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RECORD LAYOUTS FOR CRITERION AND PREDICTOR DATA SCORES FOR THE JOINT-SERVICE VALIDITY STUDY

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13. ABSTRACT *(Maximum 200 words)*

This document describes the record layouts of data files collected in the Enhanced Computer Administered Test (ECAT) study. The body of the report describes criterion data at both the test and item levels. Data files for Navy specialty schools are presented first, then Air Force specialty schools, and finally Army specialty schools. Tables for the data files document the line numbers, column numbers, format, variable descriptions, and valid ranges and values. For the Navy, Air Force, and Army specialty schools, Tables 1 through 19 present layouts for all criterion data collected for each school. Each record layout includes detailed notes regarding changes to the course curriculum and/or testing procedures that took place throughout data collection.

Appendix A presents file formats for the criterion and predictor data tape. Files 1 through 19 in the appendix contain criterion item level data for all of the 18 schools in the study. (Please note: Machinist's Mate school split into MM1 and MM2.) Files 20 through 33 contain merged criterion item level data, predictor summary scores, and post- enlistment ASVAB scores for the 13 Navy schools. And finally, files 34 through 38 contain merged criterion item level data and predictor summary scores for the 3 Army schools and 2 Air Force schools.

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CRITERION ITEM LEVEL DATA RECORD LAYOUTS

This document describes data files for criterion data. Data files for Navy specialty schools are presented first, then Air Force specialty schools, and finally Army specialty schools. Tables for the data files document the line numbers, column numbers, format, variable descriptions, and valid ranges and values. For the Navy, Air Force, and Army specialty schools, Tables 1 through 19 present layouts for all criterion data collected for each school.

Please note that each record layout includes detailed notes regarding changes to the course curriculum and/or testing procedures that took place throughout data collection. It is very important to pay close attention to these notes to avoid confusion in the interpretation of the data.

Appendix A presents file formats for the criterion and predictor data tape. Files 1 thru 19 in the appendix contain criterion item level data for all of the 18 schools in the study. (Please note: Machinist's Mate school split into MM1 and MM2.) Files 20 thru 33 contain merged criterion item level data, predictor summary scores, and post- enlistment ASVAB scores for the 13 Navy schools. And finally, files 34 thru 38 contain merged criterion item level data and predictor summary scores for the 3 Army schools and 2 Air Force schools.

Table 1

Air Traffic Controller (AC)

Line Number 01 - Personal Data; Block I (Base Operations) and Block II (Tower) Test Scores

Note: The Air Traffic Control (AC) School testing procedure consists of three blocks: I. Base Operations, II. Tower, and III. Radar. The table below lists the tests which make up each Block and the weights which the school assigns to each test in calculating the Final School Grade (FSG). The written tests have a (W) following their description, and the performance (laboratory) tests have a (P) following their description.

Block	Test		Weight
I	Air Traffic Control Fundamentals (W)		5%
I	Airspace & Time (W)		5%
I	Navigational Aids (W)		5%
I	Charts & Publications (W)		5%
I	Flight Plans (W)		5%
I	Aviation Weather (W)		5%
	Block I subtotal	30%	
II	Basic Knowledge (W)		5%
II	General Control & Equipment (W)		5%
II	Visual Flight Rules Procedures (W)		5%
II	Instrument Flight Rules Procedures (W)		5%
II	Airman's Written Test Certification (W)		10%
II	Local, Ground, Flight Data (P)		10%
	Block II subtotal	40%	
III	Identification & Vectoring Procedures (W)		5%
III	Air Surveillance Radar Procedures (W)		2.5%
III	Air Surveillance Radar Procedures (P)		5%
III	Precision Approach Radar Procedures (W)		2.5%
III	Precision Approach Radar Procedures (P)		5%
III	Arrival Procedures (W)		5%
III	Arrival Procedures (P)		5%
	Block III subtotal	30%	
	Final School Grade		100%

The FSG is thus the weighted sum (composite) of the individual tests. Percentages representing the weights applied by the school to each test score in composing the FSG follow the variable descriptions below.

Table 1 (Cont'd)

Students having initial test scores below 70 retake the test. For students who pass the first or subsequent retest, the school records scores of 70 and uses these scores in calculating the FSG. RGI entered the initial test scores in this database. Therefore, an FSG which a researcher might calculate using the initial scores differs from the FSG calculated by the school using the retest scores.

Columns	Format	Description	Valid Ranges, Values
01-02	A2	School Name	Alpha only (AC)
04-12	I9	Social Security Number	Digits
14-16	A3	Student Action Code/Status (e.g., graduated, disenrolled)	Alpha only; -1=missing. See Appendix B.
18-23	3(I2)	Class convening date (YYMMDD)	Digits 90-91, 1-12, 1-31
25-29	F5.1	Block I (Base Operations) Air Traffic Control Fundamentals (W) (5%)	0.0-100.0, -1.0=missing
31-35	F5.1	Block I (Base Operations) Airspace & Time (W) (5%)	0.0-100.0, -1.0=missing
37-41	F5.1	Block I (Base Operations) Navigational Aids (W) (5%)	0.0-100.0, -1.0=missing
43-47	F5.1	Block I (Base Operations) Charts & Publications (W) (5%)	0.0-100.0, -1.0=missing
49-53	F5.1	Block I (Base Operations) Flight Plans (W) (5%)	0.0-100.0, -1.0=missing
55-59	F5.1	Block I (Base Operations) Aviation Weather (W) (5%)	0.0-100.0, -1.0=missing
61-65	F5.1	Block II (Tower) Basic Knowledge (W) (5%)	0.0-100.0, -1.0=missing
67-71	F5.1	Block II (Tower) General Control & Equipment (W) (5%)	0.0-100.0, -1.0=missing
73-77	F5.1	Block II (Tower) Visual Flight Rules Procedures (W) (5%)	0.0-100.0, -1.0=missing

Table 1 (Cont'd)

Line Number 02 - Continuation of Block II (Tower) Test Scores; Block III (Radar) Test Scores			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	Block II (Tower) Instrument Flight Rules Procedures (W) (5%)	0.0-100.0, -1.0=missing
07-11	F5.1	Block II (Tower) Airman's Written Test (Federal Aviation Administration (FAA) secure test) (W) (10%)	0.0-100.0, -1.0=missing
13-17	F5.1	Block II (Tower) Local, Ground, Flight Data (P) (10%)	0.0-100.0, -1.0=missing
19-23	F5.1	Block III (Radar) Identification & Vectoring Procedures (W) (5%)	0.0-100.0, -1.0=missing
Note: In Block III, students take an Identification & Vectoring Procedures performance test in a radar lab simulator. Instructors grade students on a Satisfactory ("S) or Unsatisfactory ("U") basis. Students who fail undertake remedial training, and reportedly all students pass the retest. RGI entered the initial scores.			
25-26	I2	Block III (Radar) Identification & Vectoring Procedures (P)	1="S", 0="U", -1=missing
28-32	F5.1	Block III (Radar) Air Surveillance Radar Procedures (W) (2.5%)	0.0-100.0, -1.0=missing
34-38	F5.1	Block III (Radar) Air Surveillance Radar Procedures (P) (5%)	0.0-100.0, -1.0=missing
40-44	F5.1	Block III (Radar) Precision Approach Radar Procedures (W) (2.5%)	0.0-100.0, -1.0=missing
46-50	F5.1	Block III (Radar) Precision Approach Radar Procedures (P) (5%)	0.0-100.0, -1.0=missing
52-56	F5.1	Block III (Radar) Arrival Procedures (W) (5%)	0.0-100.0, -1.0=missing

Table 1 (Cont'd)

58-62	F5.1	Block III (Radar) Arrival Procedures (P) (5%)	0.0-100.0, -1.0=missing
64-69	F6.2	Final School Grade (FSG)	0.00-100.00, -1.00=missing
71-72	I2	Number of Students in Class	Digits, 00-30, -1=missing
74-75	I2	Student's Rank in Class	Digits, 00-30, -1=missing

Table 2

AVIATION ELECTRICIAN'S MATE (AE)

Line Number 01 - Personal Data; Test Scores for Knowledge, Performance, and Comprehensive Tests

Note: The minimum passing score for each test is 63. Students who do not achieve the minimum passing score take one retest per test. For students passing the retest, the AE school assigns a score of 63. For students who fail the retest, an Academic Review Board forms a recommendation as to the student's status. RGI entered the initial test scores into the database.

Columns	Format	Description	Valid Ranges,Values
01-02	A2	School name	Alpha only (AE)
04-12	I9	Social Security Number	Digits
14-16	A3	Student Action Code	Alpha only; -1=missing. See Appendix B.
18-22	F5.1	#301 - knowledge test covering Whole Numbers, Fractions, Decimals, and Basic Algebra	0.0-100.0, -1.0=missing
24-28	F5.1	#311 - knowledge test covering Basic DC Theory	0.0-100.0, -1.0=missing
30-34	F5.1	#322 - performance test covering DC Series-Parallel Circuits	0.0-100.0, -1.0=missing
36-40	F5.1	#321 - knowledge test covering Basic DC Circuits	0.0-100.0, -1.0=missing
42-46	F5.1	#332 - performance test covering Basic AC Theory	0.0-100.0, -1.0=missing
48-52	F5.1	#331 - knowledge test covering Basic AC Theory	0.0-100.0, -1.0=missing
54-58	F5.1	#342 - performance test covering LC Parallel Resonant Circuits	0.0-100.0, -1.0=missing
60-64	F5.1	#341 - Comprehensive knowledge test covering all subject material on tests #301 through #342	0.0-100.0, -1.0=missing

Table 2 (Cont'd)

66-70	F5.1	#352 - performance test covering Diodes, Transistor Amplifiers, Integrated Circuits, and Cathode Ray Tubes	0.0-100.0, -1.0=missing
72-76	F5.1	#351 - knowledge test covering Applications of Electronic Circuits	0.0-100.0, -1.0=missing
Line Number 02 - Continuation of Test Scores for Knowledge, Performance, and Comprehensive Tests			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	#361 - knowledge test covering Digital Fundamentals	0.0-100.0, -1.0=missing
07-11	F5.1	#372 - performance test covering Maintenance Data Forms, an Introduction to Troubleshooting, and Interior Lighting	0.0-100.0, -1.0=missing
13-17	F5.1	#371 - knowledge test covering Basic Troubleshooting	0.0-100.0, -1.0=missing
19-23	F5.1	#382 - performance test covering AC and DC Power Distribution Systems	0.0-100.0, -1.0=missing
25-29	F5.1	#381 - knowledge test covering Generators	0.0-100.0, -1.0=missing
31-35	F5.1	#392 - performance test covering Hydraulics Arresting Gear System	0.0-100.0, -1.0=missing
37-41	F5.1	#393 - performance test covering Hydraulics Speed Brake System	0.0-100.0, -1.0=missing
43-47	F5.1	#394 - performance test covering Hydraulics Flap System	0.0-100.0, -1.0=missing
49-53	F5.1	#395 - performance test covering the Hydraulics Landing Gear System	0.0-100.0, -1.0=missing

Table 2 (Cont'd)

55-59	F5.1	#396 - performance test covering the Hydraulics Nosewheel Steering System	0.0-100.0, -1.0=missing
61-65	F5.1	#391 - Comprehensive knowledge test covering all subject material on tests #352 through #396	0.0-100.0, -1.0=missing
67-71	F5.1	#402 - performance test covering the Fuel Quantity System	0.0-100.0, -1.0=missing
73-77	F5.1	#403 - performance test covering the Simple Synchros System	0.0-100.0, -1.0=missing
Line Number 03 - Continuation of Test Scores for Knowledge, Performance, and Comprehensive Tests			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	#404 - performance test covering the Pitot Static System	0.0-100.0, -1.0=missing
07-11	F5.1	#401 - knowledge test covering Indicating Systems	0.0-100.0, -1.0=missing
13-17	F5.1	#412 - performance test covering Attitude Headings and Reference Systems	0.0-100.0, -1.0=missing
19-23	F5.1	#411 - knowledge test covering the Navigation System	0.0-100.0, -1.0=missing
25-29	F5.1	#422 - performance test covering the Inertial Navigation System	0.0-100.0, -1.0=missing
31-35	F5.1	#421 - knowledge test covering the Inertial Navigation and Automatic Flight Control Systems	0.0-100.0, -1.0=missing
37-41	F5.1	#432 - performance test covering the Jet Ignition System	0.0-100.0, -1.0=missing

Table 2 (Cont'd)

43-47	F5.1	#433 - performance test covering the Engine RPM Indicating System	0.0-100.0, -1.0=missing
49-53	F5.1	#434 - performance test covering the Turbine Inlet Temperature System	0.0-100.0, -1.0=missing
55-59	F5.1	#435 - performance test covering Anti-Ice and Deice Systems	0.0-100.0, -1.0=missing
61-65	F5.1	#436 - performance test covering Anti-ice and Deice Systems	0.0-100.0, -1.0=missing
67-71	F5.1	#431 - knowledge test covering Engine Instruments	0.0-100.0, -1.0=missing
73-77	F5.1	#442 - performance test covering the Angle of Attack System, the Fire Warning System, and Scheduled/Unscheduled Maintenance	0.0-100.0, -1.0=missing
Line Number 04 - Continuation of Test Scores for Knowledge, Performance, and Comprehensive Tests; Final School Grade (FSG)			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	#441 - Comprehensive test covering all subject material on tests #402 through #442	0.0-100.0, -1.0=missing
07-11	F5.1	#451 - knowledge test covering Avionics Corrosion Control	0.0-100.0, -1.0=missing
Note: For each student, the school computes a Final School Grade (FSG) as a weighted average of all Knowledge, Performance, and Comprehensive test scores. (See Appendix C for test weights.)			
13-17	F5.1	Final School Grade (FSG)	0.0-100.0, -1.0=missing

Table 3

Aviation Ordnanceman (AO)

Line Number 01 - Personal Data, Practical Work, Knowledge Progress Tests

Columns	Format	Description	Valid Ranges, Values
01-02	A2	School Name	Alpha only (AO)
04-12	I9	Social Security Number	Digits
14-16	A3	Student Action Code	Alpha only; -1=missing See Appendix B.

Note: The AO school revised the first half of the curriculum in April, 1991. (The school could not provide a more specific date.) The following charts list the units covered before and after April, 1991 (curricula A and B, respectively). Unit 0 from curriculum B covers units 0 and 1 from curriculum A. The school does not test students on unit 0 in either curriculum. Units 3 and 4 from curriculum A do not exist as separate lessons in curriculum B. However, units 2 and 1 from curriculum B include the material covered in units 3 and 4 from curriculum A, respectively.

Curriculum A:
Unit 0. Enlisted Aviation Basic Training and Indoctrination
Unit 1. Introduction and Indoctrination
Unit 2. Electricity
Unit 3. Publications and Administration
Unit 4. Aircraft Maintenance
Unit 5. Ammunition and Magazines
Unit 6. Ammunition Ordnance
Unit 7. Aircraft Guns
Unit 8. Guided Missiles.

Curriculum B:
Unit 0. Introduction and Indoctrination
Unit 1. Naval Aviation Maintenance
Unit 2. Electricity
Unit 5. Ammunition and Magazines
Unit 6. Ammunition Ordnance
Unit 7. Aircraft Guns
Unit 8. Guided Missiles.

Table 3 (Cont'd)

The school administered a third curriculum to classes 91210, 91240, and 91260 during May and June of 1991. These three classes piloted a revised second half of the curriculum that the school implemented April 24, 1992. The last examinees for this study completed the AO school in March, 1992; therefore, only classes 91210, 91240, and 91260 completed the third curriculum. We did not enter the data for the four cases from these three classes (examinees Alberts 284-72-0139, Duncan 484-02-0783, Embry 313-76-5330, and Morris 448-86-4011) because the school made several changes between the pilot curricula they completed and the curricula the school actually implemented on April 24, 1992.

For each unit of instruction, students receive **practical work** (a combination of homework and laboratory sessions), a written **Knowledge Progress Test**, and a **Performance Progress Test.** The school requires a minimum passing score of 63% for Knowledge Progress Tests and practical works. Students who do not pass Knowledge Progress Tests receive remedial instruction and a retest. The school assigns the minimum passing score to those passing the retest. Students who do not pass practical works do not receive remediation or retesting, but they do continue on in the curriculum and they keep their failing score. Students who fail a Knowledge Progress Test retest must appear before the Academic Review Board (ARB).

Students also receive a Within-Course Comprehensive **Knowledge** Test and a Final Comprehensive **Knowledge** Test. The school requires a minimum passing score of 63% for these tests with remediation and retesting if a student fails. Those who pass the retests receive the minimum passing score. In addition, in curriculum B, students receive a Within-Course Comprehensive **Performance** Test. The school requires a minimum passing score of 63% has no remediation or retesting for this test. Students who fail the Within-Course Knowledge Progress Test retest, the Within-Course Performance Test, or the Final Comprehensive Knowledge Test retest, must appear before the ARB.

RGI entered only the initial test scores and not the school assigned scores (63%) for successful retests.

Columns	Format	Description	Valid Ranges, Values
18	I1	Curriculum (A: prior to April 1991; B: April 1991 to April 1992)	Digits, 1=A, 2=B

Table 3 (Cont'd)

Note: Only curriculum A includes tests #111 - #343.			
20-24	F5.1	**#111 - Unit 1 Practical Work:** Introduction and Indoctrination, Intro to the AO Field, General Ordnance Safety, Tool Control, Intro to Electricity, Theory of a Series Direct Current Circuit, Conductors, and Insulators, Application of current in a Direct Current Armament Circuit, Measuring current, Voltage, and Resistance with a Multimeter, Intro to Voltage in a Series Armament Circuit, Intro to Resistance in a Series Armament Circuit, Application of Ohm's Law, Relationship and Application of current, Voltage, and Resistance in a Series Armament Circuit, Measuring current, Voltage, and Resistance in a Series Direct Current Circuit with a Multimeter	0.0-100.0, -1.0=missing, -2.0=not administered
26-30	F5.1	**#113 - Unit 1 Knowledge Test:** See Module #111 for description of test material.	0.0-100.0, -1.0=missing -2.0=not administered

Table 3 (Cont'd)

32-36	F5.1	**#121 - Unit 1 Practical Work:** Current, Voltage, and Resistance in a Parallel Armament Circuit and Measuring it with a Multimeter, Troubleshooting Parallel Armament Circuits, Current, Voltage, and Resistance in a Combination Armament Circuit, Troubleshooting and Measuring Combination Armament Circuits, Transformers, Application of Transformers in an Armament Circuit, Filters Relays, Maintenance, and Repair of Armament Circuits, Electrical Control Devices, Protection Devices and Symbols, 6E10 Training Device Familiarization, Aircraft Troubleshooting (6E11 Training Device)	0.0-100.0, -1.0=missing -2.0=not administered
38-42	F5.1	**#123 - Unit 1 Knowledge Test:** See Module #121 for description of test material.	0.0-100.0, -1.0=missing -2.0=not administered

Table 3 (Cont'd)

44-48	F5.1	**#201 - Unit 2 Practical Work:** Wiring Code and Diagrams, Aircraft Armament Circuits, Suspension, and Releasing Equipment, Intro to the A-4 Aircraft, Aircraft Maintenance Manuals, Aircraft Armament Test Equipment, Aircraft Preparation and Inspection, Intro to Aircraft Armament Troubleshooting Techniques, Release and Control Checks, System Troubleshooting Techniques and Documentation	0.0-100.0, -1.0=missing -2.0=not administered
50-54	F5.1	**#203 - Unit 2 Knowledge Test:** See Module #201 for description of test material.	0.0-100.0, -1.0=missing -2.0=not administered
56-60	F5.1	**#343 - Units 3 and 4 Knowledge Test:** Introduction to NAVSEA Publications, Administrative Publications, Ordnance Safety and Supply Publications, Intro to NAVAIR Publications, Loading Manuals and Checklists, Intro to Aircraft Corrosion, Corrosion Control Manual, Theory of Corrosion	0.0-100.0, -1.0=missing -2.0=not administered

Table 3 (Cont'd)

