279	331	210	40	--	--	--	--	--	--
C2DG040	281	283	21	33	10	31	9	10	15	16
C2DG041	363	364	18	50	11	49	17	13	16	27
C2DG042	208	211	14	20	12	33	8	12	12	13
C2DG043	226	227	15	22	12	36	8	15	14	18
C2DG044	165	165	20	20	13	23	12	10	6	8
C2DG045	167	168	8	17	27	14	20	19	15	7
C2DG046	135	135	11	15	26	11	21	16	7	--
C2DG047	123	126	11	22	23	12	11	7	1	--
C2DG048	78	78	9	15	21	7	4	1	--	--
C2DG049	57	58	11	16	17	4	--	--	--	--
C2DG050	23	23	6	4	5	--	--	--	--	--
C2DG051	7	7	1	4	1	--	--	--	--	--
C2DG052	--	--	--	--	--	--	--	--	--	--
C2DG053	159	159	26	18	8	16	--	1	2	1
C2DG054	208	208	22	18	6	20	2	2	2	1
C2DG055	132	132	8	1	--	16	--	--	1	2
C2DG056	167	167	7	9	2	27	1	1	1	1
C2DG057	173	173	8	11	3	29	--	1	1	--
C2DG058	160	162	8	4	8	3	1	1	--	93
C2DG059	157	157	3	--	20	2	1	--	88	--
C2DG060	191	192	5	4	16	6	--	117	--	--
C2DG061	189	193	12	1	21	4	117	--	--	--
C2DG062	214	216	29	4	23	104	--	--	--	--
C2DG063	139	145	16	2	87	1	--	--	1	--
C2DG064	134	136	33	78	2	--	1	--	--	--
C2DG065	95	97	64	14	1	1	1	--	--	--
C2DG066	73	73	--	--	--	--	--	--	--	--
C3DG001	--	--	--	--	--	--	--	--	--	--
C3DG002	113	113	--	--	--	--	--	--	--	--
C3DG003	156	156	--	--	--	--	--	1	--	--
C3DG004	320	320	--	--	--	--	--	--	--	--
C3DG005	325	325	--	--	--	--	--	--	2	1
C3DG006	476	476	1	--	1	--	--	1	2	4
C3DG007	509	509	--	1	--	--	1	2	1	--
C3DG008	332	332	--	--	--	--	1	--	--	--
C3DG009	215	215	--	2	1	--	1	--	1	--
C3DG010	196	196	1	1	2	3	--	--	--	--
C3DG011	361	361	--	1	6	3	4	--	1	1

Table D.3 (cont'd)

C3DG012	366	366	3	11	2	1	2	2	--	--
C3DG013	108	108	5	1	--	--	--	--	--	--
C3DG014	111,689	111,830	427	606	519	733	737	755	785	832
C3DG015	1,389	1,412	53	52	56	37	37	20	16	25
C3DG016	1,525	1,531	66	75	86	46	20	24	26	25
C3DG017	1,314	1,320	52	47	51	32	20	15	25	207
C3DG018	1,200	1,208	47	43	37	19	16	25	168	182
C3DG019	1,030	1,034	37	29	46	28	23	114	174	111
C3DG020	1,562	1,572	36	65	36	44	161	232	189	435
C3DG021	1,099	1,117	20	51	24	155	179	131	359	34
C3DG022	1,093	1,096	27	80	136	198	154	339	36	2
C3DG023	1,009	1,019	21	209	132	140	384	23	2	4
C3DG024	930	935	139	196	93	380	31	2	5	--
C3DG025	752	760	154	159	329	57	1	--	2	--
C3DG026	561	570	95	411	17	--	3	2	--	--
C3DG027	403	411	319	54	1	2	3	1	1	--
C3DG028	843	843	10	3	6	6	12	6	12	9
C3DG029	980	980	9	8	6	12	16	9	10	13
C3DG030	929	929	7	12	11	14	9	11	8	6
C3DG031	808	808	8	6	8	12	11	10	14	19
C3DG032	1,039	1,039	7	11	6	17	16	26	29	20
C3DG033	1,004	1,004	10	13	11	15	24	16	24	58
C3DG034	1,068	1,068	3	20	14	13	26	30	62	65
C3DG035	1,006	1,006	8	8	19	25	23	65	61	28
C3DG036	641	641	5	20	19	17	51	37	17	18
C3DG037	598	598	6	18	10	53	28	27	16	17
C3DG038	454	454	12	7	31	35	15	16	10	17
C3DG039	507	507	12	45	26	17	17	22	15	21
C3DG040	587	587	39	27	17	18	20	16	14	16
C3DG041	56	56	--	--	1	--	--	--	--	--
C3DG042	53	53	--	1	--	--	--	--	--	--
C3DG043	54	54	--	1	--	--	--	1	--	--
C3DG044	45	45	--	--	--	--	--	2	1	--
C3DG045	44	44	--	--	--	--	--	--	--	--
C3DG046	29	29	--	--	--	--	--	--	2	--
C3DG047	26	26	--	--	--	--	--	--	1	--
C3DG048	18	18	--	--	--	--	--	--	--	--
C3DG049	10	10	1	1	--	--	--	--	--	--
C3DG050	12	12	--	--	--	--	--	--	--	--
C3DG051	3	3	--	--	--	--	--	--	--	--
C3DG052	1	1	--	--	1	--	--	--	--	--
C3DG053	2	2	--	1	--	--	--	--	--	--
C3DG054	39	39	--	--	--	--	--	--	--	--
C4DG001	--	--	--	--	--	--	--	--	--	--
C4DG002	33	33	1	--	--	--	--	--	--	--
C4DG003	80	80	--	--	--	--	--	--	1	1
C4DG004	116	116	--	--	--	1	1	1	1	--
C4DG005	232	232	2	--	--	--	1	--	4	--

Table D.3 (cont'd)