Note: Only curriculum B includes Tests #101 - #231.			
62-66	F5.1	**#101 - Unit 1 Practical Work:** Naval Aviation Maintenance Program and Discrepancy Reporting Program, Planned Maintenance Systems, Maintenance Data Forms, Foreign Object Damage, Tool Control, Common Hand Tools, Aircraft Hardware, Torquing and Safetying, Shop Project	0.0-100.0, -1.0=missing -2.0=not administered
68-72	F5.1	**#110 - Unit 1 Knowledge Test:** See Module #101 for description of test material.	0.0-100.0, -1.0=missing -2.0=not administered
74-78	F5.1	**#102 - Unit 1 Practical Work:** Corrosion Control Manuals, Corrosion Theory, Corrosion Control Program, Corrosion Corrective Maintenance, Corrosion Inspections, Paint and Touch-up, Preservation/ Depreservation, Emergency Corrosion Treatment, Aircraft Cleaning	0.0-100.0, -1.0=missing -2.0=not administered
Line Number 02 - Practical Work, Knowledge Progress Tests, Comprehensive Tests for curriculum B (Continued)			
01-05	F5.1	**#120 - Unit 1 Knowledge Test:** See Module #102 for description of test material.	0.0-100.0, -1.0=missing -2.0=not administered

Table 3 (Cont'd)

07-11	F5.1	**#221 - Unit 2 Practical Work:** Electrical Safety, Electrical Fundamentals, Ohm's Law, Measuring Electrical Values, Protective Control Devices	0.0-100.0, -1.0=missing -2.0=not administered
13-17	F5.1	**#210 - Unit 2 Knowledge Test:** See Module #221 for description of test material.	0.0-100.0, -1.0=missing -2.0=not administered
19-23	F5.1	**#222 - Unit 2 Practical Work:** Introduction to Publications, Wire Maintenance, Troubleshooting, Aircraft Armament Test Equipment, Loading Manual (Chapters 1-6) and NA-01-700, Aircraft Armament Systems, Intro to the Weapons Systems Trainer, Weapons System Functional Checks and Troubleshooting	0.0-100.0, -1.0=missing -2.0=not administered
25-29	F5.1	**#220 - Unit 2 Knowledge Test:** See Module #222 for description of test material.	0.0-100.0, -1.0=missing -2.0=not administered
31-35	F5.1	**#230 - Within-course Comprehensive Knowledge Test** covering test material in Modules #101 through #220	0.0-100.0, -1.0=missing -2.0=not administered
37-41	F5.1	**#231 - Within-course Comprehensive Performance Test** covering test material in Modules #101 through #220	0.0-100.0, -1.0=missing -2.0=not administered

Table 3 (Cont'd)

Note: Both curricula A and B include Tests #501 - #900.			
43-47	F5.1	**#501 - Unit 5 Practical Work:** Ammunition Stowage Ashore, at advanced Bases, and Afloat, Identification and Types of Magazines Ashore, Magazine Temperatures and Safety Devices, Ammunition Handling and Transportation Equipment, Procedures for Ordering and Turning in Ammunition	0.0-100.0, -1.0=missing
49-53	F5.1	**#503 - Unit 5 Knowledge Test:** See Module #501 for description of test material.	0.0-100.0, -1.0=missing
55-59	F5.1	**#611 - Unit 6 Practical Work:** Intro to Airborne Ordnance, General Purpose Bombs, Intro to Freefall and Retarded Airborne Weapons, Intro to Aircraft Mechanical Bomb Fuses and Boosters, Intro to Electrical Bomb Fuses, Practice Bombs and Signals, Laser Guided Bomb AGM-123 Skipper Missile, Cluster Bomb Unit (CBU), Firebombs and Associated Components, Special Purpose Munitions, Arming Wire	0.0-100.0, -1.0=missing
61-65	F5.1	**#613 - Unit 6 Knowledge Test:** See Module #611 for description of test material.	0.0-100.0, -1.0=missing

Table 3 (Cont'd)

67-71	F5.1	**#621 - Unit 6 Practical Work:** Intro to Airborne Rockets, Rocket Components, Intro to Pyrotechnics, Intro to Ammunition Suspension Equipment, Aircraft Arming Signals, Conventional Weapons Loading/Unloading, Integrated Rapid Rearming System (IRRS)	0.0-100.0, -1.0=missing
73-77	F5.1	**#623 - Unit 6 Knowledge Test:** See Module #621 for description of test material.	0.0-100.0, -1.0=missing
Line Number 03 - Practical Work, Knowledge Progress Tests, Comprehensive Tests for curricula A and B (Continued); Final Student Grade (FSG)			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**#701 - Unit 7 Practical Work:** Intro to 20MM Aircraft Guns, Aircraft Ammunition 20MM, Intro to the M61A1 Vulcan Gun, Nomenclature and Function of the Major Components of the M61A1 Vulcan Gun, M61A1 Vulcan Gun linkless Ammunition Loading System, Intro to the A-7E, F-14, F/A-18 Gun System, General Aircraft Safety, LALS Loading/Downloading	0.0-100.0, -1.0=missing
07-11	F5.1	**#703 - Unit 7 Knowledge Test:** See Module #701 for description of test material.	0.0-100.0, -1.0=missing

Table 3 (Cont'd)

13-17	F5.1	**#801 - Unit 8 Practical Work:** Intro and Function of Air-Launched Guided Missiles, Intro and Function of the Shrike Missile and it's Components, Intro and Function of the Sidewinder Missile and it's Components, Intro and Function of the Sparrow III Missile and it's Components, Intro and Function of the Standard Arm Missile, Intro and Function of the Phoenix Missile, Intro and Function of the Walleye Weapon, Intro to the New Missiles, Missile Handling Equipment, Missile Launching Equipment, Procedures and Missile Safety, Weapons Assembly, Inspection, Loading, Arming, Dearming, Downloading, and Disassembly	0.0-100.0, -1.0=missing
19-23	F5.1	**#803 - Unit 8 Knowledge Test:** See Module #801 for description of test material.	0.0-100.0, -1.0=missing
25-29	F5.1	**#900 - Final Comprehensive Test:** (Curriculum A) - Entire course comprehensive test. (Curriculum B) - From Module #231 through #803.	0.0-100.0, -1.0=missing

Table 3 (Cont'd)

Note: For computing the Final Student Grade (FSG), the school used the following formulas for the weighted average:

Curriculum A:
(Mean of all Practical Works x 20%) + (Mean of all Knowledge Progress Tests x 80%) = N
FSG = (N x 90%) + (Final Comprehensive Knowledge Test x 10%)

Curriculum B:
(Mean of all Practical Works x 10%) + (Mean of all Knowledge Progress Tests x 90%) = N
FSG = (N x 70%) + (Within-Course Comprehensive Knowledge Test x 10%) + (Within-Course Comprehensive Performance Test x 10%) + (Final Comprehensive Knowledge Test x 10%)

31-35	F5.1	Final Student Grade (FSG)	0.0-100.0, -1.0=missing

Table 4

Aviation Structural Mechanic (Structures) - AMS

Line Number 01 - Personal Data; Knowledge, Performance, and Practical Work Test Scores

Note: The minimum passing score for each test is 63. Students who do not achieve the minimum passing score take one retest per test. For students passing the retest, the AMS school assigns a score of 63. For students who fail the retest, an Academic Review Board assigns night study and allows the student to continue taking retests until they achieve the minimum passing score. RGI entered only the initial test scores into the database.

Columns	Format	Description	Valid Ranges, Values
01-03	A3	School Name	Alpha only (AMS)
05-13	I9	Social Security Number	Digits
15-17	A3	Student Action Code	Alpha only; -1=missing. See Appendix B.
19-23	F5.1	#101 - knowledge test covering a Basic Introduction to the AMS school	0.0-100.0, -1.0=missing
25-26	I2	Number of retests on test #101	Digits 00-15, -1=missing
28-32	F5.1	#103 - practical work covering the Introduction (Unit 1)	0.0-100.0, -1.0=missing
34-35	I2	Number of retests on test #103	Digits 00-15, -1=missing
37-41	F5.1	#201 - knowledge test covering Maintenance and Material Documentation	0.0-100.0, -1.0=missing
43-44	I2	Number of retests on test #201	Digits 00-15, -1=missing
46-50	F5.1	#202 - performance test covering Maintenance and Material Documentation	0.0-100.0, -1.0=missing
52-53	I2	Number of retests on test #202	Digits 00-15, -1=missing
55-59	F5.1	#311 - knowledge test covering Corrosion Control	0.0-100.0, -1.0=missing

Table 4 (Cont'd)

61-62	I2	Number of retests on test #311	Digits 00-15, -1=missing
64-68	F5.1	#313 - practical work covering Corrosion Control (Unit 3, Section 1)	0.0-100.0, -1.0=missing
70-71	I2	Number of retests on test #313	Digits 00-15, -1=missing
73-77	F5.1	#321 - knowledge test covering Aircraft Painting and all related areas	0.0-100.0, -1.0=missing
79-80	I2	Number of retests on test #321	Digits 00-15, -1=missing
Line Number 02 - Continuation of Knowledge, Performance, and Practical Work Test Scores			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	#322 - performance test covering Corrosion Control and Painting	0.0-100.0, -1.0=missing
07-08	I2	Number of retests on test #322	Digits 00-15, -1=missing
10-14	F5.1	#323 - practical work covering Aircraft Painting (Unit 3, Section 2)	0.0-100.0, -1.0=missing
16-17	I2	Number of retests on test #323	Digits 00-15, -1=missing
19-23	F5.1	#411 - knowledge test covering Basic Aircraft Construction, Aircraft Structural Materials, the Fundamentals of Drawing Interpretation, the Bend allowance for 90 degree Bends, the Development of a Flat Layout, Flat Layout on Metal, Cutting Aircraft Structural Metal, Drilling Structural Metals, and how to Cut Structural Metals	0.0-100.0, -1.0=missing

Table 4 (Cont'd)

25-26	I2	Number of retests on test #411	Digits 00-15, -1=missing
28-32	F5.1	#413 - practical work covering topics in knowledge test #411 (Unit 4, Section 1)	0.0-100.0, -1.0=missing
34-35	I2	Number of retests on test #413	Digits 00-15, -1=missing
37-41	F5.1	#421 - knowledge test covering Forming Aircraft Structural Metals, the Installation of Permanent Fasteners, the Layout of Riveted Joints, Removal of Rivets and Scrap Metal, Layout and Drill Rivet Joints, and Countersinking	0.0-100.0, -1.0=missing
43-44	I2	Number of retests on test #421	Digits 00-15, -1=missing
46-50	F5.1	#422 - performance test covering topics in knowledge tests #411 and #421	0.0-100.0, -1.0=missing
52-53	I2	Number of retests on test #422	Digits 00-15, -1=missing
55-59	F5.1	#423 - practical work covering topics in knowledge test #421 (Unit 4, Section 2)	0.0-100.0, -1.0=missing
61-62	I2	Number of retests on test #423	Digits 00-15, -1=missing
64-68	F5.1	#431 - knowledge test covering the Repair of External Skin, Repair External Skin by Patching, the Installation of Semipermanent Fasteners, the Installation of Turnlock Fasteners, and Making an Access Panel	0.0-100.0, -1.0=missing
70-71	I2	Number of retests on test #431	Digits 00-15, -1=missing

Table 4 (Cont'd)

73-77	F5.1	#433 - practical work covering topics in knowledge test #431 (Unit 4, Section 3)	0.0-100.0, -1.0=missing
79-80	I2	Number of retests on test #433	Digits 00-15, -1=missing
Line Number 03 - Continuation of Knowledge, Performance, and Practical Work Test Scores			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	#441 - knowledge test covering the Repair of Internal Structures, the Repair of a Damaged Rib, the Repair of a Damaged "U" Channel, and Nondestructive Metal Inspections	0.0-100.0, -1.0=missing
07-08	I2	Number of retests on test #441	Digits 00-15, -1=missing
10-14	F5.1	#442 - performance test covering topics in knowledge tests #431 and #441	0.0-100.0, -1.0=missing
16-17	I2	Number of retests on test #442	Digits 00-15, -1=missing
19-23	F5.1	#443 - practical work covering topics in knowledge test #441 (Unit 4, Section 4)	0.0-100.0, -1.0=missing
25-26	I2	Number of retests on test #443	Digits 00-15, -1=missing
28-32	F5.1	#511 - knowledge test covering the Fabrication of Reinforced Plastics, the Repair of Reinforced Plastic, Transparent Plastic, and the Repair of Sandwich Construction	0.0-100.0, -1.0=missing
34-35	I2	Number of retests on test #511	Digits 00-15, -1=missing

Table 4 (Cont'd)

37-41	F5.1	#513 - practical work covering Aircraft Non-Metallics (Unit 5)	0.0-100.0, -1.0=missing
43-44	I2	Number of retests on test #513	Digits 00-15, -1=missing
46-50	F5.1	#521 - knowledge test covering the Fabrication of a Circular Patch, an Introduction to Composite Materials, and a Composite Material Repair Lab	0.0-100.0, -1.0=missing
52-53	I2	Number of retests on test #521	Digits 00-15, -1=missing
55-59	F5.1	#611 - knowledge test covering Aircraft Flight Controls and Mechanisms, Planned Maintenance System, Aircraft Servicing, Fuel Cell Repair, Lubrication of an Aircraft, and the Service of a Pneumatic System	0.0-100.0, -1.0=missing
61-62	I2	Number of retests on test #611	Digits 00-15, -1=missing
64-68	F5.1	#613 - practical work covering topics in knowledge test #611 (Unit 6, Section 1)	0.0-100.0, -1.0=missing
70-71	I2	Number of retests on test #613	Digits 00-15, -1=missing
73-77	F5.1	#621 - knowledge test covering Aircraft Jacking, the Maintenance of Wheels and Tires, Raise and Lower Complete Aircraft, Remove and Replace Wheel Assembly, the Maintenance of Arresting Hooks, Remove and Replace a Hook Point, and Flight Deck/Line Safety	0.0-100.0, -1.0=missing
79-80	I2	Number of retests on test #621	Digits 00-15, -1=missing

Table 4 (Cont'd)

Line Number 04 - Continuation of Knowledge, Performance, and Practical Work Test Scores; Final School Grade (FSG)			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	#623 - practical work covering topics in knowledge test #621 (Unit 6, Section 2)	0.0-100.0, -1.0=missing
07-08	I2	Number of retests on test #623	Digits 00-15, -1=missing
10-14	F5.1	#700 - Final Comprehensive test given at the end of Unit 6	0.0-100.0, -1.0=missing
16-17	I2	Number of retests on test #700	Digits 00-15, -1=missing
Note: For each student, the school computes a Final School Grade as a weighted average of all Knowledge, Performance, Practical Work, and Comprehensive test scores. See Appendix D for the test weights.			
19-23	F5.1	Final School Grade	0.0-100.0, -1.0=missing

Table 5

Avionics Technician (AV)

Line Number 01 - Personal Data, Scores for Knowledge and Performance Tests, and Labs

Note: In December, 1991, the AV school re-numbered and modified several of the course labs and tests. At that time, the instructors changed the AV school course number from 61 to 60. Because the school made extensive changes, we separated this layout into two sections. The first half of this layout covers students entering the AV program as course number 61, and the second half applies to students entering the program as course number 60.

Within the first half of the layout (course 61), the AV school altered, added, or deleted tests from its curriculum on three separate occasions. In the layout, we included notes regarding the nature of each change and its date of occurrence.

On June 27, 1991 (Julian date - 91178), the school changed the scoring method of the course labs from a percentage score to a satisfactory/unsatisfactory grade. The school kept the minimum passing score for each lab at 70%. For students who fail a lab, the school retained its policy of retesting them until they pass the lab.

The school requires a minimum passing score of 70 for the course tests (knowledge, performance, and comprehensive). Students who fail a test appear before the Academic Review Board (ARB). The school then decides upon the student's status. ARB often permits such students to retest. The instructor assigns the minimum passing score (70) to students who pass the retest, and the school uses that minimum score in calculating the final school grade (FSG). The school sends students who fail the retest back to ARB for a second review. We entered only the initial test scores for each examinee, because the school assigns a score of 70 for all successful retests.

The AV School Course Curriculum as Course Number 61:

Columns	Format	Description	Valid Ranges, Values
01-02	A2	School Name (AV)	Alpha (AV)
04-12	I9	Social Security Number	Digits

Table 5 (Cont'd)

14-16	A3	Student Action Code	Alpha only. See Appendix B.
18-19	I2	School Course Number	Digits (60 or 61)
21-25	A5	Student Class Number	Alpha (90001-92365) or 'Group'
27-31	I5	Class Registration Date	YearDay (Julian) (90001-92365)
33-37	F5.1	**#111 - Knowledge Test:** General Math: Fractions, basic algebra, equations, signed numbers, linear, trig., vector algebra, atomic structure	0.0-100.0, -1.0=missing -2.0=not administered
39-43	F5.1	**#109 - Lab:** Intro to DC circuit analysis & series DC circuit.	0.0-100.0, -1.0=missing -2.0=not administered
45-49	F5.1	**#121 - Knowledge Test:** DC Theory: multimeters, DC circuit anlys, electrostatics, batteries	0.0-100.0, -1.0=missing -2.0=not administered
51-55	F5.1	**#119 - Lab:** Parallel circuits	0.0-100.0, -1.0=missing -2.0=not administered
57-61	F5.1	**#122 - Knowledge Test:** DC theory: Series circuit anlys., parallel circuits	0.0-100.0, -1.0=missing -2.0=not administered
63-67	F5.1	**#129 - Lab:** Series parallel circuits, DC troubleshooting (T/S)	0.0-100.0, -1.0=missing -2.0=not administered
69-73	F5.1	**#139 - Lab:** Voltage dividers	0.0-100.0, -1.0=missing -2.0=not administered
75-79	F5.1	**#124 - Performance Test:** T/S DC circuits	0.0-100.0, -1.0=missing -2.0=not administered
Line Number 02 - Continuation of Scores for Knowledge, Performance and Comprehensive Tests, and Labs			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**#123 - Comprehensive Test:** DC Theory	0.0-100.0, -1.0=missing -2.0=not administered

Table 5 (Cont'd)

07-11	F5.1	**#149 - Lab:** Application of test equip.	0.0-100.0, -1.0=missing -2.0=not administered
13-17	F5.1	**#159 - Lab:** Resistive capacitive (RC) circuit analysis	0.0-100.0, -1.0=missing -2.0=not administered
19-23	F5.1	**#131 - Knowledge Test:** AC concepts, sine wave anlys., capacitators & capacitance, digital multimeters, RC circuit anlys, oscilloscopes (OSC)	0.0-100.0, -1.0=missing -2.0=not administered
25-29	F5.1	**#169 - Lab:** Resistive inductive (RL) circuit anlys. & transformers	0.0-100.0, -1.0=missing -2.0=not administered
31-35	F5.1	**#132 - Knowledge Test:** Inductors & inductance, RL circuit anlys, trnsformrs.	0.0-100.0, -1.0=missing -2.0=not administered
37-41	F5.1	**#179 - Lab:** Series & parallel resonant circuits	0.0-100.0, -1.0=missing -2.0=not administered
Note: On June 6, 1991 (Julian 91157), the school introduced Lab #189 into the course curriculum. Students entering the school prior to this date did not take this lab.			
43-47	F5.1	**#189 - Lab: (Only If Registered After 91156)** RC & RL signal filters	0.0-100.0, -1.0=missing -2.0=not administered
49-53	F5.1	**#133 - Performance Test:** AC: Application of test equip., transformers, RL & RC circuit anlys., series reactive circuits, RC & RL signal filters.	0.0-100.0, -1.0=missing -2.0=not administered
55-59	F5.1	**#100 - Comprehensive Test:** AC Theory: Content from lab 149 to test 133 plus inductive/capacitive/ resistive analysis	0.0-100.0, -1.0=missing -2.0=not administered
61-65	F5.1	**#219 - Lab:** Amplifier (amp) biasing, transistor amps	0.0-100.0, -1.0=missing -2.0=not administered

Table 5 (Cont'd)

67-71	F5.1	**#211 - Knowledge Test:** Semiconductor Devices: Pos./neg. junctions, amps/ transistor theory, amp biasing, elecrostatic discharge	0.0-100.0, -1.0=missing -2.0=not administered
73-77	F5.1	**#229 - Lab:** Limiters and clampers	0.0-100.0, -1.0=missing -2.0=not administered
Line Number 03 - Continuation of Scores for Knowledge, Performance, and Comprehensive Tests, and Labs			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**#221 - Knowledge Test:** Solid State Devices/ Electric Circuits: Amp gain & decibels feedback amps, limiters & clampers, classification & coupling, OSCs	0.0-100.0, -1.0=missing -2.0=not administered
07-11	F5.1	**#239 - Lab:** OSCs & voltage regulators	0.0-100.0, -1.0=missing -2.0=not administered
13-17	F5.1	**#241 - Knowledge Test:** Power Supplies/Naval Aviation Maint. Program: OSCs, voltage regulators, rectifiers & filters, audio amps, power supply, maint. data syst.s	0.0-100.0, -1.0=missing -2.0=not administered
19-23	F5.1	**#249 - Lab:** Sig. tracing AM receivers (RXs)	0.0-100.0, -1.0=missing -2.0=not administered
25-29	F5.1	**#251 - Knowledge Test:** AM Communication Theory: Radio-frequency (RF) comm., block diag/tracing/ sig anlys/injecting AM RX, transmitter (TX) & RX fundamentals, sig tracing a superheterodyne RX	0.0-100.0, -1.0=missing -2.0=not administered
31-35	F5.1	**#259 - Lab:** AM TX, RF amp & 1st RX mixer	0.0-100.0, -1.0=missing -2.0=not administered

Table 5 (Cont'd)

37-41	F5.1	**#269 - Lab:** 1st intermediate freq. (IF) amp & 2nd RX mixer, detector & preamp, audio output amp	0.0-100.0, -1.0=missing -2.0=not administered
43-47	F5.1	**#279 - Lab:** T/S: RX	0.0-100.0, -1.0=missing -2.0=not administered
49-53	F5.1	**#253 - Performance Test:** T/S: RX	0.0-100.0, -1.0=missing -2.0=not administered
55-59	F5.1	**#252 - Knowledge Test:** AM TX: RF & IF amps, 1st & 2nd RX mixer, detector-preamp, audio output amp	0.0-100.0, -1.0=missing -2.0=not administered
61-65	F5.1	**#289 - Lab:** Low & high freq. OSC, 1st & 2nd transmitter mixer & OSC, freq. amp, doubler	0.0-100.0, -1.0=missing -2.0=not administered
67-71	F5.1	**#299 - Lab:** Modulator (MOD) & RF power amp, beat freq. OSC, RX power supply & voltage regulator	0.0-100.0, -1.0=missing -2.0=not administered
73-77	F5.1	**#254 - Knowledge Test:** High & low freq. OSC, 1st TX mixer, freq. doubler/ amp, beat freq. OSC, MOD & RF power amp, TX power supply & voltage regulator	0.0-100.0, -1.0=missing -2.0=not administered

Line Number 04 - Continuation of Scores for Knowledge, Performance, and Comprehensive Tests, and Labs

Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**#209 - Lab:** Troubleshooting: AM & FM TX	0.0-100.0, -1.0=missing -2.0=not administered
07-11	F5.1	**#255 - Performance Test:** AM TX	0.0-100.0, -1.0=missing -2.0=not administered

Table 5 (Cont'd)

13-17	F5.1	**#200 - Comprehensive Test:** Material from Lab 219 to Test 255 plus FM theory/ MOD/detection/auto freq. control, transmission lines, antenna (ant), T/S FM TX, radio wave propagation	0.0-100.0, -1.0=missing -2.0=not administered
19-23	F5.1	**#309 - Lab:** Integrators & differentrs	0.0-100.0, -1.0=missing -2.0=not administered
25-29	F5.1	**#319 - Lab:** Blocking OSCs & multivibrators	0.0-100.0, -1.0=missing -2.0=not administered
31-35	F5.1	**#321 - Knowledge Test:** Electromechanical/solid state devices, synchros, servosystems, resolvers/ accelerometers, blocking OSCs, gyros, integrators & diffrnttrs, motors, multivibrators	0.0-100.0, -1.0=missing -2.0=not administered
37-41	F5.1	**#329 - Lab:** Sweep generators	0.0-100.0, -1.0=missing -2.0=not administered
43-47	F5.1	**#339 - Lab:** Switching power supplies	0.0-100.0, -1.0=missing -2.0=not administered
49-53	F5.1	**#331 - Knowledge Test:** Power Supplies: Sweep generator, step & level counters, diffrntl /oprtnl amps, voltage multipliers, multiphase/switching power supplies, integrated circuits	0.0-100.0, -1.0=missing -2.0=not administered
55-59	F5.1	**#349 - Lab:** Logic gates	0.0-100.0, -1.0=missing -2.0=not administered
61-65	F5.1	**#369 - Lab:** Flip-flops	0.0-100.0, -1.0=missing -2.0=not administered
67-71	F5.1	**#341 - Knowledge Test:** Number systems, logic gates, flip-flops	0.0-100.0, -1.0=missing -2.0=not administered

Table 5 (Cont'd)

Note:	In February of 1991, the school proposed major content changes for all knowledge and comprehensive tests of Part 4. From February to August of 1991, the school piloted the revised tests in 8 classes: #90820, #90821, #91010, #91011, #91140, #91141, #91280, and #91281. As of August, 1991, the school adopted the new curriculum for all students. Therefore, the new curriculum applies to all students registered in the course as of April 15, 1991 (Julian: 91105) in addition to the pilot classes listed above.		
73-77	F5.1	#409 - Lab: Inspections & physical security, intro: Airborne Search Radar (ASR)	0.0-100.0, -1.0=missing -2.0=not administered

Line Number 05 - Continuation of Scores for Knowledge, Performance, and Comprehensive Tests, and Labs

Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	#419 - Lab: Signal tracing & block diagram analysis synchronizer/indicator	0.0-100.0, -1.0=missing -2.0=not administered

Table 5 (Cont'd)

07-11	F5.1	**#431 - Knowledge Test: (Only if Registered Before 91105 and NOT in Pilot Class)** Maint. instruction manual, interconnection wiring diagrams & installation/ inspections, instalation/ inspection of avionic syst., line replaceable units, radar fundamentals, block diag. of an ASR syst., ASR synchronizer display syst., MOD/RX/TX syst. operation check, isolating malfunctioning units in ASR syst., ant stabiliztn syst., signal trace/block diagram anlys. of sync./indicator/MOD/RX/ TX/ant stabilztn syst, T/S the ASR **(Only if Registered After 91104 or in Pilot Class)** Radar fundamentals, maint. instruction manual, ASR, signal tracing & block diagram analys. synch./ indicator, inspections & physical security	0.0-100.0, -1.0=missing -2.0=not administered
13-17	F5.1	**#429 - Lab:** Signal tracing & block diag analysis TX/RX/ant	0.0-100.0, -1.0=missing -2.0=not administered
19-23	F5.1	**#439 - Lab:** T/S the ASR	0.0-100.0, -1.0=missing -2.0=not administered

Table 5 (Cont'd)

25-29	F5.1	**#441 - Knowledge Test: (Only if Registered Before 91105 and NOT in Pilot Class)** Power supply 1/common devices/ Azimuth & tilt circuit analys., closed loop servosyst.s, tubes, unit junction transistor OSC/bootstrap sawtooth gen., display indicator, monostable multivibrator/ down-counters/colpitts OSC, bleeder circuits, isolating parts of sync. display indicators **(Only if Registered After 91104 or in Pilot Class)** Block diag analys. ant/ transmitter, signal tracing ant, T/S the ASR	0.0-100.0, -1.0=missing -2.0=not administered
31-35	F5.1	**#449 - Lab:** T/S the synch. & indicator	0.0-100.0, -1.0=missing -2.0=not administered

Table 5 (Cont'd)

37-41	F5.1	**#442 - Knowledge Test: (Only if Registered Before 91105 and NOT in Pilot Class)** 3-Phase power supply/over-load protection circuit, control circuits, resonant cavities, pulse forming network/silicone control rectifier, magnetrons, isolating parts in the MOD/TX sect., waveguide issues: Principles, duplexer filters, coaxial coupling, attenuators, microwave radiating, switching & receiving devices, termination **(Only if Registered After 91104 or in Pilot Class)** Circuit analys. sync., vacuum tubes & circuit deflection syst., resonant cavities, intrmediate bench setup, magnetrons	0.0-100.0, -1.0=missing -2.0=not administered
43-47	F5.1	**#459 - Lab:** T/S: Ant, TX, & RX	0.0-100.0, -1.0=missing -2.0=not administered
49-53	F5.1	**#443 - Knowledge Test: (Only if Registered before 91105 and NOT in Pilot Class)** Short-slot hybrid mixer/ crystal current meter network, klystrons, auto/ intermed freq. amp control network, T/S the video detector/preamp **(Only if Registered After 91104 or in Pilot Class)** Circuit analysis trnsmttr, waveguide principles, reflex klystrons	0.0-100.0, -1.0=missing -2.0=not administered

Table 5 (Cont'd)

Note: In addition to changing the content of existing tests, the school introduced a new knowledge test (#445) into the program. Only students in the pilot classes noted previously and students registered in the course as of 91105 received Knowledge Test #445.			
55-59	F5.1	**#445 - Knowledge Test: (Only if registered after 91104 or in Pilot Class)** Circuit anlys. RX, circuit analys/microwave ant, T/S: RX ant, alternate devices	0.0-100.0, -1.0=missing -2.0=not administered
61-65	F5.1	**#444 - Performance Test:** T/S: special circuits (part 3 & 4 lab material)	0.0-100.0, -1.0=missing -2.0=not administered
67-71	F5.1	**#400 - Comprehensive Test: (Only if Registered Before 91105 and NOT in Pilot Class)** Covers material from pre-91105 tests 431, 441, 442, & 443 **(Only if Registered After 91104 or in Pilot Class)** Covers material from post-91104 tests 431, 441, 442, 443, & 445.	0.0-100.0, -1.0=missing -2.0=not administered
73-77	F5.1	**#509 - Lab:** Clocks/counters, adders/ subtractors, registers	0.0-100.0, -1.0=missing -2.0=not administered

Line Number 06 - Continuation of Scores for Knowledge, Performance, and Comprehensive Tests, and Labs			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**#519 - Lab:** Multipliers	0.0-100.0, -1.0=missing -2.0=not administered
07-11	F5.1	**#512 - Performance Test:** Digital circuits	0.0-100.0, -1.0=missing -2.0=not administered
13-17	F5.1	**#511 - Knowledge Test:** Registers, multipliers/ dividers, clocks/counters, adders/subtractors	0.0-100.0, -1.0=missing -2.0=not administered

Table 5 (Cont'd)

19-23	F5.1	**#529 - Lab:** Signals (control/address, timing/data, memory), encoders & decoders	0.0-100.0, -1.0=missing -2.0=not administered
25-29	F5.1	**#522 - Performance Test:** Content from lab #509 to lab #529	0.0-100.0, -1.0=missing -2.0=not administered
31-35	F5.1	**#539 - Lab:** Intro to computer coding	0.0-100.0, -1.0=missing -2.0=not administered
Note: As of July 2, 1990 (Julian: 90183), the school deleted Comprehensive Test 500 and administered Knowledge Test 521 at the end of Part 5. The school also revised Knowledge Test 521 to include material covered the last week of Part 5. Students entering the course before this date took Knowledge Test 521 during the 24th week of class, then they took Comprehensive Test 500 one week later. Students enrolling after this date did not take Comprehensive Test 500. Instead, they took the revised Knowledge Test 521 in its place, during the 25th week.			
37-41	F5.1	**#521 - Knowledge Test: (Only if Registered Before 90183)** Computer basics, memory devices, microprocessors, timing signal anlys, data control, adders/memory, in-out interface/devices, encoders/decoders **(Only if Registerd After 90182)** covers material noted in test 521 above, plus electrostatic discharge & programming	0.0-100.0, -1.0=missing -2.0=not administered
43-47	F5.1	**#500 - Comprehensive Test: (Only if Registered Before 90183)** Covers Part 5 material: Computer Fundamentals: Comptr. theory, processing circuits, programming	0.0-100.0, -1=missing -2.0=not administered

Table 5 (Cont'd)

49-53	F5.1	#601 - Knowledge Test: Corrosion, preventive maint., avionics equip. repair/treatment, equip. cleaning, measures for elect. bonding/grounding, emergency procedures	0.0-100.0, -1.0=missing -2.0=not administered
55-59	F5.1	#609 - Lab: Soldering	0.0-100.0, -1.0=missing -2.0=not administered
61-65	F5.1	#619 - Lab: Wire & connector repair, coaxial repair	0.0-100.0, -1.0=missing -2.0=not administered
67-71	F5.1	#611 - Performance Test: Soldering, wire connector/ coaxial repair	0.0-100.0, -1.0=missing -2.0=not administered
73-77	F5.1	#600 - Knowledge Test: Infrared/laser principles, fiber optics, cyrogenics, automatic test equip., theater of nuc. warfare	0.0-100.0, -1.0=missing -2.0=not administered
Line Number 07 - Continuation of Scores for Comprehensive Test and FSG, Scores for Knowledge, Performance, and Comprehensive Tests, and Labs of the Revised AV School (Course #61)			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	#700 - Knowledge Test: Basic integrated weapons, communication/navigation/ fire control/tactical radar subsyst., electronic counter measures, anti-sub warfare, electromagnetic interference awareness	0.0-100.0, -1.0=missing -2.0=not administered
Note: Until June 28, 1991 (Julian: 91178), the school included scores from labs as well as knowledge, performance, and comprehensive tests to determine the final school grade (FSG). However, as of this date, the labs did not contribute towards the FSG (See Appendix E).			
07-11	F5.1	Final School Grade (Course #61)	0.0-100.0, -1.0=missing -2.0=not administered

Table 5 (Cont'd)

Note: The AV school revised its course curriculum in December 1991. The school also changed the AV course number from 61 to 60 at that time. We created the layout below for students entering the AV school as course #60. Appendix E describes the relationship between the new and the old tests and labs.

Columns	Format	Description	Valid Ranges, Values
13-17	F5.1	**#100 - Knowledge Test:** General Math: Fractions, basic algebra, equations, signed numbers, linear, trig., vector algebra	0.0-100.0, -1.0=missing -2.0=not administered
19-23	F5.1	**#103 - Lab:** Intro to DC circuit anlys.	0.0-100.0, -1.0=missing -2.0=not administered
25-29	F5.1	**#106 - Knowledge Test:** DC Theory: Intro to DC circuit anlys., batteries, electrostatics, atomic structure, multimeters	0.0-100.0, -1.0=missing -2.0=not administered
31-35	F5.1	**#109 - Lab:** Series DC circuits	0.0-100.0, -1.0=missing -2.0=not administered
37-41	F5.1	**#112 - Lab:** Parallel circuits	0.0-100.0, -1.0=missing -2.0=not administered
43-47	F5.1	**#115 - Knowledge Test:** DC Theory: Series circuit anlys., parallel circuits	0.0-100.0, -1.0=missing -2.0=not administered
49-53	F5.1	**#118 - Lab:** Series parallel circuit	0.0-100.0, -1.0=missing -2.0=not administered
55-59	F5.1	**#121 - Lab:** Voltage dividers	0.0-100.0, -1.0=missing -2.0=not administered
61-65	F5.1	**#124 - Lab:** Trouble shooting (T/S): DC circuits	0.0-100.0, -1.0=missing -2.0=not administered
67-71	F5.1	**#127 - Performance Test:** T/S: DC circuits	0.0-100.0, -1.0=missing -2.0=not administered

Table 5 (Cont'd)

Line Number 8 - Continuation of Scores for Knowledge, Performance, and Comprehensive Tests, and Labs			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**#130 - Comprehensive Test:** DC theory	0.0-100.0, -1.0=missing -2.0=not administered
07-11	F5.1	**#133 - Lab:** Application of test equip.	0.0-100.0, -1.0=missing -2.0=not administered
13-17	F5.1	**#136 - Lab:** Resistive capacitive (RC) circuit analysis.	0.0-100.0, -1.0=missing -2.0=not administered
19-23	F5.1	**#139 - Knowledge Test:** AC concepts, sine wave & RC circuit analys., oscillators (OSCs), capacitors & capacitance, digital multimeters	0.0-100.0, -1.0=missing -2.0=not administered
25-29	F5.1	**#142 - Lab:** Resistive inductive (RL) circuit analysis	0.0-100.0, -1.0=missing -2.0=not administered
31-35	F5.1	**#145 - Lab:** Transformers	0.0-100.0, -1.0=missing -2.0=not administered
37-41	F5.1	**#148 - Knowledge Test:** Inductors & inductance, RL circuit anlys., transformrs.	0.0-100.0, -1.0=missing -2.0=not administered
43-47	F5.1	**#151 - Lab:** Series resonant circuits	0.0-100.0, -1.0=missing -2.0=not administered
49-53	F5.1	**#154 - Lab:** Parallel resonant circuits	0.0-100.0, -1.0=missing -2.0=not administered
55-59	F5.1	**#157 - Lab:** RC & RL signal filters	0.0-100.0, -1.0=missing -2.0=not administered
61-65	F5.1	**#160 - Performance Test:** AC: Application of test equip., transformers, RL & RC filter signals/ circuit anlys., series reactive circuits	0.0-100.0, -1.0=missing -2.0=not administered

Table 5 (Cont'd)

67-71	F5.1	**#163 - Comprehensive Test:** AC Theory: Content from lab 133 to test 160 plus inductive/capacitive/ resistive analyis.	0.0-100.0, -1.0=missing -2.0=not administered
73-77	F5.1	**#200 - Lab:** Transistor amplifier (amp)	0.0-100.0, -1.0=missing -2.0=not administered
Line Number 9 - Continuation of Scores from Knowledge, Performance, and Comprehensive Tests, and Labs			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**#203 - Lab:** Amp biasing	0.0-100.0, -1.0=missing -2.0=not administered
07-11	F5.1	**#206 - Knowledge Test:** Semiconductor Devices: Pos./neg. junctions, amp biasing, transistor theory/amps	0.0-100.0, -1.0=missing -2.0=not administered
13-17	F5.1	**#209 - Lab:** Limiters and clampers	0.0-100.0, -1.0=missing -2.0=not administered
19-23	F5.1	**#212 - Knowledge Test:** Solid State Devices/ Electric Circuits: Amp gain & decibels, feedback amps, limiters & clampers, classification & coupling	0.0-100.0, -1.0=missing -2.0=not administered
25-29	F5.1	**#215 - Lab:** OSCs	0.0-100.0, -1.0=missing -2.0=not administered
31-35	F5.1	**#218 - Lab:** Voltage regulators	0.0-100.0, -1.0=missing -2.0=not administered
37-41	F5.1	**#221 - Knowledge Test** Power Supplies/Naval Aviation Maint. Program: OSCs/rectifiers/filters, voltage regulators, audio amps, maint. data syst.s	0.0-100.0, -1.0=missing -2.0=not administered
43-47	F5.1	**#224 - Lab:** Sig. trace AM receiver (RX)	0.0-100.0, -1.0=missing -2.0=not administered

Table 5 (Cont'd)