C4DG006	381	381	1	1	--	2	--	--	2	3
C4DG007	571	571	1	1	1	1	5	1	4	1
C4DG008	485	485	1	2	1	--	1	--	1	--
C4DG009	242	242	1	1	--	2	--	--	1	--
C4DG010	250	250	--	1	--	--	--	--	--	--
C4DG011	342	342	--	--	2	--	--	--	--	--
C4DG012	413	413	--	2	--	--	--	--	--	--
C4DG013	809	809	1	--	--	--	--	--	--	--
C4DG014	530	530	41	15	14	11	20	23	15	17
C4DG015	488	488	15	17	19	13	19	15	11	9
C4DG016	460	460	13	24	13	17	20	10	15	8
C4DG017	4,435	4,435	109	114	83	117	89	107	128	98
C4DG018	260	260	3	3	1	8	5	5	5	3
C4DG019	233	233	4	3	3	7	4	3	3	3
C4DG020	258	258	1	2	2	6	5	4	2	4
C4DG021	353	353	6	4	4	6	1	10	3	9
C4DG022	365	365	3	5	6	2	4	2	9	16
C4DG023	362	362	3	3	6	7	5	9	8	2
C4DG024	552	552	8	8	4	4	10	9	7	10
C4DG025	395	395	3	7	4	7	13	4	5	4
C4DG026	382	382	4	4	6	10	7	4	7	4
C4DG027	301	301	2	6	9	5	7	3	6	1
C4DG028	168	168	5	4	--	2	3	5	5	3
C4DG029	228	228	1	4	2	4	5	6	3	2
C4DG030	5,883	5,883	72	99	75	110	134	112	131	98
C4DG031	54	54	--	1	--	--	1	--	2	1
C4DG032	63	63	3	2	1	--	1	2	3	--
C4DG033	87	87	--	--	2	2	2	3	4	--
C4DG034	93	93	3	2	--	1	3	2	2	4
C4DG035	100	100	1	1	--	3	4	--	11	3
C4DG036	111	111	--	1	--	2	2	12	--	5
C4DG037	113	113	2	1	3	3	7	5	3	--
C4DG038	87	87	1	3	2	4	5	2	1	--
C4DG039	54	54	1	3	1	4	1	--	2	1
C4DG040	61	61	1	2	2	1	--	1	2	1
C4DG041	92	92	4	4	--	--	1	1	2	1
C4DG042	110	110	8	1	3	2	1	2	--	3
C4DG043	1,932	1,932	28	30	17	30	42	45	39	30
C4DG044	122	122	2	1	--	--	3	--	1	--
C4DG045	50	50	2	--	--	--	1	--	--	--
C4DG046	63	63	--	1	1	--	1	--	--	--
C4DG047	75	75	--	2	--	--	--	1	3	1
C4DG048	70	70	--	--	--	--	1	1	--	--
C4DG049	67	67	--	1	--	1	1	--	1	2
C4DG050	65	65	2	--	1	1	1	2	2	1
C4DG051	60	60	--	1	--	--	2	1	1	--
C4DG052	23	23	--	--	--	1	1	--	--	--
C4DG053	19	19	--	--	--	1	1	1	1	1

Table D.3 (cont'd)

C4DG054	12	12	1	--	--	1	--	--	--	--
C4DG055	16	16	1	2	--	--	--	--	1	--
C4DG056	12	12	1	--	--	--	--	--	--	--
C4DG057	3	3	--	--	--	--	--	--	--	--

Table D.4

RETIREMENT LOSSES: FEBRUARY 1988 THROUGH SEPTEMBER 1988, BY DECISION GROUP

Decision Group	Starting Inventory		Month During Rest of Fiscal Year							
	Actual	Policy Free	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
C1DG001	2	2	--	--	--	--	--	--	--	--
C1DG002	2	2	--	--	--	--	--	--	--	--
C1DG003	9	9	--	--	--	--	--	--	--	--
C1DG004	12	12	--	--	--	--	--	--	--	--
C1DG005	14	14	--	--	--	--	--	--	--	--
C1DG006	23	23	--	--	--	--	--	--	--	--
C1DG007	31	31	--	--	--	--	--	--	--	--
C1DG008	46	46	--	--	--	--	--	--	--	--
C1DG009	124	124	--	--	--	--	--	--	--	--
C1DG010	1,096	1,096	--	--	--	--	--	--	--	--
C1DG011	2,816	2,816	--	--	--	--	--	--	--	--
C1DG012	3,451	3,451	--	--	--	1	--	--	--	--
C1DG013	1,570	1,570	--	--	--	--	--	--	--	--
C1DG014	2,878	2,878	--	--	--	--	--	--	--	--
C1DG015	3,698	3,699	--	--	--	--	--	--	--	--
C1DG016	2,613	2,613	--	--	--	--	--	--	--	--
C1DG017	30,554	30,556	--	--	--	--	--	--	--	--
C1DG018	44,790	45,608	--	2	--	--	--	--	1	--
C1DG019	42,717	43,055	--	--	--	--	--	--	--	--
C1DG020	12,452	12,535	--	--	--	--	1	--	--	--
C1DG021	2,450	2,550	--	--	--	--	--	--	--	--
C1DG022	2,893	2,989	--	--	--	--	--	--	--	--
C1DG023	2,467	2,602	--	--	--	--	--	--	--	--
C1DG024	1,961	2,065	--	--	--	--	--	--	--	--
C1DG025	2,192	2,311	--	--	--	--	--	--	--	--
C1DG026	1,950	2,120	--	--	--	--	--	--	--	--
C1DG027	1,619	1,748	--	--	--	--	--	--	--	--
C1DG028	1,712	1,846	--	--	--	--	--	--	--	--
C1DG029	1,395	1,547	--	--	--	--	--	--	--	--
C1DG030	893	1,035	--	--	--	--	--	--	--	--
C1DG031	788	956	--	--	--	--	--	--	--	--
C1DG032	544	755	--	--	--	--	--	--	--	--
C1DG033	356	521	--	--	--	--	--	--	--	--
C1DG034	322	323	--	--	--	--	--	--	--	--
C1DG035	457	458	--	--	--	--	--	--	--	--
C1DG036	294	299	--	--	--	--	--	--	--	--
C1DG037	273	273	--	--	--	--	--	--	--	--

Table D.4 (cont'd)

C1DG038	279	279	--	--	--	--	--	--	--	--
C1DG039	222	223	--	--	--	--	--	--	--	--
C1DG040	190	192	--	--	--	--	--	--	--	--
C1DG041	173	175	--	--	--	--	--	--	--	--
C1DG042	111	112	--	--	--	--	--	--	--	--
C1DG043	29	32	--	--	--	--	--	--	--	--
C1DG044	17	20	--	--	--	--	--	--	--	--
C1DG045	9	9	--	--	--	--	--	--	--	--
C1DG046	--	--	--	--	--	--	--	--	--	--
C1DG047	328	330	--	--	--	--	--	--	--	--
C1DG048	488	489	--	--	--	--	--	--	--	--
C1DG049	362	366	--	--	--	--	--	--	--	--
C1DG050	397	398	--	--	--	--	--	--	--	--
C1DG051	370	371	--	--	--	--	--	--	--	--
C1DG052	441	449	--	--	--	--	--	--	--	--
C1DG053	303	314	--	--	--	--	--	--	--	--
C1DG054	463	467	--	--	--	--	--	--	--	--
C1DG055	357	365	--	--	--	--	--	--	--	--
C1DG056	191	199	--	--	--	--	--	--	--	--
C1DG057	134	146	--	--	--	--	--	--	--	--
C1DG058	105	113	--	--	--	--	--	--	--	--
C1DG059	63	75	--	--	--	--	--	--	--	--
C1DG060	506	506	--	--	--	--	--	--	--	--
C1DG061	758	758	--	--	--	--	--	--	--	--
C1DG062	853	853	--	--	--	--	--	--	--	--
C1DG063	4,984	4,984	--	--	--	--	--	--	--	--
C1DG064	8,732	8,736	--	--	--	1	--	--	--	--
C1DG065	5,019	5,029	--	--	--	--	--	--	--	--
C1DG066	8,995	9,104	--	--	--	1	--	--	--	--
C1DG067	292	303	--	--	--	--	--	--	--	--
C1DG068	252	260	--	--	--	--	--	--	--	--
C1DG069	221	230	--	--	--	--	--	--	--	--
C1DG070	222	242	--	--	--	--	--	--	--	--
C1DG071	216	233	--	--	--	--	--	--	--	--
C1DG072	207	226	--	--	--	--	--	--	--	--
C1DG073	208	221	--	--	--	--	--	--	--	--
C1DG074	148	172	--	--	--	--	--	--	--	--
C1DG075	194	210	--	--	--	--	--	--	--	--
C1DG076	112	139	--	--	--	--	--	--	--	--
C1DG077	104	116	--	--	--	--	--	--	--	--
C1DG078	48	68	--	--	--	--	--	--	--	--
C1DG079	33	56	--	--	--	--	--	--	--	--
C1DG080	56	56	--	--	--	--	--	--	--	--
C1DG081	49	49	--	--	--	--	--	--	--	--
C1DG082	37	38	--	--	--	--	--	--	--	--
C1DG083	46	46	--	--	--	--	--	--	--	--
C1DG084	30	30	--	--	--	--	--	--	--	--
C1DG085	36	36	--	--	--	--	--	--	--	--