49-53	F5.1	**#227 - Knowledge Test:** AM Communication Theory: Radio freq. (RF) comm., transceiver (TX) & RX fundamentals, sig. tracing a superheterodyne RX, block diag./signal analys/ tracing/injecting AM RX	0.0-100.0, -1.0=missing -2.0=not administered
55-59	F5.1	**#230 - Lab:** AM TX	0.0-100.0, -1.0=missing -2.0=not administered
61-65	F5.1	**#233 - Lab:** RF & 1st RX mixer	0.0-100.0, -1.0=missing -2.0=not administered
67-71	F5.1	**#236 - Lab:** 1st intermediate freq. (IF) & 2nd RX mixer	0.0-100.0, -1.0=missing -2.0=not administered
73-77	F5.1	**#239 - Lab:** Detector preamp	0.0-100.0, -1.0=missing -2.0=not administered
Line Number 10 - Continuation of Scores for Knowledge, Performance and Comprehensive Tests, and Labs			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**#242 - Lab:** Audio output amp	0.0-100.0, -1.0=missing -2.0=not administered
07-11	F5.1	**#248 - Lab:** T/S: RX	0.0-100.0, -1.0=missing -2.0=not administered
13-17	F5.1	**#251 - Performance Test:** T/S: RX	0.0-100.0, -1.0=missing -2.0=not administered
19-23	F5.1	**#252 - Knowledge Test:** AM TX, RF/1st IF/audio output amp, 1st & 2nd RX mixer, detector preamp	0.0-100.0, -1.0=missing -2.0=not administered
25-29	F5.1	**#254 - Lab:** Low freq OSC, 1st transmitter mixer & OSC	0.0-100.0, -1.0=missing -2.0=not administered
31-35	F5.1	**#257 - Lab:** Freq doubler/amp & 2nd TX mixer, high freq OSC	0.0-100.0, -1.0=missing -2.0=not administered
37-41	F5.1	**#260 - Lab:** Modulator (MOD)/RF pwr amp	0.0-100.0, -1.0=missing -2.0=not administered

Table 5 (Cont'd)

43-47	F5.1	#263 - Lab: Beat freq OSC	0.0-100.0, -1.0=missing -2.0=not administered
49-53	F5.1	#266 - Lab: Pwr supply/volt regulator	0.0-100.0, -1.0=missing -2.0=not administered
55-59	F5.1	#269 - Knowledge Test: High & low freq OSC, 1st & 2nd TX mixer, beat freq OSC, MOD & RF power amp, TX power supply & voltage regulator, freq dblr amp	0.0-100.0, -1.0=missing -2.0=not administered
61-65	F5.1	#272 - Lab: T/S: AM TX	0.0-100.0, -1.0=missing -2.0=not administered
67-71	F5.1	#275 - Performance Test: AM TX	0.0-100.0, -1.0=missing -2.0=not administered
73-77	F5.1	#278 - Lab: T/S: FM TX	0.0-100.0, -1.0=missing -2.0=not administered
Line Number 11 - Continuation of Scores for Knowledge, Performance and Comprehensive Tests, and Labs			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	#281 - Comprehensive Test: Material from Lab 203 to Lab 278 plus: FM theory/ MOD/detection/auto freq. control, transmission lines, ant, T/S FM TX, radio wave propagation	0.0-100.0, -1.0=missing -2.0=not administered
07-11	F5.1	#300 - Lab: Integrators & differentiators	0.0-100.0, -1.0=missing -2.0=not administered
13-17	F5.1	#303 - Lab: Blocking OSCs & multivibrators	0.0-100.0, -1.0=missing -2.0=not administered
19-23	F5.1	#306 - Knowledge Test: Electromechanical/solid state devices, synchros, servosysts, resolvers/ accelerometers, blocking OSCs, gyros, intgrtrs/ differentiators, motors, multivibrators	0.0-100.0, -1.0=missing -2.0=not administered

Table 5 (Cont'd)

25-29	F5.1	**#309 - Lab:** Sweep generators	0.0-100.0, -1.0=missing -2.0=not administered
31-35	F5.1	**#312 - Lab:** Switching power supplies	0.0-100.0, -1.0=missing -2.0=not administered
37-41	F5.1	**#315 - Knowledge Test:** Power Supplies: Sweep generator, step & level counters, differential/ operatnl amps, switching /multiphase pwr supplies, voltage multipliers.	0.0-100.0, -1.0=missing -2.0=not administered
43-47	F5.1	**#318 - Lab:** Logic gates	0.0-100.0, -1.0=missing -2.0=not administered
49-53	F5.1	**#321 - Lab:** Flip-flops	0.0-100.0, -1.0=missing -2.0=not administered
55-59	F5.1	**#324 - Knowledge Test:** Number systems, logic gates, flip-flops,	0.0-100.0, -1.0=missing -2.0=not administered
61-65	F5.1	**#400 - Lab:** Inspections & physical security	0.0-100.0, -1.0=missing -2.0=not administered
67-71	F5.1	**#403 - Lab:** Intro to airborne search radar (ASR)	0.0-100.0, -1.0=missing -2.0=not administered
73-77	F5.1	**#406 - Lab:** Signal tracing & block diagram analys. synch.	0.0-100.0, -1.0=missing -2.0=not administered
Line Number 12 - Continuation of Scores for Knowledge, Performance and Comprehensive Tests, and Labs			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**#409 - Lab:** Signal tracing & block diagram analys. indicator	0.0-100.0, -1.0=missing -2.0=not administered
07-11	F5.1	**#412 - Knowledge Test:** Radar Fundamentals: Block diagram anlys. sync./ indictr, ASR, inspections & physical security	0.0-100.0, -1.0=missing -2.0=not administered

Table 5 (Cont'd)

13-17	F5.1	**#415 - Lab:** Signal tracing & block diagram analys. TX & RX	0.0-100.0, -1.0=missing -2.0=not administered
19-23	F5.1	**#418 - Lab:** Signal tracing & block diagram analys. ant	0.0-100.0, -1.0=missing -2.0=not administered
25-29	F5.1	**#421 - Lab:** T/S: ASR	0.0-100.0, -1.0=missing -2.0=not administered
31-35	F5.1	**#424 - Knowledge Test:** Block diag anlys. ant/ transmitter, signal tracing ant, T/S ASR	0.0-100.0, -1.0=missing -2.0=not administered
37-41	F5.1	**#427 - Lab:** T/S: Synchronizer	0.0-100.0, -1.0=missing -2.0=not administered
43-47	F5.1	**#430 - Lab:** T/S: Indicator	0.0-100.0, -1.0=missing -2.0=not administered
49-53	F5.1	**#433 - Knowledge Test:** Circuit synchnzr, vacuum/ cathode ray tube deflect syst., resonent cavities, intermed bench setup, magnetrons.	0.0-100.0, -1.0=missing -2.0=not administered
55-59	F5.1	**#436 - Lab:** T/S: transmitter	0.0-100.0, -1.0=missing -2.0=not administered
61-65	F5.1	**#439 - Knowledge Test:** Reflex klystrons, circuit analys. transmitter, waveguide principles	0.0-100.0, -1.0=missing -2.0=not administered
67-71	F5.1	**#442 - Lab:** T/S: RX	0.0-100.0, -1.0=missing -2.0=not administered
73-77	F5.1	**#445 - Lab:** T/S: Antenna	0.0-100.0, -1.0=missing -2.0=not administered

Table 5 (Cont'd)

Line Number 13 - Continuation of Scores for Knowledge, Performance, and Comprehensive Tests, and Labs			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**#448 - Knowledge Test:** Circuit analys RX/ microwave ant, alternate devices	0.0-100.0, -1.0=missing -2.0=not administered
07-11	F5.1	**#451 - Performance Test:** T/S: Special circuits (covers labs #300-#445)	0.0-100.0, -1.0=missing -2.0=not administered
13-17	F5.1	**#454 - Comprehensive Test:** Material from Lab 400 to Performance Test 451	0.0-100.0, -1.0=missing -2.0=not administered
19-23	F5.1	**#500 - Lab:** Registers, clocks, counters	0.0-100.0, -1.0=missing -2.0=not administered
25-29	F5.1	**#503 - Lab:** Adders	0.0-100.0, -1.0=missing -2.0=not administered
31-35	F5.1	**#506 - Lab:** Subtractors	0.0-100.0, -1.0=missing -2.0=not administered
37-41	F5.1	**#509 - Lab:** Multipliers	0.0-100.0, -1.0=missing -2.0=not administered
43-47	F5.1	**#512 - Lab:** Dividers	0.0-100.0, -1.0=missing -2.0=not administered
49-53	F5.1	**#515 - Lab:** T/S: Digital circuits	0.0-100.0, -1.0=missing -2.0=not administered
55-59	F5.1	**#518 - Performance Test:** Digital circuits	0.0-100.0, -1.0=missing -2.0=not administered
61-65	F5.1	**#521 - Knowledge Test:** Registers, clocks, counters, adders, subtractors, multipliers, dividers	0.0-100.0, -1.0=missing -2.0=not administered
67-71	F5.1	**#524 - Lab:** Timing signals	0.0-100.0, -1.0=missing -2.0=not administered
73-77	F5.1	**#527 - Lab:** Data & control signals	0.0-100.0, -1.0=missing -2.0=not administered

Table 5 (Cont'd)

Line Number 14 - Continuation of Scores for Knowledge, Performance, and Comprehensive Tests, and Labs			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**#530 - Lab:** Address & memory control signals	0.0-100.0, -1.0=missing -2.0=not administered
07-11	F5.1	**#533 - Lab:** Encoders & decoders	0.0-100.0, -1.0=missing -2.0=not administered
13-17	F5.1	**#536 - Lab:** Intro to T/S	0.0-100.0, -1.0=missing -2.0=not administered
19-23	F5.1	**#539 - Performance Test:** Covers Labs #500-#536	0.0-100.0, -1.0=missing -2.0=not administered
25-29	F5.1	**#542 - Lab:** Intro to computer coding	0.0-100.0, -1.0=missing -2.0=not administered
31-35	F5.1	**#545 - Knowledge Test:** Computer basics, memory & In-out interface devices, microprocessors, timing sig. anlys, data control, adders/memory, encoders/ decoders, electrostatic discharge, programming	0.0-100.0, -1.0=missing -2.0=not administered
37-41	F5.1	**#600 - Knowledge Test:** Corrosion, preventive maint., avionics equip. repair/treatment, equip. cleaning, measures for elect. bonding/grounding, emergency procedures	0.0-100.0, -1.0=missing -2.0=not administered
43-47	F5.1	**#601 - Lab:** Soldering	0.0-100.0, -1.0=missing -2.0=not administered
49-53	F5.1	**#602 - Lab:** Wire & connector repair	0.0-100.0, -1.0=missing -2.0=not administered
55-59	F5.1	**#603 - Lab:** Coaxial repair	0.0-100.0, -1.0=missing -2.0=not administered
61-65	F5.1	**#604 - Performance Test:** Soldering, coaxial repair, wire connector repair	0.0-100.0, -1.0=missing -2.0=not administered

Table 5 (Cont'd)

67-71	F5.1	**#605 - Knowledge Test:** Infrared/laser principles, fiber optics, cryogenics, theater of nuc. warfare, automatic test equip.	0.0-100.0, -1.0=missing -2.0=not administered
73-77	F5.1	**#606 - Knowledge Test:** Basic integrated weapons, communication/navigation/ fire control/tactical radar subsyst., electronic counter measures, anti-sub warfare, electromagnetic interference awareness	0.0-100.0, -1.0=missing -2.0=not administered

Line Number 15 - Course #60 Final School Grade

Note: The AV school uses a weighted average of the knowledge, performance, and comprehensive tests to determine the FSG (see Appendix E).

Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	Final School Grade (Course #60)	0.0-100.0, -1.0=missing -2.0=not administered

Table 6

Electrician's Mate (EM)

Line Number 01 - Personal Data, Unit and Comprehensive Knowledge Test Scores

Note: The school requires a minimum passing score of 75% for each test. The Academic Review Board (ARB) forms a recommendation as to the status of each student who fails a test. ARB often permits such students to retest. The instructor assigns the minimum passing score to those students who pass the retest, and the school uses that minimum score in calculating the final school grade (FSG). ARB reexamines students who fail the retest and determines how the student will proceed. We entered only the initial test scores for each examinee, because the school assigns a score of 75 for all successful retests.

Columns	Format	Description	Valid Ranges, Values
01-02	A2	School Name	Alpha only (EM).
04-12	I9	Social Security Number	Digits
14-16	A3	Student Action Code	Alpha only. See Appendix B.
18-22	I5	Class Registration Date	YearDay (Julian) (90001-92365)
24-28	F5.1	**#500 - Knowledge Test:** Math pre-test to determine skills upon course entrance (FSG does not include this test)	0.0-100.0, -1.0=missing
30-34	F5.1	**#001 - Knowledge Test:** General math, scientific notation, trigonometry	0.0-100.0, -1.0=missing
36-40	F5.1	**#002 - Knowledge Test:** Safety: First aid, electrical safety, CPR	0.0-100.0, -1.0=missing
42-46	F5.1	**#004 - Knowledge Test:** Basics: Ohm's law, power schematics, fluke 77, AN circuit construction, DC series circuits	0.0-100.0, -1.0=missing

Table 6 (Cont'd)

48-52	F5.1	**#005 - Knowledge Test:** DC parallel circuit construction & V/A, series/ parallel characteristics, DC troubleshooting	0.0-100.0, -1.0=missing
54-58	F5.1	**#006 - Knowledge Test:** AC generation, waveform analysis/ o'scope, electromagnetism, misc. test equipment	0.0-100.0, -1.0=missing
60-64	F5.1	**#007 - Knowledge Test:** Inductance fundamentals/ reactance, RL circuits, transformers	0.0-100.0, -1.0=missing
66-70	F5.1	**#008 - Knowledge Test:** Capacitance fundamentals/ reactance, RC circuits, RLC circuits	0.0-100.0, -1.0=missing
72-76	F5.1	**#009 - Comprehensive Knowledge Test I:** Content from tests 002 to 008	0.0-100.0, -1.0=missing
Line Number 02 - Continuation of Unit and Comprehensive Knowledge Test Scores			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**#010 - Knowledge Test:** Engineering Admin: Tag-out, 3M, PQS/ tools/ fasteners, cables	0.0-100.0, -1.0=missing
07-11	F5.1	**#011 - Knowledge Test:** Generators: Steam cycle, AC & DC generators, gen. maint./ tech. manuals	0.0-100.0, -1.0=missing
13-17	F5.1	**#012 - Knowledge Test:** Distribution: Intro to distribution, EOSS, switchboards/shore power	0.0-100.0, -1.0=missing

Table 6 (Cont'd)

19-23	F5.1	**#013 - Knowledge Test:** Motors: DC & AC motors, motor maintenance	0.0-100.0, -1.0=missing
25-29	F5.1	**#014 - Knowledge Test:** Controllers: Intro to controllers, AC controllers	0.0-100.0, -1.0=missing
31-35	F5.1	**#015 - Comprehensive Knowledge Test 2:** Content from tests 010 to 014	0.0-100.0, -1.0=missing
37-41	F5.1	**#016 - Knowledge Test:** AC/R & Galley: Refrig. & air condit., galley aux.	0.0-100.0, -1.0=missing
Note: On March 6, 1991, the school changed the sequence of knowledge tests 17, 18, and 19. For examinees who registered in the course before this date (Julian date: Year=91, Day=065), use Form 1. For those registering in the course after this period, use Form 2.			
43-47	F5.1	**#017 - Knowledge Test:** **Form 1:** Lighting distribution & navigational lighting **Form 2:** Smallcraft: Batteries, starting/charging system	0.0-100.0, -1.0=missing
49-53	F5.1	**#018 - Knowledge Test:** **Form 1:** Smallcraft: Batteries, starting/charging system **Form 2:** Misc. Aux.: Degaussing, cathodic protection, valve operators	0.0-100.0, -1.0=missing
55-59	F5.1	**#019 - Knowledge Test:** **Form 1:** Misc. Aux.: Degaussing, cathodic protection, valve operators **Form 2:** Lighting distribution & navigational lighting	0.0-100.0, -1.0=missing

Table 6 (Cont'd)

61-65	F5.1	**#020 - Comprehensive Knowledge Test 3:** Content from tests 016 to 019	0.0-100.0, -1.0=missing
67-71	F5.1	**#021 - Knowledge Test:** Electronics: P.N. junction theory, special devices, transistor theory	0.0-100.0, -1.0=missing
73-77	F5.1	**#022 - Knowledge Test:** Electronics: Pwr supplies, transformers & rectifiers, AMP operation/ transistor config., integrated circuits, intro to logics	0.0-100.0, -1.0=missing
Line Number 03 - Unit and Comprehensive Knowledge Test Scores, Final School Grade			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**#023 - Knowledge Test:** Elevators: Intro to basic components, power sup & signal converters, ops of gate circuits & set-reset/ pulser/stepper/ SCR input devices/magnetic controller, flow charts & elevator operations	0.0-100.0, -1.0=missing
07-11	F5.1	**#024 - Comprehensive Knowledge Test 4:** Content from test #002 to #023	0.0-100.0, -1.0=missing
Note: The EM school uses a weighted average of the knowledge test scores to determine the FSG: Each unit test conributes 4% and each comprehensive test contributes 6%. The instructors do not include the math pre-test score (test #500) in determining the FSG.			
13-17	F5.1	Final School Grade	0.0-100.0, -1.0=missing

Table 7

Electronic Technician School Phase I

Line Number 01 - Personal Data; Math Pretest Score; AREA 100 - Basic Electronics and Study Skills Homework Scores

Note: Instruction for the Electronic Technician School takes place over the course of two phases. Student's first attend Phase I, located in Orlando, Florida. Upon satisfactory completion of Phase I, students mover on to Phase II located in Great Lakes, Michigan.

The first half of this layout covers the curriculum implemented for Phase I instruction.

The school administers lab quizzes, blitzes, homework, knowledge exams, performance exams, and cumulative exams. The school requires a minimum passing grade of 64 on all quizzes and exams for graduation. Students who score below 64 receive remediation and a retest. The school allows one retest and assigns students who fail the retest to an Academic Review Board (ARB). Students receive a score of 63 when they pass a retest or repeat and area of instruction.

The school began pilot testing this particular Phase I curriculum July 10, 1990. Therefore, the school may not have administered some homework, quizzes and tests during the time period of July 10 to September 30, 1990, due to experimentation with the curriculum (i.e. leaving a quiz out).

The school cannot provide specific quiz content for the curriculum implemented prior to July 10, 1990. However, the school informed us that they restructured the sequence of topic presentation in the present curriculum. Topics covered within specific areas in the former curriculum do not match the topics covered within specific areas in the new curriculum. For example according to the former curriculum, the school administered the topic Inductance in Area 200; AC Theory. However, in the present curriculum the school administers the topic Inductance in Area 300; AC Components. Since only four students (Baumgardener, 278-66-5736; Compton, 432-17-6879; Moody, 255-67-4328; Olson, 471-78-0888) began the course prior to July 10, 1990, we did not include them in the database.

Columns	Format	Description	Valid Ranges,Values
01-03	A3	School Name	Alpha numeric (ET1).

Table 7 (Cont'd)

05-13	I9	Social Security Number	Digits
15-17	A3	Student Action Code	Alpha only;-1=missing. See Appendix B.
19-23	I5	Date student began course	Year Day (Julian) (90001-92365)
25-30	I6	Class I.D. Number	Digits

Note: The following information represents the curriculum started July 10, 1990. The school grades all homework, blitzes and lab quizzes on a cumulative basis within each area. Thus, the final homework or quiz score per area will represent a cumulative percent score made up of all items completed throughout the area. Since the percentage score associated with each reflects a cumulative score and not the actual score, we entered the number correct for each homework, blitz and lab quiz. In addition, we entered the number points correct for the knowledge, cumulative and first three performance tests. For each score the highest end of the range equals the number possible and remains constant for all students. For the performance tests beginning in Area 500, the school did not provide number correct and number possible information. Therefore, we entered the percentage scores for the remaining performance tests.

The following scores represent student performance in Area 100; Basic Electronics and Study Skills.

32-33	I2	#001101-001109 Math Pretest (Prerequisite Skills)	00-25, -1=missing
35-36	I2	#018401 Homework: Learning and study skills	00-10, -1=missing
38-39	I2	#018402 Basic Electronics Homework: Mathematics for basic electronics, scientific calculator skills, graphs or maps	00-27, -1=missing
41-42	I2	#018403 Basic Electronics Homework: Mathematics for basic electronics, scientific calculator skills, graphs or maps	00-18, -1=missing

Table 7 (Cont'd)

44-45	I2	#018404 Basic Electronics Homework: Mathematics for basic electronics, scientific calculator skills, graphs or maps	00-10, -1=missing
47-48	I2	#018405 Basic Electronics Homework: Mathematics for basic electronics, scientific calculator skills, graphs or maps	00-10, -1=missing
50-51	I2	#018406 Basic Electronics Homework: Mathematics for basic electronics, scientific calculator skills, graphs or maps	00-10, -1=missing
53-54	I2	#018407 Basic Electronics Homework: Mathematics for basic electronics, scientific calculator skills, graphs or maps	00-10, -1=missing
56-57	I2	#018408 Basic Electronic Homework: Mathematics for basic electronics, scientific calculator skills, graphs or maps	00-15, -1=missing
59-60	I2	#018409 Basic Electronics Homework: Mathematics for basic electronics, scientific calculator skills, graphs or maps	00-10, -1=missing
62-63	I2	#018410 Basic Electronics Homework: Mathematics for basic electronics, scientific calculator skills, graphs or maps	00-15, -1=missing

Table 7 (Cont'd)

65-66	I2	#018411 Basic Electronics Homework: Mathematics for basic electronics, scientific calculator skills, graphs or maps	00-12, -1=missing
68-69	I2	#018412 Basic Electronics Homework: Mathematics for basic electronics, scientific calculator skills, graphs or maps	00-08, -1=missing
71-72	I2	#018415 Basic Electronics Homework: Electrical safety and firefighting procedures, first aid for electrical shock victims	00-12, -1=missing
74-75	I2	#018416 Basic Electronics Homework: Describe electrical, magnetic and chemical properties of matter	00-38, -1=missing
77-78	I2	#018417 Basic Electronics Homework: Describe electrical, magnetic and chemical properties of matter	00-29, -1=missing

Line Number 02 - AREA 100 - Basic Electronics and Study Skills Knowledge Test Score; AREA 200 - DC Circuits Lab Quiz, Quiz, Knowledge and Performance Test Scores; AREA 300 - AC Components Homework, and Quiz Lab and Performance Test Scores

Note: The school administers one of several versions of knowledge, quiz, and performance exams.

Columns	Format	Description	Valid Ranges, Values
01-02	I2	#011401 Quiz: Math, safety, matter	00-20, -1=missing

Table 7 (Cont'd)

04-05	I2	#010401-010409 Math Knowledge Test: Learning skills, math, safety, matter	00-50, -1=missing
Note: The following scores represent student performance in Area 200; DC Circuits.			
07-08	I2	#021401-021403 Quiz: Electrical energy and series DC circuits	00-15, -1=missing
10-11	I2	#027411-027417 Lab Quiz: Series DC circuits	00-05, -1=missing
13-14	I2	#028401 DC Circuits Homework: Electrical energy	00-50, -1=missing
16-17	I2	#028402 DC Circuits Homework: Series DC circuits	00-50, -1=missing
19-20	I2	#028403 DC Circuits Homework: Series DC circuits	00-50, -1=missing
22-23	I2	#027421-027427 DC Circuits Lab Quiz: Series DC circuits	00-10, -1=missing
25-26	I2	#028404 DC Circuits Homework: Parallel DC circuits	00-50, -1=missing
28-29	I2	#022401-022493 DC Circuits Quiz: Series DC circuits and parallel DC circuits	00-15, -1=missing
31-32	I2	#028405 DC Circuits Homework: Series-parallel DC circuits	00-25, -1=missing
34-35	I2	#027431-027432 DC Circuits Lab Quiz: Parallel DC circuits	00-09, -1=missing
37-38	I2	#029401-029409 DC Circuits Performance Test: Electrical energy, series DC circuits, parallel DC circuits	00-16, -1=missing

Table 7 (Cont'd)

40-41	I2	#023401-023403 Series-Parallel Quiz	00-15, -1=missing
43-44	I2	#020401-020409 DC Circuits Knowledge Test: Electrical energy, series DC circuits, parallel DC circuits	00-50, -1=missing
Note: The following scores represent students performance in Area 300; AC Components.			
46-47	I2	#038401 AC Components Homework: AC theory	00-41, -1=missing
49-50	I2	#031401-031403 AC Components Quiz: AC theory and test equipment	00-15, -1=missing
52-53	I2	#038402 AC Components Homework: Test equipment	00-41, -1=missing
55-56	I2	#037411-037416 AC Components Lab Quiz: Test equipment	00-10, -1=missing
58-59	I2	#032401-032403 AC Components Quiz: Capacitance	00-10, -1=missing
61-62	I2	#038403 AC Components Homework: Capacitance	00-46, -1=missing
64-65	I2	#037421-037426 AC Components Lab Quiz: Capacitance	00-10, -1=missing
67-68	I2	#033401-033403 AC Components Quiz: Inductance	00-10, -1=missing
70-71	I2	#038404 AC Components Homework: Inductance	00-50, -1=missing
73-74	I2	#037431-037436 AC Components Lab Quiz:	00-08, -1=missing
76-78	I2	#039401-039409 AC Components Performance Test: AC theory, test equipment, capacitance, inductance, transformers	00-10, -1=missing

Table 7 (Cont'd)

Line Number 03 - AREA 300 - AC Components Homework and Knowledge Test Scores; Cumulative Test Score; AREA 400 - AC Circuits Homework, Quiz, Lab Quiz Performance and Knowledge Test Scores; AREA 500 - Transistors Homework, Quiz, Lab Quiz, Knowledge and Performance Test Scores			
Columns	Format	Description	Valid Ranges, Values
01-02	I2	**#038405 AC Components Homework:** transformers	00-25, -1=missing
04-05	I2	**#030401-030419 AC Components Knowledge Test:** AC theory, test equipment, capacitance, inductance, transformers	00-50, -1=missing
07-08	I2	**#030411-030419 Cumulative Test:** Prerequisite skills, DC circuits, AC components	00-25, -1=missing
Note: The following scores represent student performance in Area 400; AC Circuits			
10-11	I2	**#04101-04103 AC Circuits Quiz:** RLC circuit analysis	00-15, -1=missing
13-14	I2	**#048401 AC Circuits Homework:** RLC circuit analysis	00-49, -1=missing
16-17	I2	**#047411-047416 AC Circuits Lab Quiz:** RLC analysis	00-10, -1=missing
19-20	I2	**#042401-042404 AC Circuits Quiz:** Tuned circuits and filters	00-15, -1=missing
22-23	I2	**#048402 AC Circuits Homework:** Tuned circuits and filters	00-50, -1=missing
25-26	I2	**#048403 AC Circuits Homework:** Integrators and differentiators	00-14, -1=missing

Table 7 (Cont'd)

28-29	I2	**#048404 AC Circuits Homework:** Semiconductor diodes	00-50, -1=missing
31-32	I2	**#047421-047426 AC Circuits Lab Quiz:** Integrators and differentiators	00-05, -1=missing
34-35	I2	**#043401-043402 AC Circuits Quiz:** Integrators and differentiators, semiconductor diodes	00-15, -1=missing
37-38	I2	**#047431-047436 AC Circuits Lab Quiz:** Limiters	00-10, -1=missing
40-41	I2	**#048405 AC Circuits Homework:** Limiters	00-20, -1=missing
43-44	I2	**#049401-049409 AC Circuits Performance Test:** RLC circuit analysis, tuned circuits and filters, integrators and differentiators, semiconductor diodes, limiters	00-05, -1=missing
46-47	I2	**#040401-040409 AC Circuits Knowledge Test:** RLC circuit analysis, tuned circuits and filters, integrators and differentiators, semiconductor diodes, limiters	00-50, -1=missing
Note: The following scores represent student performance in Area 500; Transistors.			
49-50	I2	**#058401 Transistors Homework:** Clampers	00-36, -1=missing
52-53	I2	**#051410-051405 Transistors Quiz:** Clampers	00-15, -1=missing

Table 7 (Cont'd)

55-56	I2	#057411-057416 Transistors Lab Quiz: Transistors	00-15, -1=missing
58-59	I2	#052401-052405 Transistors Quiz: Transistors	00-15, -1=missing
61-62	I2	#058402 Transistors Homework: Transistors	00-38, -1=missing
64-68	F5.1	#059401-059409 Transistors Performance Test: Clampers, transistors, audio frequency amplifiers	0.0-100.0, -1.0=missing
70-71	I2	#053401-053404 Transistors Quiz: Transistors and audio frequency amplifiers	00-15, -1=missing
73-74	I2	#058403 Transistors Homework: Audio frequency amplifiers	00-50, -1=missing
76-77	I2	#058404 Transistors Homework: Audio frequency amplifiers	00-40, -1=missing
79-80	I2	#050401-050409 Transistors Knowledge Test: Clampers, transistors, audio frequency amplifiers, special amplifiers	00-50, -1=missing
Line Number 04 - AREA 600 - Power Supplies Quiz, Homework, Lab Quiz, Performance and Knowledge Test Scores; Cumulative Test Score; AREA 700 - Wave Generating Circuits Quiz, Lab Quiz, Homework Scores, Performance and Knowledge Test Scores			
Note: The following scores represent student performance in Area 600: Power Supplies			

Table 7 (Cont'd)

Columns	Format	Description	Valid Ranges, Values
01-02	I2	#061401-061402 Power Supplies Quiz: Electron tube diodes and triodes	00-15, -1=missing
04-05	I2	#068401 Power Supplies Homework: Electron tube diodes	00-10, -1=missing
07-08	I2	#068402 Power Supplies Homework: Electron tube triodes	00-20, -1=missing
10-11	I2	#062401-062402 Power Supplies Quiz: Solid state power supplies	00-15, -1=missing
13-17	F5.1	#067401-067404 Power Supplies Lab Quiz: Solid state power supplies	0.0-100.0, -1.0=missing
19-20	I2	#068403 Power Supplies Homework: Solid state power supplies	00-50, -1=missing
22-23	I2	#063401-063402 Power Supplies Quiz: Special semiconductor devices	00-15, -1=missing
25-29	F5.1	#069401-069409 Power Supplies Performance Test: Tube diodes, triodes, power supplies, special semiconductor devices(SCR/UJT)	0.0-100.0, -1.0=missing
31-32	I2	#068404 Power Supplies Homework: Special semiconductor devices	00-42, -1=missing
34-35	I2	#060401-060409 Power Supplies Knowledge Test: Tube diodes, triodes, powers supplies, special semiconductor devices (SCR/UJT), special semiconductor devices (FET)	00-50, -1=missing

Table 7 (Cont'd)

37-38	I2	#060411-060419 Cumulative Test: AC circuits, transistors, power supplies	00-25, -1=missing
Note: The following scores represent student performance in Area 700; Wave Generating Circuits.			
40-41	I2	#071401-071403 Wave Generating Circuits Quiz: Multivibrators	00-15, -1=missing
43-44	I2	#072401-072402 Wave Generating Circuits Quiz: Multivibrators	00-15, -1=missing
Note: The school did not provide number correct information on the lab quiz for Area 700. Therefore, we entered the percentage score obtained by the student on this lab. Also, the school administers only one lab in this Area. Hence, this score also represents the cumulative lab quiz score.			
46-50	F5.1	#077401-077406 Wave Generating Circuits Lab Quiz: Multivibrators	0.0-100.0, -1.0=missing
52-53	I2	#073401-073402 Wave Generating Circuits Quiz: Sawtooth generators and oscillators	00-15, -1=missing
55-56	I2	#078401/078501 Wave Generating Circuits Homework: Multivibrators	00-43, -1=missing
58-59	I2	#078402/078502 Wave Generating Circuits Homework: Sawtooth generators	00-30, -1=missing
61-62	I2	#078403 Wave Generating Circuits Homework: Oscillators	00-50, -1=missing
64-65	I2	#078404 Wave Generating Circuits Homework: Special amplifiers	00-40, -1=missing

Table 7 (Cont'd)

67-71	F5.1	**#079401-079409 Wave Generating Circuits Performance Test:** Multivibrators, sawtooth generators, oscillators	0.0-100.0, -1.0=missing
73-74	I2	**#070401-070409 Wave Generating Circuits Knowledge Test:** Wave generating circuits: multivibrators, sawtooth generators, oscillators	00-50, -1=missing
Note: The following scores represent student performance in Area 800; AM Receivers.			
76-77	I2	**#081401-081403 AM Receivers Quiz:** Decibels and introduction to AM receivers	00-15, -1=missing
Line Number 05 - AREA 700 - Wave Generating Circuits Performance and Knowledge Test, Homework and Quiz Scores; AREA 800 AM Receivers Quiz, Homework, Performance and Knowledge Test Scores; AREA 900 Transmitters and Transceivers Homework, Quiz, Performance and Knowlege Test Scores			
Columns	Format	Description	Valid Ranges, Values
01-02	I2	**#088401 AM Receivers Homework:** Decibels	00-50, -1=missing
04-05	I2	**#088402 AM Receivers Homework:** Introduction to AM receivers	00-50, -1=missing
07-08	I2	**#082401-082402 AM Receivers Quiz:** RF and IF amplifiers and mixers	00-15, -1=missing
10-11	I2	**#088403 AM Receivers Homework:** RF and IF amplifiers	00-50, -1=missing
13-14	I2	**#088404 AM Receivers Homework:** Mixers	00-30, -1=missing

Table 7 (Cont'd)

16-17	I2	#083401-083402 AM Receivers Quiz: Detectors and control circuits	00-15, -1=missing
19-20	I2	#088405 AM Receivers Homework: Detectors	00-30, -1=missing
22-23	I2	#088406 AM Receivers Homework: Control circuits	00-30, -1=missing
25-26	I2	#088407 AM Receivers Homework: Troubleshooting methods	00-50, -1=missing
28-32	F5.1	#089401-089409 AM Receivers Performance Test: Decibels, control circuits, receiver alignments, receiver troubleshooting	0.0-100.0, -1.0=missing
34-35	I2	#080401-080409 AM Receivers Knowledge Test: Decibels, control circuits, receiver alignments	00-50, -1=missing
Note: The following score represent student performance in Area 900; Transmitters and Transceivers.			
37-38	I2	#091401-092403 AM Transmitters and Transceivers Quiz: Intro AM transmitters, RF power amplifiers, amplitude modulation	00-15, -1=missing
40-41	I2	#098401 AM Transmitters and Receivers Homework: Introduction to AM transmitters	00-25, -1=missing
43-44	I2	#098402 AM Transmitters and Transceivers Homework: RF Power amplifiers	00-37, -1=missing

Table 7 (Cont'd)

46-47	I2	#098403 AM Transmitters and Transceivers Homework: Amplitude modulation	00-40, -1=missing
49-50	I2	#098404 AM Transmitters and Transceivers Homework: Transmitter troubleshooting	00-20, -1=missing
52-53	I2	#098405 AM Transmitters and Transceivers Homework: AM transceivers	00-20, -1=missing
55-56	I2	#098406 AM Transmitters and Transceivers Homework: Transmission lines and antennas	00-50, -1=missing
58-62	F5.1	#095401-095409 AM Transmitters Performance Test: AM transmitters, RF power amplifiers, AM modulation	0.0-100.0, -1.0=missing
64-68	F5.1	#099401-099409 AM Transceivers Performance Test: Troubleshooting transceivers	0.0-100.0, -1.0=missing
70-71	I2	#092401-092403 AM Transmitters and Transceivers Quiz: Transmission lines and antennas, wave propagation and EMI	00-15, -1=missing
73-74	I2	#098407 AM Transmitters and Transceivers Homework: Wave propagation and EMI	00-50, -1=missing
76-77	I2	#098408 AM Transmitters and Transceivers Homework: RF radiation hazards	00-50, -1=missing

Table 7 (Cont'd)

79-80	I2	**#090401-090409 AM Transmitters & Transceivers Knowledge Test:** AM transmitters, RF power amplifiers, AM modulators, transceivers, transmission lines and antennas, wave propagation & EMI, RF radiation hazards	00-50, -1=missing
Line Number 06 - Cumulative Test Score, Final School Grade			
Columns	Format	Description	Valid Ranges, Value
01-02	I2	**#090411-090419: Cumulative Test:** Wave generating circuits, AM transceivers, AM transmitters & transceivers	00-25, -1=missing

Note: The final school grade consists of a weighted average of scores obtained by the student on knowledge and performance exams. The school assigns the following weights to the Knowledge and Performance Tests (column 2 represents cumulative points):

AREA 100 Knowledge Test	.05	5
AREA 200 Performance Test	.01	6
AREA 200 Knowledge Test	.09	15
AREA 300 Performance Test	.02	17
AREA 300 Knowledge Test	.08	25
AREA 400 Performance Test	.02	27
AREA 400 Knowledge Test	.08	35
AREA 500 Performance Test	.02	37
AREA 500 Knowledge Test	.08	45
AREA 600 Performance Test	.02	47
AREA 600 Knowledge Test	.08	55
AREA 700 Performance Test	.03	58
AREA 700 Knowledge Test	.12	70
AREA 800 Performance Test	.03	73
AREA 800 Knowledge Exam	.12	85
AREA 900 Performance Test #1	.0225	87.25
AREA 900 Performance Test #2	.0225	89.5
AREA 900 Knowledge Exam	.105	100

04-08	F5.1	Final School Grade	0.0-100.0, -1.0=missing

Table 7 (Cont'd)

Electronics Technician Phase II

Line Number 07 - Personal Data, FM/DC Circuit Analysis, and Single Sideband Receiver Knowledge and Performance Test, Homework and Blitz Scores; Single Sideband Transmitter Knowledge Test Score

Note: The remainder of the layout represents the curricula implemented in Phase II. The school implemented three curricula over the course of two and a half years. We referred to these curricula and the changes in each as:

Curriculum I: Curriculum that covered the time period of March 1, 1990 to March 31, 1991.
Curriculum II: Curriculum that covered the time period of April 1, 1991 to March 3, 1992.
Curriculum III: Curriculum that covers the time period from March 4, 1992 to June 1992.

The major changes that occurred between these curricula involved the addition and removal of a training Area consisting of AC Primary Power distribution and Supplies.

All performance tests consist of troubleshooting procedures taught in the lab.

The school also administers homework and blitzes for each Area. However, the school did not record these scores until February 22, 1991. The school does not include these scores in the calculation of the final school grade. For all students enrolling on or before February 22, 1991, we entered a missing value; and for all students enrolling in the school after February 22, 1991, we entered the homework and blitz scores as they appeared on the ISS report. The content covered in the homework and blitzes for each area exemplifies the content covered in the Knowledge tests.