Table D.4 (cont'd)

C1DG086	26	27	--	--	--	--	--	--	--	--
C1DG087	19	19	--	--	--	--	--	--	--	--
C1DG088	16	16	--	--	--	--	--	--	--	--
C1DG089	10	10	--	--	--	--	--	--	--	--
C1DG090	3	3	--	--	--	--	--	--	--	--
C1DG091	--	--	--	--	--	--	--	--	--	--
C1DG092	--	--	--	--	--	--	--	--	--	--
C1DG093	29	29	--	--	--	--	--	--	--	--
C1DG094	36	38	--	--	--	--	--	--	--	--
C1DG095	26	26	--	--	--	--	--	--	--	--
C1DG096	33	33	--	--	--	--	--	--	--	--
C1DG097	36	36	--	--	--	--	--	--	--	--
C1DG098	31	31	--	--	--	--	--	--	--	--
C1DG099	28	28	--	--	--	--	--	--	--	--
C1DG100	35	35	--	--	--	--	--	--	--	--
C1DG101	23	23	--	--	--	--	--	--	--	--
C1DG102	17	17	--	--	--	--	--	--	--	--
C1DG103	17	18	--	--	--	--	--	--	--	--
C1DG104	8	10	--	--	--	--	--	--	--	--
C1DG105	5	6	--	--	--	--	--	--	--	--
C1DG106	134	134	--	--	--	--	--	--	--	--
C2DG001	--	--	--	--	--	--	--	--	--	--
C2DG002	3	3	--	--	--	--	--	--	--	--
C2DG003	2	2	--	--	--	--	--	--	--	--
C2DG004	4	4	--	--	--	--	--	--	--	--
C2DG005	4	4	--	--	--	--	--	--	--	--
C2DG006	61	61	--	--	--	--	--	--	--	--
C2DG007	15	15	--	--	--	--	--	--	--	--
C2DG008	12	12	--	--	--	--	--	--	--	--
C2DG009	76	76	--	--	--	--	--	--	--	--
C2DG010	174	174	--	--	--	--	--	--	--	--
C2DG011	804	804	--	--	--	--	--	--	--	--
C2DG012	819	819	--	--	--	--	--	--	--	--
C2DG013	371	371	--	--	--	--	--	--	--	--
C2DG014	5,787	5,800	--	--	--	--	--	--	--	--
C2DG015	17,952	18,069	--	--	--	--	--	--	1	--
C2DG016	22,539	22,729	--	--	--	--	--	--	--	--
C2DG017	24,574	24,722	--	--	--	--	--	--	1	--
C2DG018	15,788	15,867	--	--	--	1	--	--	--	--
C2DG019	9,581	9,606	--	--	--	--	1	1	--	--
C2DG020	3,878	3,885	--	--	--	--	--	--	--	--
C2DG021	1,622	1,622	--	--	--	--	--	--	--	--
C2DG022	670	672	--	--	--	--	--	--	--	--
C2DG023	241	241	--	--	--	--	--	--	--	--
C2DG024	109	109	--	--	--	--	--	--	--	--
C2DG025	21	21	--	--	--	--	--	--	--	--
C2DG026	11	11	--	--	--	--	--	--	--	--
C2DG027	1,139	1,218	--	--	--	--	--	--	--	--
C2DG028	1,121	1,151	--	--	--	--	--	--	--	--

Table D.4 (cont'd)

C2DG029	1,156	1,201	--	--	--	--	--	--	--	--
C2DG030	1,082	1,104	--	--	--	--	--	--	--	--
C2DG031	713	758	--	--	--	--	--	--	--	--
C2DG032	1,183	1,212	--	--	--	--	--	--	--	--
C2DG033	863	902	--	--	--	--	--	--	--	--
C2DG034	942	982	--	--	--	--	--	--	--	--
C2DG035	922	964	--	--	--	--	--	--	--	--
C2DG036	700	748	--	--	--	--	--	--	--	--
C2DG037	532	580	--	--	--	--	--	--	--	--
C2DG038	527	577	--	--	--	--	--	--	--	--
C2DG039	279	331	--	--	--	--	--	--	--	--
C2DG040	281	283	--	--	--	--	--	--	--	--
C2DG041	363	364	--	--	--	--	--	--	--	--
C2DG042	208	211	--	--	--	--	--	--	--	--
C2DG043	226	227	--	--	--	--	--	--	--	--
C2DG044	165	165	--	--	--	--	--	--	--	--
C2DG045	167	168	--	--	--	--	--	--	--	--
C2DG046	135	135	--	--	--	--	--	--	--	--
C2DG047	123	126	--	--	--	--	--	--	--	--
C2DG048	78	78	--	--	--	--	--	--	--	--
C2DG049	57	58	--	--	--	--	--	--	--	--
C2DG050	23	23	--	--	--	--	--	--	--	--
C2DG051	7	7	--	--	--	--	--	--	--	--
C2DG052	--	--	--	--	--	--	--	--	--	--
C2DG053	159	159	--	--	--	--	--	--	--	--
C2DG054	208	208	--	--	--	--	--	--	--	--
C2DG055	132	132	--	--	--	--	--	--	--	--
C2DG056	167	167	--	--	--	--	--	--	--	--
C2DG057	173	173	--	--	--	--	--	--	--	--
C2DG058	160	162	--	--	--	--	--	--	--	--
C2DG059	157	157	--	--	--	--	--	--	--	--
C2DG060	191	192	--	--	--	--	--	--	--	--
C2DG061	189	193	--	--	--	--	--	--	--	--
C2DG062	214	216	--	--	--	--	--	--	--	--
C2DG063	139	145	--	--	--	--	--	--	--	--
C2DG064	134	136	--	--	--	--	--	--	--	--
C2DG065	95	97	--	--	--	--	--	--	--	--
C2DG066	73	73	--	--	--	--	--	--	--	--
C3DG001	--	--	--	--	--	--	--	--	--	--
C3DG002	113	113	--	--	--	--	--	--	--	--
C3DG003	156	156	--	--	--	--	--	2	1	1
C3DG004	320	320	--	--	--	--	--	--	6	4
C3DG005	325	325	--	--	--	1	--	2	3	2
C3DG006	476	476	--	--	1	2	1	--	2	426
C3DG007	509	509	--	--	1	--	--	5	479	3
C3DG008	332	332	--	--	--	--	--	325	1	1
C3DG009	215	215	--	--	--	--	177	4	1	--
C3DG010	196	196	--	--	--	162	--	--	--	--
C3DG011	361	361	--	--	217	1	--	1	--	--