Columns	Format	Description	Valid Ranges,Values
01-03	A3	School Name	(ET2)
05-13	I9	Social Security Number	Digits
15-17	A3	Student Action Code	See Appendix B.
19-23	I5	Date student began course	Year Day(Julian) (90001-92365)

Table 7 (Cont'd)

25-30	I6	Class I.D. Number	Digits
32-36	F5.1	**#501 AREA 1 FM/DC Analysis Knowledge Test:** FM fundamentals and DC circuit analysis, narrow band frequency modulator (NBFM) receiver functional operation, biased semiconductor diode PN junction, analysis of 2 junction transistors, basic amplifier configurations, classes of amplifiers, single source biasing	0.0-100.0, -1.0=missing
38-42	F5.1	**#801 AREA 1 FM/DC Analysis Blitz**	0.0-100.0, -1.0=missing
44-48	F5.1	**#701 AREA 1 FM/DC Homework**	0.0-100.0, -1=missing
50-54	F5.1	**#502 AREA 2 Single Sideband Receiver (SSB) Knowledge test:** SSB functional operations and receiver fundamentals, receiver front end circuits, intermediate frequency amplifiers, demodulator, audio amps/reproduction devices	0.0-100.0, -1.0=missing
56-60	F5.1	**#602 AREA 2 Single Sideband Receiver Performance test:** Single sideband receiver troubleshooting	0.0-100.0, -1.0=missing
62-66	F5.1	**#802 AREA 2 Single Sideband Receiver Blitz**	0.0-100.0, -1.0=missing
68-72	F5.1	**#702 AREA 2 Single Sideband Receiver Homework**	0.0-100.0, -1.0=missing

Table 7 (Cont'd)

74-78	F5.1	**#503 AREA 3 Single Sideband Transmitter Knowledge test:** SSB transmit functional circuits, oscillators, SSB modulation, first intermediate frequency (IF) amps, four diode balanced mixer, high frequency balanced mixer/RF amplifier	0.0-100.0, -1.0=missing
Line Number 08 - Single Sideband Transmitter Performance Test, Blitz and Homework Scores; Digital Knowledge Test, Blitz and Homework Scores; AN/WRC-1B Receiver and Transmitter Knowledge and Performance Test, Blitz and Homework Scores;			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**#603 AREA 3 Single Sideband Transmitter Performance test:** Transmitter troubleshooting procedures	0.0-100.0, -1.0=missing
07-11	F5.1	**#803 AREA 3 Single Sideband Transmitter Blitz**	0.0-100.0, -1.0=missing
13-17	F5.1	**#703 AREA 3 Single Sideband Transmitter Homework**	0.0-100.0, -1.0=missing

Table 7 (Cont'd)

19-23	F5.1	**#504 AREA 4 Digital Knowledge Test:** Number systems,intro to digital principles, basic logic gate, logic gate variation and equivalents, encoders and decoders, flip-flops, clocks and counters, registers, multiplexers and demultiplexers, simulator NIDA 210 operation and block analysis	0.0-100.0, -1.0=missing
25-29	F5.1	**#804 Digital Blitz**	0.0-100.0, -1.0=missing
31-35	F5.1	**#704 Digital Homework**	0.0-100.0, -1.0=missing
37-41	F5.1	**#511 AREA 11 AN/WRC-1B Receiver Knowledge Test:** R-1051B/URR high frequency receiver functional block diagrams, R-1051B/URR AC/DC distribution, R-1051B/URR Ant. Overload/Code, R-1051B/URR RF amplifier, R-1051B/URR trans/synth, R-1051B/URR receiver mode selector, R-1051B/URR IF/AF amplifier	0.0-100.0, -1.0=missing
43-47	F5.1	**#611 AREA 11 AN/WRC-1B Receiver Performance Test:** Troubleshooting principles for R-1051B/URR	0.0-100.0, -1.0=missing
49-53	F5.1	**#811 AREA 11 AN/WRC-1B Receiver Blitz**	0.0-100.0, -1.0=missing
55-59	F5.1	**#711 AREA 11 AN/WRC-1B Receiver Homework**	0.0-100.0, -1.0=missing

Table 7 (Cont'd)

61-65	F5.1	**#512 AREA 12 AN/WRC-1B Transmit Knowledge Test:** AN/URT-24 operations, high frequency transmitter T-827 chassis and main frame circuit analysis, T-827 FSK tone gen. and AF amp, T-827 transmit mode selector, T-827 IF amp, trans/synth, RF amp, AM-3007/URT, CU-937/UR	0.0-100.0, -1.0=missing
67-71	F5.1	**#612 AREA 12 AN/WRC-1B Transmit Performance Test:** AN/URT-24 operations and troubleshooting	0.0-100.0, -1.0=missing
73-77	F5.1	**#812 AREA 12 AN/WRC-1B Transmit Blitz**	0.0-100.0, -1.0=missing

Line Number 09 - AN/WRC-1B Transmit Homework Score; WSC-3 UHF Transceiver and Telecommunications System Knowledge and Performance Test, Blitz and Homework Scores (Curriculum 1 and 3 only), and AN/URT 23 and AN/URA 38 (Curriculum 2 only)

Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**#712 AREA 12 AN/WRC-1B Transmit Homework**	0.0-100.0, -1.0=missing

Note: The school added a new course area in Curriculum 2 and defined it as AREA 13, AN/URT 23 and AN/URA 38, and renamed previous Areas 13 and 14 as Areas 14 and 15. The new Area 13 in Curriculum 2 specifically covered Primary Power and Supplies. However, the school dropped Area 13 in Curriculum 3, and no longer includes it in the course instruction. Thus, AREA 13 and 14 in Curricula 1 and 3 are identical in content to AREA 14 and 15 from Curriculum 2 and Curriculum 2 has a content area (AREA 13) not covered in curricula 1 and 3. The differences in instruction between Curricula 1 and 3 and Curricula 2 include difference in time alloted to each topic. Students received less time per topic in Curriculum 2 than those students in Curriculum 1 and 3, because of the addition of AREA 13.

Table 7 (Cont'd)

07-11	F5.1	**#513 AREA 13 (Curricula 1 and 3 only) WSC-3 UHF Transceiver (V) 6 Knowledge test:** WSC-3 functional operation, WSC-3 power supply and distribution, WSC-3 frequency standard and synthesizer operation, WSC-3 transmitter function operation and signal flow, WSC-3 control operation and distribution interface, WSC-3 BITE operation analysis, WSC-3 transmitter paper troubleshooting, WSC-3 receiver operation and signal flow, WSC-3 receiver BITE operation and paper troubleshooting	0.0-100.0, -1.0=missing -2.0=not administered
13-17	F5.1	**#613 AREA 13 WSC-3 (V) 6 (Curricula 1 and 3 only) Performance Test:** Operation and troubleshooting	0.0-100.0, -1.0=missing -2.0=not administered
19-23	F5.1	**#813 AREA 13 WSC-3 (V) 6 (Curricula 1 and 3 only) Blitz**	0.0-100.0, -1.0=missing -2.0=not administered
25-29	F5.1	**#713 AREA 13 WSC-3 (V) 6 (Curricula 1 and 3 only) Homework**	0.0-100.0, -1.0=missing -2.0=not administered

Table 7 (Cont'd)

31-35	F5.1	**#514 AREA 14 (Curricula 1 and 3 only) Telecommunication Systems Knowledge Test:** Communications planning, blueprints, remote units, teletype principles and patch panels, URA-17 teletype converter circuit analysis, CV-2460 converter and keyer function circuit analysis, UCC-1 multiplexer keyer and converter function circuit analysis	0.0-100.0, -1.0=missing -2.0=not administered
37-41	F5.1	**#614 AREA 14 (Curriculum 1 and 3 only) Telecommunication Systems Performance Test:** Operations and troubleshooting	0.0-100.0, -1.0=missing -2.0=not administered
43-47	F5.1	**#814 AREA 14 (Curriculum 1 and 3 only) Telecommunication Systems Blitz**	0.0-100.0, -1.0=missing -2.0=not administered
49-53	F5.1	**#714 AREA 14 (Curriculum 1 and 3 only) Telecommunication Systems Homework**	1.0-100.0, -1.0=missing -2.0=not administered
55-59	F5.1	**#513 AREA 13 (Curriculum 2 only) AN/URT-23 and AN/URA 38 Transmit Receiver Knowledge Test:** URT-23/URA-38 operation, primary power circuit analysis	0.0-100.0, -1.0=missing -2.0=not administered
61-65	F5.1	**#613 AREA 13 (Curriculum 2 only) AN/URT-23 and AN/URA 38 Performance Test:** Operations and troubleshooting	0.0-100.0, -1.0=missing -2.0=not administered

Table 7 (Cont'd)

67-71	F5.1	#813 AREA 13 (Curriculum 2 only) AN/URT-23 and AN/URA 38 Blitz	0.0-100.0, -1.0=missing -2.0=not administered
73-77	F5.1	#713 AREA 13 (Curriculum 2 only) AN/URT-23 and AN/URA 38 Homework	0.0-100.0, -1.0=missing -2.0=not administered
Line Number 10 - WSC-3 UHF and Telecommunication Systems Knowledge and Performance Tests, Blitz and Homework Scores (Curriculum 2 only), AN/SPS-10 Knowledge and Performance Test, and Homework and Blitz Scores			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	#514 AREA 14 (Curriculum 2 only) WSC-3 UHF Transceiver (V) 6 Knowledge Test: WSC functional operation, WSC-3 power supply and distribution, WSC-3 frequency standard and synthesizer operation, WSC-3 transmitters function operation and signal flow, WSC-3 control operation and distribution interface, WSC-3 BITE operation analysis, WSC-3 transmitter paper troubleshooting, WSC-3 receiver functional operation and signal flow, WSC-3 receiver BITE operation and paper troubleshooting	0.0-100.0, -1.0=missing -2.0=not administered
07-11	F5.1	#614 AREA 14 (Curriculum 2 only) WSC-3 (V) 6 Performance Test: Operation and troubleshooting	0.0-100.0, -1.0=missing -2.0=not administered
13-17	F5.1	#814 AREA 14 (Curriculum 2 only) WSC-3 (V) 6 Blitz	0.0-100.0, -1.0=missing -2.0=not administered

Table 7 (Cont'd)

19-23	F5.1	**#714 AREA 14 (Curriculum 2 only) WSC-3 (V) 6 Homework**	0.0-100.0, -1.0=missing -2.0=not administered
25-29	F5.1	**#515 AREA 15 (Curriculum 2 only) Telecommunication Systems Knowledge test:** Communications planning, blueprints, remote units, teletype principles and patch panels, URA-17 teletype converter circuit analysis, CV-2460 converter and keyer function circuit analysis, UCC-1 multiplexer keyer and converter function circuit analysis	0.0-100.0, -1.0=missing -2.0=not administered
31-35	F5.1	**#615 AREA 15 (Curriculum 2 only) Telecommunication Systems Performance Test:** Operations and troubleshooting	0.0-100.0, -1.0=missing -2.0=not administered
37-41	F5.1	**#815 AREA 15 (Curriculum 2 only) Telecommunication Systems Blitz**	0.0-100.0, -1.0=missing -2.0=not administered
43-47	F5.1	**#718 AREA 15 (Curriculum 2 only) Telecommunication Systems Homework**	0.0-100.0, -1.0=missing -2.0=not administered
Note: The school did not give a performance test in AREA 21 AN/SPS-10 in Curricula 1 and 3.			
49-53	F5.1	**#521 AREA 21 Radar Principles SPS-10 Knowledge Test:** Intro to radar, intro to AN/SPS-10, radar principles, intro to systems, vacuum tube principles, microwave transmitting tubes.	0.0-100.0, -1.0=missing

Table 7 (Cont'd)

55-59	F5.1	**#621 AREA 21 (Curriculum 2 only) AN/SPS-10 Performance Test #1:** Primary power distribution and supply troubleshooting labs	0.0-100.0, -1.0=missing -2.0=not administered
61-65	F5.1	**#821 AREA 21 AN/SPS-10 Blitz**	0.0-100.0, -1.0=missing
67-71	F5.1	**#721 AREA 21 AN/SPS-10 Homework**	0.0-100.0, -1.0=missing
73-77	F5.1	**#522 AREA 22 AN/SPS-10 Knowledge test:** Vacuum tube to point ground (VTTPG), MPG micro wave devices micro wave tubes, radar frequency (RF) system	0.0-100.0, -1.0=missing
Line Number 11 - AN/SPS-10 Transmitter and Receiver, and AN/SPA 25 Knowledge, Performance Test, Blitz and Homework Scores			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**#622 AREA 22 AN/SPS-10 #1 Transmitter Performance Test:** TPG/MPG troubleshooting labs	0.0-100.0, -1.0=missing
07-11	F5.1	**#822 AREA 22 AN/SPS 10 Blitz**	0.0-100.0, -1.0=missing
13-17	F5.1	**#722 AREA 22 AN/SPS 10 Homework**	0.0-100.0, -1.0=missing
19-23	F5.1	**#523 AREA 23 AN/SPS Radar Receiver Knowledge Test:** Intro to receivers, IF strip, detect/video, interference elim. ckts, AFC synchro/servos, antenna systems	0.0-100.0, -1.0=missing

Table 7 (Cont'd)

25-29	F5.1	**#623 AREA 23 (Curriculum 1 and 3 only) AN/SPS-10 Receiver Performance test:** receiver labs and systems labs	0.0-100.0, -1.0=missing -2.0=not administered
31-35	F5.1	**#623 AREA 23 (Curriculum 2 only) AN/SPS-10 Receiver Performance Test:** Receiver lab	0.0-100.0, -1.0=missing -2.0=not administered
37-41	F5.1	**#823 AREA 23 AN/SPS-10 Receiver Blitz**	0.0-100.0, -1.0=missing
43-47	F5.1	**#723 AREA 23 AN/SPS-10 Receiver Homework**	0.0-100.0, -1.0=missing
49-53	F5.1	**#524 AREA 24 AN/SPA-25 Planned Position Indicator Display Knowledge Test #1:** Intro/Book issue, intro to AN/SPA-25 and special circuits, AN/SPA-25 timing section, AN/SPA-25 power supply, AN/SPA-25 operation and timing circuits	0.0-100.0, -1.0=missing
55-59	F5.1	**#624 AREA 24 AN/SPA-25 Performance Test #1:** AN/SPA-25 troubleshooting	0.0-100.0, -1.0=missing
61-65	F5.1	**#824 AREA 24 AN/SPA-25 Blitz**	0.0-100.0, -1.0=missing
67-71	F5.1	**#724 AREA 25 AN/SPA-25 Homework**	0.0-100.0, -1.0=missing
73-77	F5.1	**#525 AREA 25 AN/SPA-25 Knowledge Test #2:** Azimuth resolver and bearing cursor, video cursor sweep switch, sweep generators block, yoke drivers block, range strobe generator block, range ring generator, video section	0.0-100.0, -1.0=missing

Table 7 (Cont'd)

Line Number 12 - AN/SPA-25 Performance Test, Blitz and Homework Scores; and Final School Grade			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**#625 AREA 25 AN/SPA-25 Performance Test #2:** Sweep and brightening troubleshooting	0.0-100.0, -1.0=missing
07-11	F5.1	**#825 AREA 25 AN/SPA-25 Blitz**	0.0-100.0, -1.0=missing
13-17	F5.1	**#725 AREA 25 AN/SPA-25 Homework**	0.0-100.0, -1.0=missing
Note: The Final School Grade consists of a weighted average of scores obtained by the student on the Knowledge and Performance tests. The Knowledge Tests account for 70% of the student's Final School Grade and the Performance Tests account for 30%.			
19-23	F5.1	**Final School Grade**	0.0-100.0, -1.0=missing

Table 8

Engineman (EN)

Line Number 01 - Personal and Class Data, Written and Performance Test Scores

Columns	Format	Description	Valid Ranges,Values
01-02	A2	School name	Alphanumeric (EN)
04-12	I9	Social security number	Digits
14-16	A3	Student Action Code	Alpha only; -1=missing See Appendix B.

Note: Before October 1, 1990, all EN students took Propulsion Engineering (PE) Basics as a prerequisite course. Civilian personnel taught PE, and military personnel taught EN. As of October 1, 1990, the EN school incorporated the PE school into the EN course curriculum increasing the length of the school from 9 to 11 1/2 weeks. The school restructured and reordered the presentation of the previous course material and integrated it with the new PE Basics material. However, course content did not change. Following this merger, teaching responsibilities for the PE course shifted from civilian to military personnel.

In May of 1991 (the school could not provide a more specific date), the school prepiloted a revised course curriculum that incorportated several new lessons. At the time of this revision the school also separated the curriculum into 3 distinct phases. Phase I covers the first four weeks of training, Phase II covers weeks five through eight, and Phase III covers the last three and a half weeks. The school administers a comprehensive phase exam following each phase. The school also phased out quizzes during the May 1991 prepilot of the new three phase curriculum. The school began implementing this new curriculum in May of 1991 and finalized it in October of 1991.

The school requires a score of 75% or higher to pass each quiz and exam. Examinees who fail a quiz or exam participate in remediation and retesting. The instructor assigns the minimum passing score to those students who pass the retest, and the school uses that minimum score in calculating the final school grade (FSG). All students who fail the retest appear befor the Academic Review Board. We entered only the initial test scores for each examinee, because the school assigns a score of 75 for all successful retests.

As a result of these revisions, there are three test forms for this layout.

Table 8 (Cont'd)

18	A1	Test Form	A=Through September 30, 1990 B=October 1, 1990 through May 1991 C=After May 1991
Note: The following are scores from Test Form A.			
20-24	F5.1	**Week 1 Quiz/Mod 013:** Introduction to diesel engines, diesel engine construction, diesel engine air intake systems, diesel engine exhaust systems	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
26-30	F5.1	**Week 1 Exam/Mod 016:** Introduction to diesel engines, diesel engine construction, diesel engine air intake systems, diesel engine exhaust systems	Digits, 0.0-100.0, -1.0=missing -2.0=not administered
32-36	F5.1	**Week 2 Quiz/Mod 023:** Diesel engine fuel systems, diesel engine lube oil systems, diesel engine cooling water systems	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
38-42	F5.1	**Week 2 Exam/Mod 026:** Diesel engine fuel systems, diesel engine lube oil systems, diesel engine cooling water systems	Digits, 0.0-100.0, -1.0=missing -2.0=not administered
44-48	F5.1	**Week 3 Quiz/Mod 033:** Diesel engine air starting systems, diesel engine control systems, intro. to GM 6-71 series diesel engine	Digits, 0.0-100.0 -1.0=missing -2.0=not administered

Table 8 (Cont'd)

50-54	F5.1	**Week 3 Exam/Mod 036:** Diesel engine air starting systems, diesel engine control systems, intro. to GM 6-71 series diesel engine	Digits, 0.0-100.0, -1.0=missing -2.0=not administered
56-60	F5.1	**Week 5 Quiz/Mod 053:** Clutches, main reduction gear, main reduction gear lube oil system, main propulsion shafting system, controllable pitch propeller system, electro-hydraulic steering system	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
62-66	F5.1	**Week 5 Exam/Mod 056 Comprehensive Exam 1:** Clutches, main reduction gear, main reduction gear lube oil system, main propulsion shafting system, controllable pitch propeller system, electro-hydraulic steering system, all material covered in weeks 1 through 5	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
68-72	F5.1	**Week 6 Quiz/Mod 063:** Intro. to shipboard electrical circuits, 60Hz electrical distribution system, interior communications (IC) alarm systems, small craft operations, small craft electrical distribution system, small craft propulsion engine hydraulic starting system, small craft steering systems, small craft propulsion engine transmissions, small craft ramp hoisting system	Digits, 0.0-100.0 -1.0=missing -2.0=not administered

Table 8 (Cont'd)

74-78	F5.1	**Week 6 Exam/Mod 066:** Intro. to shipboard electrical circuits, 60Hz electrical distribution system, interior communications (IC) alarm systems, small craft operations, small craft electrical distribution system, small craft propulsion engine hydraulic starting system, small craft steering systems, small craft propulsion engine transmissions, small craft ramp hoisting system	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
Line Number 02 - Quiz and Exam Scores, Form A & B; FSG, Form A			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**Week 7 Quiz/Mod 073:** Evaporators (distilling plants), auxiliary boilers, air conditioning and refrigeration plants, compressed air systems, shipboard drainage systems, shipboard fire fighting systems, fuel systems	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
07-11	F5.1	**Week 7 Exam/Mod 076:** Evaporators (distilling plants), auxiliary boilers, air conditioning and refrigeration plants, compressed air systems, shipboard drainage systems, shipboard fire fighting systems, fuel systems	Digits, 0.0-100.0 -1.0=missing -2.0=not administered

Table 8 (Cont'd)

13-17	F5.1	**Week 9 Comprehensive Exam /Mod 800:** Shipboard auxiliary equipment, propulsion plant operations, small craft operations, all information covered in weeks 6 through 9	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
Note: For this form the school weighted quizzes 3.33% (6 quizzes x 3.33% = 20%), exams 10% (5 exams x 10% = 50%) and comprehensive exams 15% (2 comprehensive exams x 15% = 30%).			
19-23	F5.1	**FSG**	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
Note: The following are scores from Test Form B.			
25-29	F5.1	**Week 1 Quiz/Mod 013:** Command/dept./watch organization, ships maintenance and material management (3-M) system, equipment tag-out procedures, engineering fundamentals,personnel qualification standards (PQS) program, engineering operational sequencing system (EOSS)	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
31-35	F5.1	**Week 1 Exam/Mod 016:** Command/dept./watch organization, ships maintenance and material management (3-M) system, equipment tag-out procedures, engineering fundamentals, personnel qualification standards (PQS) program, engineering operational sequencing system (EOSS)	Digits, 0.0-100.0 -1.0=missing -2.0=not administered

Table 8 (Cont'd)