Table D.4 (cont'd)

C3DG012	366	366	--	248	--	--	--	1	1	1
C3DG013	108	108	3	--	--	--	--	--	--	1
C3DG014	111,689	111,830	1	2	3	1	--	1	3	3
C3DG015	1,389	1,412	--	--	--	--	--	--	--	--
C3DG016	1,525	1,531	--	--	--	--	--	--	--	--
C3DG017	1,314	1,320	--	--	--	--	--	--	--	--
C3DG018	1,200	1,208	--	--	--	--	--	--	--	--
C3DG019	1,030	1,034	--	--	--	--	--	--	--	--
C3DG020	1,562	1,572	--	--	--	--	--	--	--	--
C3DG021	1,099	1,117	--	--	--	--	--	--	--	--
C3DG022	1,093	1,096	--	--	--	--	--	--	--	--
C3DG023	1,009	1,019	--	--	--	--	--	--	--	--
C3DG024	930	935	--	--	--	--	--	--	--	--
C3DG025	752	760	--	--	--	--	--	--	--	--
C3DG026	561	570	--	--	--	--	--	--	--	--
C3DG027	403	411	--	--	--	--	--	--	--	--
C3DG028	843	843	--	--	--	--	--	--	--	--
C3DG029	980	980	--	--	--	--	--	--	--	--
C3DG030	929	929	--	--	--	--	--	--	--	--
C3DG031	808	808	--	--	--	--	--	--	--	--
C3DG032	1,039	1,039	--	--	--	--	--	--	--	--
C3DG033	1,004	1,004	--	--	--	--	--	--	--	1
C3DG034	1,068	1,068	--	--	--	--	--	--	1	163
C3DG035	1,006	1,006	--	--	--	--	--	1	107	34
C3DG036	641	641	--	--	--	--	--	44	22	29
C3DG037	598	598	--	--	--	--	16	25	18	18
C3DG038	454	454	--	--	--	6	5	13	21	17
C3DG039	507	507	--	--	4	1	8	6	17	21
C3DG040	587	587	--	2	1	6	9	14	23	22
C3DG041	56	56	--	--	--	--	--	--	--	--
C3DG042	53	53	--	--	--	--	--	--	--	--
C3DG043	54	54	--	--	--	--	--	--	--	--
C3DG044	45	45	--	--	--	--	--	--	--	--
C3DG045	44	44	--	--	--	--	--	--	--	--
C3DG046	29	29	--	--	--	--	--	--	--	--
C3DG047	26	26	--	--	--	--	--	--	1	21
C3DG048	18	18	--	--	--	--	--	1	12	--
C3DG049	10	10	--	--	--	--	1	6	--	--
C3DG050	12	12	--	--	--	--	5	--	--	--
C3DG051	3	3	--	--	--	2	--	--	--	--
C3DG052	1	1	--	--	--	--	--	--	--	--
C3DG053	2	2	--	1	--	--	--	--	--	--
C3DG054	39	39	--	--	--	--	--	--	--	--
C4DG001	--	--	--	--	--	--	--	--	--	--
C4DG002	33	33	--	--	--	--	--	--	--	--
C4DG003	80	80	--	--	--	--	--	1	4	3
C4DG004	116	116	--	--	--	--	1	2	2	5
C4DG005	232	232	--	--	--	6	--	5	9	5

Table D.4 (cont'd)

C4DG006	381	381	--	--	4	1	4	7	6	341
C4DG007	571	571	--	--	4	4	6	9	525	2
C4DG008	485	485	--	--	--	3	2	466	2	3
C4DG009	242	242	--	--	1	2	220	11	1	1
C4DG010	250	250	--	1	--	235	1	8	--	1
C4DG011	342	342	--	--	329	1	1	4	1	--
C4DG012	413	413	1	379	4	4	5	5	7	4
C4DG013	809	809	806	--	1	--	--	--	--	--
C4DG014	530	530	--	--	2	1	5	13	19	24
C4DG015	488	488	--	1	--	3	3	6	8	18
C4DG016	460	460	--	--	--	--	3	9	18	17
C4DG017	4,435	4,435	1	4	10	18	29	72	94	107
C4DG018	260	260	--	--	--	3	1	4	6	4
C4DG019	233	233	--	--	--	1	1	1	--	2
C4DG020	258	258	--	--	--	--	1	2	1	1
C4DG021	353	353	--	1	--	4	2	4	4	8
C4DG022	365	365	--	--	1	--	1	1	--	17
C4DG023	362	362	--	--	2	1	--	6	17	14
C4DG024	552	552	--	1	--	--	3	20	6	13
C4DG025	395	395	--	--	--	--	6	7	9	13
C4DG026	382	382	--	--	--	1	1	8	12	14
C4DG027	301	301	--	--	1	1	--	5	7	6
C4DG028	168	168	--	--	--	--	1	1	6	6
C4DG029	228	228	--	--	--	--	1	4	3	8
C4DG030	5,883	5,883	--	6	4	17	20	68	98	116
C4DG031	54	54	--	--	--	--	--	1	--	--
C4DG032	63	63	--	--	--	--	--	--	--	--
C4DG033	87	87	--	--	--	--	--	--	--	--
C4DG034	93	93	--	--	--	--	--	--	--	--
C4DG035	100	100	--	1	--	--	--	--	--	9
C4DG036	111	111	--	--	--	--	--	1	4	2
C4DG037	113	113	--	--	--	--	--	2	--	4
C4DG038	87	87	--	--	--	--	--	2	2	5
C4DG039	54	54	--	--	--	--	1	--	1	1
C4DG040	61	61	--	--	--	--	--	3	2	--
C4DG041	92	92	--	--	--	1	--	--	3	--
C4DG042	110	110	--	--	--	--	--	1	2	3
C4DG043	1,932	1,932	--	3	4	6	9	19	43	52
C4DG044	122	122	--	--	1	--	1	--	3	3
C4DG045	50	50	--	--	--	1	--	--	1	--
C4DG046	63	63	--	--	--	--	--	1	4	4
C4DG047	75	75	--	--	--	--	--	1	--	2
C4DG048	70	70	--	--	--	--	--	--	1	1
C4DG049	67	67	--	--	--	--	1	1	4	43
C4DG050	65	65	--	--	--	--	--	3	45	2
C4DG051	60	60	--	--	1	--	1	37	2	--
C4DG052	23	23	--	--	--	--	9	6	--	--

Table D.4 (cont'd)

C4DG053	19	19	--	--	--	5	--	2	1	--
C4DG054	12	12	--	--	3	--	--	--	--	--
C4DG055	16	16	--	2	--	--	--	1	--	1
C4DG056	12	12	--	--	--	--	--	1	1	1
C4DG057	3	3	--	--	--	1	--	--	--	--

Table D.5

FLOWS OUT TO RETIREMENT ELIGIBILITY: FEBRUARY 1988 THROUGH SEPTEMBER 1988, BY DECISION GROUP

Decision Group	Starting Inventory		Month During Rest of Fiscal Year							
	Actual	Policy Free	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
C1DG001	2	2	--	--	--	--	--	--	--	--
C1DG002	2	2	--	--	--	--	--	--	--	--
C1DG003	9	9	--	--	--	--	--	--	--	--
C1DG004	12	12	--	--	--	--	--	--	--	--
C1DG005	14	14	--	--	--	--	--	--	--	--
C1DG006	23	23	--	--	--	--	--	--	--	--
C1DG007	31	31	--	--	--	--	--	--	--	--
C1DG008	46	46	--	--	--	--	--	--	--	--
C1DG009	124	124	--	--	--	--	--	--	--	--
C1DG010	1,096	1,096	--	--	--	--	--	--	--	--
C1DG011	2,816	2,816	--	--	--	--	--	--	--	--
C1DG012	3,451	3,451	--	--	--	--	--	--	--	--
C1DG013	1,570	1,570	--	--	--	--	--	--	--	--
C1DG014	2,878	2,878	--	--	--	--	--	--	--	--
C1DG015	3,698	3,699	--	--	--	--	--	--	--	--
C1DG016	2,613	2,613	--	--	--	--	--	--	--	--
C1DG017	30,554	30,556	--	--	--	--	--	--	--	--
C1DG018	44,790	45,608	--	--	--	--	--	--	--	--
C1DG019	42,717	43,055	--	--	--	--	--	--	--	--
C1DG020	12,452	12,535	--	--	--	--	--	--	--	--
C1DG021	2,450	2,550	--	--	--	--	--	--	--	--
C1DG022	2,893	2,989	--	--	--	--	--	--	--	--
C1DG023	2,467	2,602	--	--	--	--	--	--	--	--
C1DG024	1,961	2,065	--	--	--	--	--	--	--	--
C1DG025	2,192	2,311	--	--	--	--	--	--	--	--
C1DG026	1,950	2,120	--	--	--	--	--	--	--	--
C1DG027	1,619	1,748	--	--	--	--	--	--	--	--
C1DG028	1,712	1,846	--	--	--	--	--	--	--	--
C1DG029	1,395	1,547	--	--	--	--	--	--	--	--
C1DG030	893	1,035	--	--	--	--	--	--	--	--
C1DG031	788	956	--	--	--	--	--	--	--	--
C1DG032	544	755	--	--	--	--	--	--	--	--
C1DG033	356	521	--	--	--	--	--	--	--	--
C1DG034	322	323	--	--	--	--	--	--	--	--
C1DG035	457	458	--	--	--	--	--	--	--	--
C1DG036	294	299	--	--	--	--	--	--	--	--
C1DG037	273	273	--	--	--	--	--	--	--	--

Table D.5 (cont'd)

C1DG038	279	279	--	--	--	--	--	--	--	--
C1DG039	222	223	--	--	--	--	--	--	--	--
C1DG040	190	192	--	--	--	--	--	--	--	--
C1DG041	173	175	--	--	--	--	--	--	--	--
C1DG042	111	112	--	--	--	--	--	--	--	--
C1DG043	29	32	--	--	--	--	--	--	--	--
C1DG044	17	20	--	--	--	--	--	--	--	--
C1DG045	9	9	--	--	--	--	--	--	--	--
C1DG046	--	--	--	--	--	--	--	--	--	--
C1DG047	328	330	--	--	--	--	--	--	--	--
C1DG048	488	489	--	--	--	--	--	--	--	--
C1DG049	362	366	--	--	--	--	--	--	--	--
C1DG050	397	398	--	--	--	--	--	--	--	--
C1DG051	370	371	--	--	--	--	--	--	--	--
C1DG052	441	449	--	--	--	--	--	--	--	--
C1DG053	303	314	--	--	--	--	--	--	--	--
C1DG054	463	467	--	--	--	--	--	--	--	--
C1DG055	357	365	--	--	--	--	--	--	--	--
C1DG056	191	199	--	--	--	--	--	--	--	--
C1DG057	134	146	--	--	--	--	--	--	--	--
C1DG058	105	113	--	--	--	--	--	--	--	--
C1DG059	63	75	--	--	--	--	--	--	--	--
C1DG060	506	506	--	--	--	--	--	--	--	--
C1DG061	758	758	--	--	--	--	--	--	--	--
C1DG062	853	853	--	--	--	--	--	--	--	--
C1DG063	4,984	4,984	--	--	--	--	--	--	--	--
C1DG064	8,732	8,736	--	--	--	--	--	--	--	--
C1DG065	5,019	5,029	--	--	--	--	--	--	--	--
C1DG066	8,995	9,104	--	--	--	--	--	--	--	--
C1DG067	292	303	--	--	--	--	--	--	--	--
C1DG068	252	260	--	--	--	--	--	--	--	--
C1DG069	221	230	--	--	--	--	--	--	--	--
C1DG070	222	242	--	--	--	--	--	--	--	--
C1DG071	216	233	--	--	--	--	--	--	--	--
C1DG072	207	226	--	--	--	--	--	--	--	--
C1DG073	208	221	--	--	--	--	--	--	--	--
C1DG074	148	172	--	--	--	--	--	--	--	--
C1DG075	194	210	--	--	--	--	--	--	--	--
C1DG076	112	139	--	--	--	--	--	--	--	--
C1DG077	104	116	--	--	--	--	--	--	--	--
C1DG078	48	68	--	--	--	--	--	--	--	--
C1DG079	33	56	--	--	--	--	--	--	--	--
C1DG080	56	56	--	--	--	--	--	--	--	--
C1DG081	49	49	--	--	--	--	--	--	--	--
C1DG082	37	38	--	--	--	--	--	--	--	--
C1DG083	46	46	--	--	--	--	--	--	--	--
C1DG084	30	30	--	--	--	--	--	--	--	--
C1DG085	36	36	--	--	--	--	--	--	--	--