37-41	F5.1	**Week 2 Quiz/Mod 023:** Technical manuals, common hand tools, precision measuring instruments, metal fasteners, pipe, tubing and fittings, packing, gaskets and insulation, valves (globe, gate butterfly, ball, plug cock, needle)	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
43-47	F5.1	**Week 2 Exam/Mod 026:** Technical manuals, common hand tools, precision measuring instruments, metal fasteners, pipe, tubing and fittings, packing, gaskets and insulation, valves (globe, gate butterfly, ball, plug cock, needle)	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
49-53	F5.1	**Week 3 Quiz/Mod 033:** Heat exchangers, lubricants, bearings, gears, couplings, pumps, intro. to shipboard electrical circuits, interior communication alarms system 60Hz electrical distribution system, shipboard internal communication devices	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
55-59	F5.1	**Week 3 Exam/Mod 036:** Heat exchangers, lubricants, bearings, gears, couplings, pumps, intro. to shipboard electrical circuits, interior communication alarms system 60Hz electrical distribution system, shipboard internal communication devices	Digits, 0.0-100.0 -1.0=missing -2.0=not administered

Table 8 (Cont'd)

61-65	F5.1	**Week 4 Quiz/Mod 043:** Compressed air systems, auxiliary machinery cooling water system, potable water system, main drain system, waste water/oily waste systems, fire fighting equipment, shipboard firemain system, single agent fire fighting system, halon 1301 fire fighting system, cold iron watchstation indoctrination	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
67-71	F5.1	**Week 4 Exam/Mod 046:** Compressed air systems, auxiliary machinery cooling water system, potable water system, main drain system, waste water/oily waste systems, fire fighting equipment, shipboard firemain system, single agent fire fighting system, halon 1301 fire fighting system, cold iron watchstation indoctrination	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
73-77	F5.1	**Week 5 Quiz/Mod 053:** Diesel engine construction, diesel engine air intake systems, diesel engine exhaust systems, diesel engine cooling water systems	Digits, 0.0-100.0 -1.0=missing -2.0=not administered

Table 8 (Cont'd)

Line Number 03 - Quiz and Exam Scores, Form B & C; FSG, Form B			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**Week 5 Exam/Mod 056 Comprehensive Exam 1:** Diesel engine construction, diesel engine air intake systems, diesel engine exhaust systems, diesel engine cooling water systems, all material covered in weeks 1 through 5	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
07-11	F5.1	**Week 7 Quiz/Mod 073:** Diesel engine lube oil systems, diesel engine fuel systems (external systems), diesel engine fuel systems (injection systems), diesel engine control systems, Diesel engine air starting systems, lube oil fill, transfer and purification system, fuel oil fill, transfer and purification, stripping and ballast systems	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
13-17	F5.1	**Week 7 Exam/Mod 076:** Diesel engine lube oil systems, diesel engine fuel systems (external systems), diesel engine fuel systems (injection systems), diesel engine control systems, Diesel engine air starting systems, lube oil fill, transfer and purification system, fuel oil, purification, transfer, stripping and ballast systems	Digits, 0.0-100.0 -1.0=missing -2.0=not administered

Table 8 (Cont'd)

19-23	F5.1	**Week 8 Quiz/Mod 083:** Intro. to diesel engine maintenance (troubleshooting, preparation for overhaul, disassembly, precision measuring, reassembly)	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
25-29	F5.1	**Week 8 Exam/Mod 086:** Intro. to diesel engine maintenance (troubleshooting, preparation for overhaul, disassembly, precision measuring, reassembly)	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
31-35	F5.1	**Week 9 Quiz/Mod 093:** Clutches, main reduction gears, main reduction gear lube oil system, pain propulsion shafting system, basic hydraulics	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
37-41	F5.1	**Week 9 Exam/Mod 096:** Clutches, main reduction gears, main reduction gear lube oil system, main propulsion shafting system, basic hydraulics	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
43-47	F5.1	**Week 11 Exam/Mod 100 Final Comprehensive Exam:** Auxiliary equipment, evaporators (distilling plants), auxiliary boilers, air conditioning and refrigeration, small boat electrical distribution system, small boat hydraulic starting system, small boat steering system, small boat transmissions, small boat bow ramp hoisting systems, small boat operations, propulsion plant operations, all material covered in weeks 6 through 11 1/2	Digits, 0.0-100.0 -1.0=missing -2.0=not administered

Table 8 (Cont'd)

Note: For this phase the school weighted quizzes 1.75% (8 quizzes x 1.75% = 14%), exams 8.0% (7 exams x 8.0% = 56%), and comprehensive exams 15% (2 comprehensive exams x 15% = 30%).			
49-53	F5.1	**FSG**	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
Note: The following are scores from Test Form C.			
55-59	F5.1	**Week 1 Exam/Mod 016:** Command/dept./watch organization, intro. to engineering programs, shipboard safety programs, electrical safety program, hearing conservation program, heat stress program, hazardous material program, environmental protection, ships maintenance and material management (3-M) system, equipment tag-out procedures, engineering fundamentals, personnel qualification standards (PQS) program, engineering operational sequencing system (EOSS)	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
61-65	F5.1	**Week 2 Exam/Mod 026:** Technical manuals, common hand tools, precision measuring instruments, metal fasteners, pipe tubing and fittings, packing, gaskets and insulation, valves (globe, gate butterfly, ball, plug cock, needle)	Digits, 0.0-100.0 -1.0=missing -2.0=not administered

Table 8 (Cont'd)

67-71	F5.1	**Week 3 Exam/Mod 036:** Heat exchangers, lubricants, bearings, gears, couplings, pumps, intro. to shipboard electrical circuits, interior communication alarms system, 60Hz electrical distribution system, shipboard internal communication devices	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
73-77	F5.1	**Week 4 Exam/Mod 046 Comprehensive Exam 1:** Compressed air system, auxiliary machinery cooling water system, potable water system, main drain system, waste water/oily waste systems, fire fighting equipment, shipboard firemain system, single agent fire fighting system, halon 1301 fire fighting system, cold iron watchstation indoctrination, all material covered in weeks 1 through 4	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
Line 04 - Exam Scores Continued, Form C; FSG, Form C			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**Week 5 Exam/Mod 056:** Diesel engine construction, diesel engine air intake systems, diesel engine exhaust systems, diesel engine cooling water systems	Digits, 0.0-100.0 -1.0=missing -2.0=not administered

Table 8 (Cont'd)

07-11	F5.1	**Week 6 Exam/Mod 066:** Diesel engine lube oil systems, diesel engine fuel systems (external systems), diesel engine fuel systems (injection systems), diesel engine control systems	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
13-17	F5.1	**Week 7 Exam/Mod 076:** Diesel engine air starting systems, surface ship noise awareness program, lube oil quality management program, lube oil fill, transfer and purification system, fuel oil fill, transfer and purification, stripping and ballast systems	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
19-23	F5.1	**Week 8 Exam/Mod 086 Comprehensive Exam 2:** Intro. to diesel engine maintenance (troubleshooting, preparation for overhaul, disassembly, precision measuring, reassembly), all material covered in weeks 5 through 8	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
25-29	F5.1	**Week 9 Exam/Mod 096:** Clutches, main reduction gears, main reduction gear lube oil system, main propulsion shafting system, basic hydraulics	Digits, 0.0-100.0 -1.0=missing -2.0=not administered

Table 8 (Cont'd)

31-35	F5.1	**Week 10 Exam/Mod 106:** Shipboard auxiliary equipment, evaporators (distilling plants), auxiliary boilers, air conditioning and refrigeration, small boat electrical distribution system, small boat hydraulic starting system, small boat steering system, small boat transmission system, small boat bow ramp hoisting systems, small boat operations	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
37-41	F5.1	**Week 11 Final Exam/Mod 116 Comprehensive Exam 3:** Propulsion plant operation and all material covered in weeks 9 through 11 1/2	Digits, 0.0-100.0 -1.0=missing -2.0=not administered
Note: For this phase the school weighted exams 6.875% (8 exams x 6.875% = 55%) and comprehensive exams 15% (3 comprehensive exams x 15% = 45%).			
43-47	F5.1	**FSG**	Digits, 0.0-100.0 -1.0=missing -2.0=not administered

Table 9

Fire Control

Line Number 01 - Personal Information; Written Test Scores			
Columns	Format	Description	Valid Ranges,Values
01-02	A2	School Name	Alpha only (FC)
04-12	I9	Social Security Number	Digits
14-28	A15	Student Name (Hard-Card Data only)	Alpha only (Last name followed by first name; no space in between) -2=not applicable
Note: The school did not consistently include the student's SSN on the hard-card data. Therefore, we also entered the student's name. The data format variable distinguishes between the two types of student data RGI entered into the database. The school used hard-card data for students tested through September, 1990, and the ISS Response History Report for students tested after September 16, 1990. The school made several changes to the curriculum during the time we collected data. These changes involved renumbering tests, consolidating and splitting test material, and adding and subtracting tests and test material. We used notes to indicate when and where these changes occurred. The hard-card data does not always have the class convening date on the forms. Therefore, we entered the first test date rather than the class convening date for students with hard-card data. We entered the class registration date for students with ISS data.			
30	A1	Data Format Variable	A=Hard-Card B=ISS Tape
32-37	I6	First Test Date (Format A except classes 91277 and 91283)	900101 - 921231 -1=missing -2=not applicable

Table 9 (Cont'd)

39-43	I5	Class Registration Date; Julian Calendar (Format B and classes 91277 and 91283)	90000 - 92366 -1=missing -2=not applicable
45-47	A3	Student Action Code	See Appendix B.
Note: The school uses a multiple choice, written test format and administers tests only on Fridays. Therefore, some students may not take all tests for various reasons (such as when a government holiday falls on a Friday). The school requires a 70% to pass each test. Students who fail a test must take a retest over the problem areas after remediation. The school allows two retests per test. Students who fail both retests must appear before the Academic Review Board (ARB). As of June 1991, the school administers retests on Saturday mornings instead of later on the same day of testing (Friday). According to instructors, this extra time for studying greatly improved retest scores. The school assigns the minimum passing score to all retests the student passes. However, we entered the initial score for each test. During November 1991, the school consolidated the various texts for Unit 100 (i.e. module numbers 101-105). Instructors reported that this consolidation improved student test scores. For each test variable we identified the ISS name (e.g. module 101) and the most commonly used hard-card name (e.g. DC1), followed by the fully written test name and a short description.			
49-54	F6.2	**module 101 - DC1 (Direct Current Circuits 1):** Introduction to Fire Control; Knowledge of matter and energy; knowledge, comprehension, and application of metric notation and electrical characteristics	0.00-100.00, -1.00=missing -2.00=not administered

Table 9 (Cont'd)

56-61	F6.2	**module 102 - DC2 (Direct Current Circuits 2):** Knowledge and comprehension of batteries and electrical safety; application of series DC circuits	0.00-100.00, -1.00=missing -2.00=not administered
63-68	F6.2	**module 103 - DC3 (Direct Current Circuits 3):** Knowledge, comprehension, and application of basic meters, multimeters (Simpson), and series circuit fault isolation	0.00-100.00, -1.00=missing -2.00=not administered
70-75	F6.2	**module 104 - DC4 (Direct Current Circuits 4):** Knowledge, comprehension, and application of DC parallel circuits and DC series-parallel circuits	0.00-100.00, -1.00=missing -2.00=not administered
Line Number 02 - Written Test Scores			
Columns	Format	Description	Valid Ranges, Values
01-06	F6.2	**module 105 - DC5 (Direct Current Circuits 5):** Knowledge, comprehension, and application of DC series-parallel circuits and voltage dividers	0.00-100.00, -1.00=missing -2.00=not administered
08-13	F6.2	**module 106 - AC1 (Alternating Current Circuits 1):** Knowledge and comprehension of AC generation; knowledge, comprehension, and application of AC wave forms and AC test equipment	0.00-100.00, -1.00=missing -2.00=not administered

Table 9 (Cont'd)

15-20	F6.2	**module 107 - AC2 (Alternating Current Circuits 2):** Knowledge, comprehension, and application of inductors, inductance circuits, and resistive/inductive circuits	0.00-100.00, -1.00=missing -2.00=not administered
22-27	F6.2	**module 108 - AC3 (Alternating Current Circuits 3):** Knowledge, comprehension, and application of capacitance, capacitive reactance, series resistive/capacitive circuits, and parallel resistive/capacitive circuits	0.00-100.00, -1.00=missing -2.00=missing
29-34	F6.2	**module 109 - AC4 (Alternating Current Circuits 4):** Knowledge, comprehension, and application of series resistive/inductive/capacitive circuits, parallel resistive/inductive/capacitive circuits, AC power, series resonance, parallel resonance, and tuning	0.00-100.00, -1.00=missing -2.00=not administered
36-41	F6.2	**module 110 - AC5 (Alternating Current Circuits 5):** Knowledge, comprehension, and application of complex filters and transformers; knowledge and comprehension of circuit protection devices and circuit control	0.00-100.00, -1.00=missing -2.00=not administered

Table 9 (Cont'd)

43-48	F6.2	**module 201 - FCE1 (Tubes):** Knowledge and comprehension of tubes; knowledge, comprehension, and application of special tubes and tube biasing	0.00-100.00, -1.00=missing -2.00=not administered
50-55	F6.2	**module 202 - FCE2 (Transistors):** Knowledge, comprehension, and application transistors, field effect transistors, and special devices	0.00-100.00, -1.00=missing -2.00=not administered
Note: Before class 91283, the school taught Amplifiers I and II before Power Supplies.			
57-62	F6.2	**module 203 - FCE3 (Amplifiers I; before class 91283 only):** Knowledge of common emitter amplifiers, amplifier configurations, and classes of operation; knowledge, comprehension, and application of linear integrated circuits, operational amplifiers, and special design amplifiers	0.00-100.00, -1.00=missing -2.00=not administered
64-69	F6.2	**module 204 - FCE4 (Amplifiers II; before class 91283 only):** Knowledge, comprehension, and application of amplifier coupling, amplifier frequency range, and amplifier troubleshooting	0.00-100.00, -1.00=missing -2.00=not administered

Table 9 (Cont'd)

71-76	F6.2	**module 205 - FCE5: (Power Supplies; before class 91283 only):** Knowledge, comprehension, and application of basic power supplies, power supply transformers, rectifiers, power supply filters, regulation and regulators, and introduction to solid state power supplies	0.00-100.00, -1.00=missing -2.00=not administered
Line Number 03 - Written Test Scores			
Columns	Format	Description	Valid Ranges, Values
Note: Beginning with class 91283, the school began teaching Power Supplies before Amplifiers I and II and switched the module numbers to reflect the actual sequence. Although the school switched the order of the tests and the module numbers, the test material remained the same.			
01-06	F6.2	**module 203 - FCE3 (Power Supplies; all classes beginning with class 91283):** Knowledge, comprehension, and application of basic power supplies, power supply transformers, rectifiers, power supply filters, regulation and regulators, and introduction to solid state power supplies (same content as previous module 205)	0.00-100.00, -1.00=missing -2.00=not administered

Table 9 (Cont'd)

08-13	F6.2	**module 204 - FCE4 (Amplifiers I; all classes beginning with class 91283):** Knowledge of common emitter amplifiers, amplifier configurations, and classes of operation; knowledge, comprehension, and application of linear integrated circuits, operational amplifiers, and special design amplifiers (same content as previous module 203)	0.00-100.00, -1.00=missing -2.00=not administered
15-20	F6.2	**module 205 - FCE5 (Amplifiers II; all classes beginning with class 91283):** Knowledge, comprehension, and application of amplifier coupling, amplifier frequency range, and amplifier troubleshooting (same content as previous module 204)	0.00-100.00, -1.00=missing -2.00=not administered
22-27	F6.2	**module 206 - FCE6 (Oscillators):** Knowledge, comprehension, and application of crystal oscillators, resistive/capacitive phase shift oscillators, Wein-Bridge oscillators, and blocking oscillators	0.00-100.00, -1.00=missing -2.00=not administered

Table 9 (Cont'd)

29-34	F6.2	**Module 207 - FCE7 (Multivibrators):** Knowledge, comprehension, and application of bistable multivibrators, monostable multivibrators, astable multivibrators, and Schmitt Trigger multivibrators	0.00-100.00, -1.00=missing -2.00=not administered
36-41	F6.2	**Module 208 - FCE8 (Special Circuits):** Knowledge, comprehension, and application of coincidence circuits, sawtooth circuits, limiters, and clampers	0.00-100.00, -1.00=missing -2.00=not administered
43-48	F6.2	**module 209 - FCE9 (Superhet 1):** Knowledge, comprehension, and application of AM modulators, FM modulators, mixers, detectors, and discriminators	0.00-100.00, -1.00=missing -2.00=not administered

Table 9 (Cont'd)

Note: Class 91283 piloted a new version of module 210, Superhet 2, which the school added as a result of changing technology. The school renamed Solder/Desolder module 211 (from 210). Beginning with class 92015, all classes completed the new modules 210 and 211.			
50-55	F6.2	**module 210 - FCE10 (Solder/Desolder; before class 91283 only):** Knowledge, comprehension, and application of solder/desolder techniques, high reliability soldering, wiring, cable, and electro-static discharge **Superhet 2 (beginning class 91283 only):** Knowledge of the NIDA-130 trainer; knowledge and comprehension of the six-step troubleshooting, and superhet receiver troubleshooting	0.00-100.00, -1.00=missing -2.00=not administered
57-62	F6.2	**module 211 - FCE11: (Solder/Desolder; beginning with class 91283 only):** Knowledge, comprehension, and application of solder/desolder techniques, high reliability soldering, wiring, cable, and electro-static discharge	0.00-100.00, -1.00=missing -2.00=not administered

Table 9 (Cont'd)

Note: Before March 1992, the school taught Digits (module #'s 401-403) before Electro-Mechanical (module numbers 301-303). The school still teaches Digits before Electro-Mechanical, but the school switched the module numbers to reflect the actual sequence (Digits became 301-303 and Electro-Mechanical became 401-403). After the school switched the module numbers, the school split Electro-Mechanical 2 (module 402) into 2 modules, 402 and 403, as a result of an additional piece of training equipment introduced into the curriculum (the multispeed synchros). This added an extra week of training to Unit 4 and changed the module sequence from 401-403 to 401-404. The school designated classes 91277 and 91283 as pilot classes for the new Unit 4. Because class 91283 started one week later than class 91277, the 91283 students completed weeks 2 and 3 of Unit 3 (modules 302 and 303) in one week so that the two classes would complete Unit 4 at the same time. The school combined the classes in order to have more students in the pilot program. Beginning with class 92015, all classes completed the new Unit 4 and the new course sequence.			
64-69	F6.2	**DG1 - Digits 1 (before class 92015 except classes 91277 and 91283= module 401; classes 91277, 91283, and all classes beginning with 92015= module 301):** Knowledge and comprehension of number systems and logic circuits	0.00-100.00, -1.00=missing -2.00=not administered

Table 9 (Cont'd)

71-76	F6.2	**DGD - Digits 2 (before class 92015 except classes 91277 and 91283 = module 402; classes 91277, 91283, and all classes beginning with 92015 = module 302):** Knowledge of flip flop; knowledge, comprehension, and application of digital counters, registers/converters, and adders/subtractors	0.00-100.00, -1.00=missing -2.00=not administered
Line Number 04 - Written Test Scores			
Columns	Format	Description	Valid Ranges, Values
01-06	F6.2	**DG3 - Digits 3 (before class 92015 except classes 91277 and 91283= module 403; classes 91277, 91283, and all classes beginning with 92015= module 303):** Knowledge, comprehension, and application of timers/comparators/ parity; knowledge, comprehension, and application of I-O/multiplexers/ encoders/decoders/ storage devices; knowledge of digital computers/flow charting	0.00-100.00, -1.00=missing -2.00=not administered

Table 9 (Cont'd)

08-13	F6.2	**EM1 - Electro-Mechanical 1 (before class 92015 except classes 91277 and 91283= module 301; classes 91277, 91283, and all classes beginning with 92015= module 401):** Knowledge, comprehension, and application of AC/DC generators, tachomotors/AC and DC motors, Amplidynes/motor and generator safety/ maintenance; knowledge comprehension, and application of thermal protection/nameplate parameters/noise and vibration	0.00-100.00, -1.00=missing -2.00=not administered

Table 9 (Cont'd)

15-20	F6.2	**EM2 - Electro-Mechanical 2 (before class 92015 except classes 91277 and 91283= module 302):** Knowledge, comprehension, and application of torque synchros, troubleshooting synchros, torque differential synchros, and control synchros; knowledge and comprehension of scale factors, electronic computing elements, summation loops, multipliers-dividers, and resolvers **(classes 91277, 91283, and all classes beginning with 92015= module 402):** Knowledge, comprehension, and application of torque synchros, troubleshooting synchros, torque differential synchros, control synchros, and multispeed synchros	0.00-100.00, -1.00=missing -2.00=not administered

Table 9 (Cont'd)

22-27	F6.2	**EM3- Electro-Mechanical 3 (before class 92015 except classes 91277 and 91283= module 303):** Knowledge, comprehension, and application of servo mechanisms, servo power systems, servo operation, gyroscopes, rate gyros/ accelerometers, and intro/operations of director systems **(classes 91277, 91283, and all classes beginning with 92015= module 403):** Knowledge, comprehension, and application of scale factors, electronic computing elements, summation loops, multipliers-dividers, and resolvers	0.00-100.00, -1.00=missing -2.00=not administered
29-34	F6.2	**module 404 - EM4: (Electro-Mechanical 4; classes 91277,91283, and all classes beginning with 92015):** Knowledge, comprehension, and application of servo mechanisms, servo power systems, servo operation, gyroscopes, rate gyros/ accelerometers, and intro/operations of director systems	0.00-100.00, -1.00=missing -2.00=not administered

Note: Prior to December 15, 1990, the school administered Fire Control Problems (FCP) before Radar and Conrol Systems (CS) after Radar. Beginning February 23, 1991, the school combined FCP and Control Systems (CS) to form Fire Controlman Basics (FCB).