Table D.5 (cont'd)

C1DG086	26	27	--	--	--	--	--	--	--	--
C1DG087	19	19	--	--	--	--	--	--	--	--
C1DG088	16	16	--	--	--	--	--	--	--	--
C1DG089	10	10	--	--	--	--	--	--	--	--
C1DG090	3	3	--	--	--	--	--	--	--	--
C1DG091	--	--	--	--	--	--	--	--	--	--
C1DG092	--	--	--	--	--	--	--	--	--	--
C1DG093	29	29	--	--	--	--	--	--	--	--
C1DG094	36	38	--	--	--	--	--	--	--	--
C1DG095	26	26	--	--	--	--	--	--	--	--
C1DG096	33	33	--	--	--	--	--	--	--	--
C1DG097	36	36	--	--	--	--	--	--	--	--
C1DG098	31	31	--	--	--	--	--	--	--	--
C1DG099	28	28	--	--	--	--	--	--	--	--
C1DG100	35	35	--	--	--	--	--	--	--	--
C1DG101	23	23	--	--	--	--	--	--	--	--
C1DG102	17	17	--	--	--	--	--	--	--	--
C1DG103	17	18	--	--	--	--	--	--	--	--
C1DG104	8	10	--	--	--	--	--	--	--	--
C1DG105	5	6	--	--	--	--	--	--	--	--
C1DG106	134	134	--	--	--	--	--	--	--	--
C2DG001	--	--	--	--	--	--	--	--	--	--
C2DG002	3	3	--	--	--	--	--	--	--	--
C2DG003	2	2	--	--	--	--	--	--	--	--
C2DG004	4	4	--	--	--	--	--	--	--	--
C2DG005	4	4	--	--	--	--	--	--	--	--
C2DG006	61	61	--	--	--	--	--	--	--	--
C2DG007	15	15	--	--	--	--	--	--	--	--
C2DG008	12	12	--	--	--	--	--	--	--	--
C2DG009	76	76	--	--	--	--	--	--	--	--
C2DG010	174	174	--	--	--	--	--	--	--	--
C2DG011	804	804	--	--	--	--	--	--	--	--
C2DG012	819	819	--	--	--	--	--	--	--	--
C2DG013	371	371	--	--	--	--	--	--	--	--
C2DG014	5,787	5,800	--	--	--	--	--	--	--	--
C2DG015	17,952	18,069	--	--	--	--	--	--	--	--
C2DG016	22,539	22,729	--	--	--	--	--	--	--	--
C2DG017	24,574	24,722	--	--	--	--	--	--	--	--
C2DG018	15,788	15,867	--	--	--	--	--	--	--	--
C2DG019	9,581	9,606	--	--	--	--	--	--	--	--
C2DG020	3,878	3,885	--	--	--	--	--	--	--	--
C2DG021	1,622	1,622	--	--	--	--	--	--	--	--
C2DG022	670	672	--	--	--	--	--	--	--	--
C2DG023	241	241	--	--	--	--	--	--	--	--
C2DG024	109	109	--	--	--	--	--	--	--	--
C2DG025	21	21	--	--	--	--	--	--	--	--
C2DG026	11	11	--	--	--	--	--	--	--	--
C2DG027	1,139	1,218	--	--	--	--	--	--	--	--
C2DG028	1,121	1,151	--	--	--	--	--	--	--	--

Table D.5 (cont'd)

C2DG029	1,156	1,201	--	--	--	--	--	--	--	--
C2DG030	1,082	1,104	--	--	--	--	--	--	--	--
C2DG031	713	758	--	--	--	--	--	--	--	--
C2DG032	1,183	1,212	--	--	--	--	--	--	--	--
C2DG033	863	902	--	--	--	--	--	--	--	--
C2DG034	942	982	--	--	--	--	--	--	--	--
C2DG035	922	964	--	--	--	--	--	--	--	--
C2DG036	700	748	--	--	--	--	--	--	--	--
C2DG037	532	580	--	--	--	--	--	--	--	--
C2DG038	527	577	--	--	--	--	--	--	--	--
C2DG039	279	331	--	--	--	--	--	--	--	--
C2DG040	281	283	--	--	--	--	--	--	--	--
C2DG041	363	364	--	--	--	--	--	--	--	--
C2DG042	208	211	--	--	--	--	--	--	--	--
C2DG043	226	227	--	--	--	--	--	--	--	--
C2DG044	165	165	--	--	--	--	--	--	--	--
C2DG045	167	168	--	--	--	--	--	--	--	--
C2DG046	135	135	--	--	--	--	--	--	--	--
C2DG047	123	126	--	--	--	--	--	--	--	--
C2DG048	78	78	--	--	--	--	--	--	--	--
C2DG049	57	58	--	--	--	--	--	--	--	--
C2DG050	23	23	--	--	--	--	--	--	--	--
C2DG051	7	7	--	--	--	--	--	--	--	--
C2DG052	--	--	--	--	--	--	--	--	--	--
C2DG053	159	159	--	--	--	--	--	--	--	--
C2DG054	208	208	--	--	--	--	--	--	--	--
C2DG055	132	132	--	--	--	--	--	--	--	--
C2DG056	167	167	--	--	--	--	--	--	--	--
C2DG057	173	173	--	--	--	--	--	--	--	--
C2DG058	160	162	--	--	--	--	--	--	--	--
C2DG059	157	157	--	--	--	--	--	--	--	--
C2DG060	191	192	--	--	--	--	--	--	--	--
C2DG061	189	193	--	--	--	--	--	--	--	--
C2DG062	214	216	--	--	--	--	--	--	--	--
C2DG063	139	145	--	--	--	--	--	--	--	--
C2DG064	134	136	--	--	--	--	--	--	--	--
C2DG065	95	97	--	--	--	--	--	--	--	--
C2DG066	73	73	--	--	--	--	--	--	--	--
C3DG001	--	--	--	--	--	--	--	--	--	--
C3DG002	113	113	--	--	--	--	1	1	--	3
C3DG003	156	156	2	1	--	4	5	4	4	4
C3DG004	320	320	2	4	4	1	7	7	9	17
C3DG005	325	325	8	6	9	8	13	10	28	234
C3DG006	476	476	18	10	11	14	11	32	345	3
C3DG007	509	509	18	24	28	43	38	347	4	--
C3DG008	332	332	26	29	21	40	209	4	--	--
C3DG009	215	215	10	15	14	145	--	--	--	1
C3DG010	196	196	3	9	153	1	--	--	--	--
C3DG011	361	361	18	198	4	--	1	--	--	--

Table D.5 (cont'd)

C3DG012	366	366	245	4	--	--	1	1	1	--
C3DG013	108	108	2	1	--	--	--	--	1	--
C3DG014	111,689	111,830	--	--	--	--	--	--	--	--
C3DG015	1,389	1,412	--	--	--	--	--	--	--	--
C3DG016	1,525	1,531	--	--	--	--	--	--	--	--
C3DG017	1,314	1,320	--	--	--	--	--	--	--	--
C3DG018	1,200	1,208	--	--	--	--	--	--	--	--
C3DG019	1,030	1,034	--	--	--	--	--	--	--	--
C3DG020	1,562	1,572	--	--	--	--	--	--	--	--
C3DG021	1,099	1,117	--	--	--	--	--	--	--	--
C3DG022	1,093	1,096	--	--	--	--	--	--	--	--
C3DG023	1,009	1,019	--	--	--	--	--	--	--	--
C3DG024	930	935	--	--	--	--	--	--	--	--
C3DG025	752	760	--	--	--	--	--	--	--	--
C3DG026	561	570	--	--	--	--	--	--	--	--
C3DG027	403	411	--	--	--	--	--	--	--	--
C3DG028	843	843	--	--	--	--	--	--	--	--
C3DG029	980	980	--	--	--	--	--	--	--	--
C3DG030	929	929	--	--	--	--	--	--	--	--
C3DG031	808	808	--	--	--	--	--	--	--	--
C3DG032	1,039	1,039	--	--	--	--	--	--	--	--
C3DG033	1,004	1,004	--	--	--	--	--	--	--	1,003
C3DG034	1,068	1,068	--	--	--	--	--	--	1,065	--
C3DG035	1,006	1,006	--	--	--	--	--	1,006	--	--
C3DG036	641	641	--	--	--	--	641	--	--	--
C3DG037	598	598	--	--	--	597	--	--	--	--
C3DG038	454	454	--	--	454	--	--	--	--	--
C3DG039	507	507	--	506	--	--	--	--	--	--
C3DG040	587	587	587	--	--	--	--	--	--	--
C3DG041	56	56	--	--	--	--	--	--	--	--
C3DG042	53	53	--	--	--	--	--	--	--	--
C3DG043	54	54	--	--	--	--	--	--	--	--
C3DG044	45	45	--	--	--	--	--	--	--	--
C3DG045	44	44	--	--	--	--	--	--	--	--
C3DG046	29	29	--	--	--	--	--	--	--	29
C3DG047	26	26	--	--	--	--	--	--	25	--
C3DG048	18	18	--	--	--	--	--	16	--	--
C3DG049	10	10	--	--	--	--	10	--	--	--
C3DG050	12	12	--	--	--	9	--	--	--	--
C3DG051	3	3	--	--	2	--	--	--	--	--
C3DG052	1	1	--	1	--	--	--	--	--	--
C3DG053	2	2	2	--	--	--	--	--	--	--
C3DG054	39	39	--	--	--	--	--	--	--	--
C4DG001	--	--	--	--	--	--	--	--	--	--
C4DG002	33	33	--	--	--	--	--	--	--	--
C4DG003	80	80	--	--	--	--	--	--	--	--
C4DG004	116	116	--	--	--	--	--	--	--	--
C4DG005	232	232	--	--	--	--	--	--	--	--

Table D.5 (cont'd)

C4DG006	381	381	--	--	--	--	--	--	--	--
C4DG007	571	571	--	--	--	--	--	--	--	--
C4DG008	485	485	--	--	--	--	--	--	--	--
C4DG009	242	242	--	--	--	--	--	--	--	--
C4DG010	250	250	--	--	--	--	--	--	--	--
C4DG011	342	342	--	--	--	--	--	--	--	--
C4DG012	413	413	--	--	--	--	--	--	--	--
C4DG013	809	809	--	--	--	--	--	--	--	--
C4DG014	530	530	--	--	--	--	--	--	--	--
C4DG015	488	488	--	--	--	--	--	--	--	--
C4DG016	460	460	--	--	--	--	--	--	--	--
C4DG017	4,435	4,435	--	--	--	--	--	--	--	--
C4DG018	260	260	--	--	--	--	--	--	--	--
C4DG019	233	233	--	--	--	--	--	--	--	--
C4DG020	258	258	--	--	--	--	--	--	--	--
C4DG021	353	353	--	--	--	--	--	--	--	--
C4DG022	365	365	--	--	--	--	--	--	--	--
C4DG023	362	362	--	--	--	--	--	--	--	--
C4DG024	552	552	--	--	--	--	--	--	--	--
C4DG025	395	395	--	--	--	--	--	--	--	--
C4DG026	382	382	--	--	--	--	--	--	--	--
C4DG027	301	301	--	--	--	--	--	--	--	--
C4DG028	168	168	--	--	--	--	--	--	--	--
C4DG029	228	228	--	--	--	--	--	--	--	--
C4DG030	5,883	5,883	--	--	--	--	--	--	--	--
C4DG031	54	54	--	--	--	--	--	--	--	--
C4DG032	63	63	--	--	--	--	--	--	--	--
C4DG033	87	87	--	--	--	--	--	--	--	--
C4DG034	93	93	--	--	--	--	--	--	--	--
C4DG035	100	100	--	--	--	--	--	--	--	--
C4DG036	111	111	--	--	--	--	--	--	--	--
C4DG037	113	113	--	--	--	--	--	--	--	--
C4DG038	87	87	--	--	--	--	--	--	--	--
C4DG039	54	54	--	--	--	--	--	--	--	--
C4DG040	61	61	--	--	--	--	--	--	--	--
C4DG041	92	92	--	--	--	--	--	--	--	--
C4DG042	110	110	--	--	--	--	--	--	--	--
C4DG043	1,932	1,932	--	--	--	--	--	--	--	--
C4DG044	122	122	--	--	--	--	--	--	--	--
C4DG045	50	50	--	--	--	--	--	--	--	--
C4DG046	63	63	--	--	--	--	--	--	--	--
C4DG047	75	75	--	--	--	--	--	--	--	--
C4DG048	70	70	--	--	--	--	--	--	--	--
C4DG049	67	67	--	--	--	--	--	--	--	--
C4DG050	65	65	--	--	--	--	--	--	--	--
C4DG051	60	60	--	--	--	--	--	--	--	--
C4DG052	23	23	--	--	--	--	--	--	--	--
C4DG053	19	19	--	--	--	--	--	--	--	--

Table D.5 (cont'd)

C4DG054	12	12	--	--	--	--	--	--	--	--
C4DG055	16	16	--	--	--	--	--	--	--	--
C4DG056	12	12	--	--	--	--	--	--	--	--
C4DG057	3	3	--	--	--	--	--	--	--	--

Appendix E

ANNUAL SEPARATIONS BY TYPE OF DECISION GROUP

This appendix provides an overview of the BSP model by giving counts of starting inventories and annual flows from inventories by category of enlistment and by the following aggregation of the BSP model's Decision Groups:

	Decision Groups
Pre-decision Year	
First term:	14-20, 60-66
Second term:	14-26
Career terms:	14-27
Retirement eligible:	none
Decision Year	
First term:	21-59, 67-105
Second term:	27-65
Career terms:	28-53
Retirement eligible:	14-56
Ret/Sep Date	
First term:	1-13
Second term:	1-13
Career terms:	1-13
Retirement eligible:	1-13

In all categories of enlistment, a "Ret/Sep Date" Decision Group is one defined by retirement/separation dates. Inventory with such dates announced is classified in these groups no matter what other characteristics it may have.

In the first- and second-term categories of enlistment, "pre-decision year" means more than a year before the date of separation. In the career terms, "pre-decision year" means more than a year before becoming retirement eligible. In the retirement-eligible category of enlistment there is no "pre-decision year" inventory because there all personnel are considered to be in their decision year.

"Decision year" is the year before the date of separation in the first and second terms, the year before retirement eligibility in the career terms, and all years in the retirement-eligible category.

The inventory counts in the following tables are for the start of February 1988. The flow counts are flows from that starting inventory during the following 12 months (February 1988 through January 1989). To see average monthly flows, divide these annual flows by 12.

When looking at the tables in this appendix, keep in mind that the BSP model operates month by month using the detailed decision groups. However, the aggregated decision groups and the annual flows in these tables provide an overview of how a typical enlisted-force inventory and the flows from that inventory are distributed.

These tables support the following summary observations:

- Although less than 4 percent of the inventory is in Decision Groups defined by the ret/sep date (see Table E.1), approximately one-third of policy-free ETS losses and one-half of retirement losses come from those Decision Groups (see Table E.2).
- The probability of leaving the Air Force is considerably higher in the retirement/separation Decision Groups than in the Decision Year groups (see Table E.3).
- Reenlistments come mostly from the Decision Year groups in the first and second terms (see Table E.4).
- Reenlistments in the career terms come mostly from the Pre Decision Year groups because there decision year refers to the retirement decision rather than to the expiration of term of service decision (see Table E.4).
- Once a person has announced a retirement separation date, he almost certainly will not reenlist (see Table E.5). The difference between the sum of the loss percentages in Table E.3 for any given cell and 100 percent is therefore largely due to extensions.
- Once a person gets within a year of retirement-eligibility, the probability of staying in the Air Force until eligibility is achieved is very high (see Table E.5).

Table E.1

INVENTORY BY TYPE OF DECISION GROUP
(Beginning of February 1988)

Type of Decision Group	Category of Enlistment: First Term	Second Term	Career Terms	Retirement Eligibility	Total
Actual Inventory					
Pre-Decision Year	169549	102773	125556	0	397878
Decision Year	30507	15183	10918	19267	75875
Ret/Sep Date	9196	2345	3477	3954	18972
Total	209252	120301	139951	23221	492725
Policy-free Inventory					
Pre-Decision Year	170914	103354	125815	0	400083
Decision Year	32658	15783	10918	19267	78626
Ret/Sep Date	9196	2345	3477	3954	18972
Total	212768	121482	140210	23221	497681

Table E.2

ANNUAL LOSSES BY TYPE OF DECISION GROUP
(February 1988 through January 1989)

Type of Decision Group	Category of Enlistment: First Term	Second Term	Career Terms	Retirement Eligibility	Total
Attrition Losses					
Pre-Decision Year	9892	2651	1597	0	14140
Decision Year	763	364	66	27	1220
Ret/Sep Date	445	145	72	2	664
Total	11100	3160	1735	29	16024
Policy-free ETS Losses					
Pre-Decision Year	325	99	661	0	1085
Decision Year	14450	3432	4	0	17886
Ret/Sep Date	7463	1606	192	0	9261
Total	22238	5137	857	0	28232
Retirement Losses					
Pre-Decision Year	0	0	16	0	16
Decision Year	0	0	1954	2632	4586
Ret/Sep Date	0	0	2957	3878	6835
Total	0	0	4927	6510	11437

Table E.3

ANNUAL PERCENTAGE LOSS RATE BY TYPE OF DECISION GROUP
(February 1988 through January 1989)

Type of Decision Group	Category of Enlistment: First Term	Second Term	Career Terms	Retirement Eligibility	Total
Attrition Losses					
Pre-Decision Year	5.8	2.6	1.3	0.0	3.6
Decision Year	2.5	2.4	0.6	0.1	1.6
Ret/Sep Date	4.8	6.2	2.1	0.1	3.5
Total	5.3	2.6	1.2	0.1	3.3
Policy-free ETS Losses					
Pre-Decision Year	0.2	0.1	0.5	0.0	0.3
Decision Year	44.2	21.7	0.0	0.0	22.7
Ret/Sep Date	81.2	68.5	5.5	0.0	48.8
Total	10.5	4.2	0.6	0.0	5.7
Retirement Losses					
Pre-Decision Year	0.0	0.0	0.0	0.0	0.0
Decision Year	0.0	0.0	17.9	13.7	6.0
Ret/Sep Date	0.0	0.0	85.0	98.1	36.0
Total	0.0	0.0	3.5	28.0	2.3

Table E.4

ANNUAL FLOW BETWEEN CATEGORIES BY TYPE OF DECISION GROUP
(February 1988 through January 1989)

Type of Decision Group	Category of Enlistment: First Term	Second Term	Career Terms	Retirement Eligibility	Total
Policy-free Reenlistments Out					
Pre-Decision Year	8506	7318	20514	0	36338
Decision Year	13449	10687	3047	3998	31181
Ret/Sep Date	271	92	87	65	515
Total	22226	18097	23648	4063	68034
Flow to Retirement Eligibility					
Pre-Decision Year	0	0	0	0	0
Decision Year	0	0	9889	0	9889
Ret/Sep Date	0	0	3001	0	3001
Total	0	0	12890	0	12890

Table E.5

ANNUAL PERCENTAGE FLOW RATE BETWEEN CATEGORIES
BY TYPE OF DECISION GROUP
(February 1988 through January 1989)

Type of Decision Group	Category of Enlistment: First Term	Second Term	Career Terms	Retirement Eligibility	Total
Policy-free Reenlistments Out					
Pre-Decision Year	5.0	7.1	16.3	0.0	9.1
Decision Year	41.2	67.7	27.9	20.8	39.7
Ret/Sep Date	2.9	3.9	2.5	1.6	2.7
Total	10.4	14.9	16.9	17.5	13.7
Flow to Retirement Eligibility					
Pre-Decision Year	0.0	0.0	0.0	0.0	0.0
Decision Year	0.0	0.0	90.6	0.0	13.0
Ret/Sep Date	0.0	0.0	86.3	0.0	15.8
Total	0.0	0.0	9.2	0.0	2.6

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