Table 9 (Cont'd)

36-41	F6.2	**FCP - Fire Control Problem (before Dec. 16, 1990 only):** Knowledge, comprehension, and application of fire control problem fundamentals, co-ordinate systems, and fire control control problem calculations	0.00-100.00, -1.00=missing -2.00=not administered
Note: Prior to March 18, 1991, Radar (Unit 500) lasted 5 weeks. On this date, the school discontinued troubleshooting procedures and laboratory exercises. This cut the Radar unit from 5 weeks to four weeks in length. The school never administered tests covering this material, therefore, the tested course content remained the same.			
43-48	F6.2	**module 501 - R1 (Radar 1):** Knowledge of safety/hazards/ security, intro/basics/ subsystems, range/bearing/ elevation, resolution/accuracy, pulsed/pulsed Doppler/ FM-CW Doppler, timing, and synchronizer operations/outputs/ maintenance	0.00-100.00, -1.00=missing -2.00=not administered
50-55	F6.2	**module 502 - R2 (Radar 2):** Knowledge, comprehension, and application of indicators, indicator maintenance, transmission lines/quarter wave lines, waveguide/ microwave components, klystrons, traveling wave tubes, and magnetrons/amplitrons	0.00-100.00, -1.00=missing -2.00=not administered

Table 9 (Cont'd)

57-62	F6.2	**module 503 - R3 (Radar 3):** Knowledge, comprehension, and application of transmitters, modulation, transmitter maintenance, antennas/servos/ maintenance/halfwave antennas, and duplexers/devices/ reflex klystrons	0.00-100.00, -1.00=missing -2.00=not administered
64-69	F6.2	**module 504 - R4 (Radar 4):** Knowledge, comprehension, and application of receiver theory/maintenance/ radar ranging, dry air/liquid cooling, cooling-plumbing/power distribution	0.00-100.00, -1.00=missing -2.00=not administered

Note: Before February 23, 1991, most students received Control Systems (CS). The school indicated that the decision to administer one or two closed-book tests covering all material to the discretion of the instructor.

Beginning February 23, 1991, the school combined parts of Fire Control Problems (FCP) and parts of CS to form a new Fire Controlman Basics (FCB; modules 601 and 602). The school administerd modules 601 and 602 as separate closed-book tests and left the decision to the instructors whether to administer only 601 or both 601 and 602. Between February 23,1991 and October,1991, the school piloted changes to FCB by combining modules 601 and 602 to form one open-book test (named module 601). The school indicated that during this time, it left the decision to the discretion of the instructors to administer either the single open-book test or two closed-book tests covering 601 and 602. The school implemented the new module in October, 1991. Therefore, all remaining students received one open-book test.

Table 9 (Cont'd)

71-76	F6.2	**CS1 - Control Systems 1 (before Feb. 23, 1991 only): (if one test);** Knowledge and comprehension of publications and Documentation; knowledge of corrosion control and prevention; knowledge and comprehension of the effects of and counter-measures of theatre nuclear warfare; surface noise awareness; **(if two tests);** Knowledge and comprehension of publications and Documentation; knowledge of corrosion control and prevention	0.00-100.00, -1.00=missing -2.00=not administered
Line Number 05 - Written Test Scores and Final School Grade			
Columns	Format	Description	Valid Ranges, Values
01-06	F6.2	**CS2 - Control Systems 2 (before Feb. 23, 1991 only): (if two tests);** Knowledge and comprehension of the effects of and counter-measures of theatre nuclear warfare; surface noise awareness	0.00-100.00, -1.00=missing -2.00=not administered

Table 9 (Cont'd)

08-13	F6.2	**module 601 - FCB1 (Fire Control Basics 1; all classes between Feb.23 and Oct., 1991 only):** Knowledge of missile fundamentals, gunnery fundamentals; knowledge, comprehension, and application of fire control problem fundamentals, co-ordinate systems, and fire control problem calculations **(pilot classes between Feb. 23, 1991 and Oct., 1991 and all classes after Oct., 1991):** Knowledge of missile fundamentals, gunnery fundamentals; knowledge, comprehension, and application of fire control problem fundamentals, co-ordinate systems, and fire control problem calculations; knowledge and comprehension of ballistics; knowledge, comprehension, and application of battery alignment, radar collimation; knowledge of shipboard target detection, assignment, and task force operations; theatre nuclear warfare	0.00-100.00, -1.00=missing -2.00=not administered

Table 9 (Cont'd)

15-20	F6.2	**module 602 - FCB2 (Fire Control Basics 2; some classes between Feb. 23, 1991 and Oct., 1991 only):** Knowledge and comprehension of ballistics; knowledge, comprehension, and application of battery alignment, radar collimation; knowledge of shipboard target detection, assignment, and task force operations; theatre nuclear warfare	0.00-100.00, -1.00=missing -2.00=not administered
Note: The school calculates the Final School Grade by adding all of the module test scores together and dividing the total by the number of tests administered to the student.			
22-27	F6.2	Final School Grade.	0.00-100.00, -1.00=missing

Table 10

Gunner's Mate - Gun (GMG)

Line Number 01 - Personal Data, Written Test Scores

Note: The school generates all written tests with the COGENT (Computer Generated Testing System) microcomputer program. The COGENT program makes each test unique by randomly selecting multiple choice questions from a content area test bank. The school predetermines the material covered and the number of questions required for each test.

Columns	Format	Description	Valid Ranges, Values
01-03	A3	School name	Alpha (GMG).
05-13	I9	Social security number	Digits
15-17	A3	Student Action Code	Alpha, -1=missing. See Appendix B.

Note: The school requires a minimum passing score of 75. RGI received hard card data for all students that the school tested through June 16, 1991 (Format A). For these students, the school could not provide the initial test scores. Therefore, RGI entered the assigned score of 75 when the student passed a retest (See Retest Variable). RGI received ISS tape data for students tested after June 17, 1991 (Format B). For students tested from June 16, 1991 through July 15, 1991, we do not have initial test scores; therefore, RGI recorded the assigned score of 75 for these students. For students tested after July 15, 1991, RGI recorded the initial score obtained on the test by the student. In summary, we do not have initial test scores for students tested before July 17, 1991. This includes all hard card data and the first month of ISS data.

The data format variable distinguishes between the hard card data and the ISS Tape data.

19	A1	Data Format Variable	A=hard card B=ISS tape

Note: For students with hard card data, the school could not provide a start date. Therefore, RGI entered a -1 for these students.

21-25	I5	Start date (Julian Calendar)	91198 - 92365 -1=hard card data
27-32	F6.2	Test 1 - Mathematics	0.00-100.00, -1.00=missing

Table 10 (Cont'd)

Note: The retest variable indicates the number of times the student took each test. Students scoring below 75 have the option to take a retest. Those choosing not to take a retest, keep their initial score. For students who choose to take a retest and pass, the school assigns a minimum passing score of 75. When a student fails an individual test twice, the student must go before the Academic Review Board (ARB). For students tested after July 15, 1991, we assigned a -2 (not applicable) since we have their initial test scores.

34-35	I2	Retest variable for Test 1	Digits: 0=passed the first time (P1) 1=failed the first time; passed the second time (P2) 2=failed the first time; failed the second time (F2) 3=failed the first time; did not take a retest (F1) 4=failed the first time; retested only on parts missed (R1) -1=missing -2=not applicable (ISS after July 15, 1991)
37-42	F6.2	**Test 2** - Matter and Energy, Electromotive Force and Energy, Resistance and Resistors, Electrical Safety, Schematics, and Multimeter Usage	0.00-100.00, -1.00=missing
44-45	I2	Retest variable for Test 2	0(P1), 1(P2), 2(F2), 3(F1), 4(R1),-1(missing), -2(ISS after 7/15/91)
47-52	F6.2	**Test 3** - Series DC Circuits	0.00-100.00, -1.00=missing
54-55	I2	Retest variable for Test 3	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)
57-62	F6.2	**Test 4** - Parallel DC Circuits	0.00-100.00, -1.00=missing

Table 10 (Cont'd)

64-65	I2	Retest variable for Test 4	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)
67-72	F6.2	**Test 5** - Magnetism, AC Generation, Wave Form Analysis, and Oscilloscopes	0.00-100.00, -1.00=missing
74-75	I2	Retest variable for Test 5	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)
Line Number 02 - Written Test Scores			
Columns	Format	Description	Valid Ranges, Values
01-06	F6.2	**Test 6** - Inductors and Inductance, RL Circuits, and Transformers	0.00-100.00, -1.00=missing
08-09	I2	Retest variable for Test 6	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)
11-16	F6.2	**Test 7** - Capacitors and Capacitance, RC Circuits, and RLC Circuits	0.00-100.00, -1=missing
18-19	I2	Retest variable for Test 7	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)
Note: Beginning July 30, 1991, the school split content areas from Tests 8 and 9 to make up Test 10, and designated Test 111 as the new comprehensive exam. The school did not change the content areas with these changes.			
21-26	F6.2	**Test 8** - Electrical Connections, Semiconductors, General Transistors, and Transistor Configurations (through July 29, 1991); Electrical Connections, Semiconductors, and General Transistors (after July 29, 1991)	0.00-100.00, -1.00=missing

Table 10 (Cont'd)

28-29	I2	Retest variable for Test 8	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)
31-36	F6.2	Test 9 - Rectifier Circuits, Filter Circuits, Special Devices, Integrated Circuits (through July 29, 1991); Rectifier Services Filter Circuits, and Special Devices (after July 29, 1991)	0.00-100.00, -1.00=missing
38-39	I2	Retest variable for Test 9	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)
41-46	F6.2	Test 10 - Comprehensive test over materials covered on tests 1-9 (through July 29, 1991); Regulator and Integrated Circuits, Transistor configuration (after July 29, 1991)	0.00-100.00, -1.00=missing
48-49	I2	Retest variable for Test 10	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)
51-56	F6.2	Test 111 - Comprehensive test over materials covered on tests 1-10 (after July 29, 1991 only)	0.00-100.00, -1.00=missing -2.00=not administered
58-63	F6.2	Test 11 - Digits 1	0.00-100.00, -1.00=missing
65-66	I2	Retest variable for Test 11	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)
68-73	F6.2	Test 12 - Digits 2	0.00-100.00, -1.00=missing
75-76	I2	Retest variable for Test 12	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)

Table 10 (Cont'd)

Line Number 03 - Written Test Scores			
Columns	Format	Descriptions	Valid Ranges, Values
01-06	F6.2	**Test 13** - Motors and Generators	0.00-100.00, -1.00=missing
08-09	I2	Retest variable for Test 13	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)
11-16	F6.2	**Test 14** - Special Circuits	0.00-100.00, -1.00=missing
18-19	I2	Retest variable for Test 14	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)
21-26	F6.2	**Test 15** - Hydraulics 1	0.00-100.00, -1.00=missing
28-29	I2	Retest variable for Test 15	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)
31-36	F6.2	**Test 16** - Hydraulics 2	0.00-100.00, -1.00=missing
38-39	I2	Retest variable for Test 16	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)
41-46	F6.2	**Test 17** - Servos/Synchros Systems	0.00-100.00, -1.00=missing
48-49	I2	Retest variable for Test 17	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)
51-56	F6.2	**Test 18** - Missile Systems	0.00-100.00, -1.00=missing
58-59	I2	Retest variable for Test 18	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)
61-66	F6.2	**Test 19** - Ammunition	0.00-100.00, -1.00=missing
68-69	I2	Retest variable for Test 19	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)

Table 10 (Cont'd)

71-76	F6.2	**Test 20** - Magazines and Sprinklers	0.00-100.00, -1.00=missing
78-79	I2	Retest variable for Test 20	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)
Line Number 04 - Written Test Scores			
Columns	Format	Description	Valid Ranges, Values
01-06	F6.2	**Test 21** - Gun Mounts	0.00-100.00, -1.00=missing
08-09	I2	Retest variable for Test 21	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)
11-16	F6.2	**Test 22** - Tag-Out	0.00-100.00, -1.00=missing
18-19	I2	Retest variable for Test 22	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)
21-26	F6.2	**Test 23** - 3M (Maintenance)	0.00-100.00, -1.00=missing
28-29	I2	Retest variable for Test 23	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)
31-36	F6.2	**Test 24** - Handtools	0.00-100.00, -1.00=missing
38-39	I2	Retest variable for Test 24	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)
41-46	F6.2	**Test 25** - Small Arms	0.00-100.00, -1.00=missing
48-49	I2	Retest variable for Test 25	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)

Table 10 (Cont'd)

Note: Test 27 corresponds to ISS tape data, and Test 30 corresponds to hard card data. Although the tests have different numbers, the material covered is identical.			
51-56	F6.2	Test 27 (ISS) / 30 (Hard card) - Comprehensive test over material covered on tests 10-25	0.00-100.00, -1.00=missing
58-59	I2	Retest variable for Test 27/30	0(P1), 1(P2), 2(F2), 3(F1), 4(R1), -1(missing), -2(ISS after 7/15/91)
Note: For hard card data, the school calculated the Final School Grade (FSG) by dividing the sum of the test scores by the number of tests given. For ISS tape data, the school uses the following weighted average: Tests 1 - 10 each constitute 2.9% of the FSG; Tests 11 - 25 each constitute 3.2% of the FSG; Test 27 constitutes 20% of the FSG.			
61-66	F6.2	Final Student Grade (FSG)	0.00-100.00, -1.00=missing

Table 11

Machinist's Mate (MM1)

Line Number 01 - Personal Data, Scores for Knowledge and Comprehensive Tests

Note: Before September 27, 1990 (Julian - 90270), all MM students took Propulsion Engineering Basics (PE) as a prerequisite course. Instruction for the PE and the MM courses took place in the same building of the Great Lakes, IL Service School Command. Civilian personnel taught PE, and military personnel taught MM. As of September 27, 1990, the MM school incorporated the PE school into the MM course program. As a result of this merger, teaching responsibilities for the PE course shifted from civilian to military personnel. However, the PE course content and its presentation schedule did not change at this time.

On January 7,1991 (Julian - 91007), the school revised the MM curriculum to further integrate the PE and MM courses. This layout (MM1) covers students entering the MM school before January 7, 1991 and includes test scores from both schools (PE and MM). The next layout (MM2) covers students entering the program after this date.

The school requires a score of 75% or higher to pass each exam. Examinees who fail a test participate in instructor oral remediation, night study, and retesting. Students cannot retest until the next academic day. The instructor assigns the minimum passing score to those students who pass the retest, and the school uses that minimum score in calculating the final school grade (FSG). All students who fail the retest appear before the Academic Review Board. The school then decides upon the student's status. We entered only the initial test scores for each examinee, because the school assigns a score of 75 for all successful retests.

Columns	Format	Description	Valid Ranges, Values
01-03	A3	School Name (MM1)	Alpha Numeric (MM1).
05-13	I9	Social Security Number	Digits
15-17	A3	Student Action Code	Alpha only. See Appendix B.

Table 11 (Cont'd)

19-23	F5.1	#105 - Knowledge Test: Personnel qualification standards/comm. deptwatch organization, intro to shipboard piping systems, piping system components, tag-out	0.0-100.0, -1.0=missing
25-29	F5.1	#109 - Knowledge Test: Firemain/aux. cooling water, main drain potable & waste water system, twin agent system, halon fire system	0.0-100.0, -1.0=missing
31-35	F5.1	#114 - Knowledge Test: Maintenance & material management system (3-M), equip. tech. manuals, hand tools/metal fastners, lubricants/packing/ gaskets/insulation	0.0-100.0, -1.0=missing
37-41	F5.1	#117 - Knowledge Test: Valves, couplings/gears/ bearings, rotary/jet/ centrifugal/reciprocating pumps	0.0-100.0, -1.0=missing
43-47	F5.1	#122 - Knowledge Test: Lubrication system, lube oil quality program/fill/ transfer/purification, intro to cold iron	0.0-100.0, -1.0=missing
49-53	F5.1	#125 - Comprehensive Test 1: Intro to piping systems, piping systems, intro to maintnance, maintenance, lube oil system, cold iron	0.0-100.0, -1.0=missing
55-59	F5.1	#100 - Knowledge Test: Basic steam cycle, energy curve, flue gas/water/ steam path, fuel oil syst.	0.0-100.0, -1.0=missing

Table 11 (Cont'd)

61-65	F5.1	**#200 - Knowledge Test:** Basic engineering terms, combustion air, superheater protection steam/main steam aux./ reduced pressure	0.0-100.0, -1.0=missing
67-71	F5.1	**#300 - Knowledge Test:** Turbine theory terms, turbines, mail reduction gear/shafting/ lube oil, purification and transfer, lube oil quality mgt.	0.0-100.0, -1.0=missing
73-77	F5.1	**#400 - Knowledge Test:** Gland seal/exhaust purpose, gland seal & assembly, regulating station, main condenser/ seawater circ. theory, propeller pump	0.0-100.0, -1.0=missing
Line Number 2 - Continuation of Knowledge and Comprehensive Test Scores, Final School Grade			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**#500 - Knowledge Test:** Pump theory terms, main air removal/condensate/ feed, deaerating feed tank, freshwater collecting tank, high pressure drain system, auxiliary exhaust system	0.0-100.0, -1.0=missing
07-11	F5.1	**#600 - Knowledge Test:** Distilling plant, excess/ make-up/reserve feed, escape steam system, phys/ chemical properties of water, corrosion factors, shipboard water cycle, condensate/feedwater anlys., boiler lay-ups	0.0-100.0, -1.0=missing

Table 11 (Cont'd)

13-17	F5.1	**#700 - Knowledge Test:** S.S.T.G. components, basic elect. theories & circuit, A.C. genenator, ships service power distribution system, sources of elect. energy, alarm system	0.0-100.0, -1.0=missing
19-23	F5.1	**#800 - Comprehensive Test 2:** Generation, steam systems, turbine theory/drive train, gland seal/ exhaust, main condenser/ condensate/feed, distilling plant/water chemistry, electricity	0.0-100.0, -1.0=missing
Note: PE Grade = .8 (mean of Knowledge Tests 105, 109, 114, 117, and 122) + .2 (Comprehensive Test 1). MM Grade = .8 (mean of Knowledge Tests 100 to 700) + .2 (Comprehensive Test 2). FSG = mean of PE and MM Grades.			
25-29	F5.1	Final School Grade	0.0-100.0, -1.0=missing

Table 12

Machinist's Mate (MM2)

Line Number 01 - Personal Data, Scores for Knowledge tests and Quizzes

Note: On January 7, 1991, (Julian - 91007) the MM school incorporated the Propulsion Engineering Basics (PE) school into its curriculum. At this time, the school changed the course curriculum and the test content to avoid redundancy. RGI created layout form MM2 (below) for all students entering the MM school from this date on. Although quizzes and knowledge tests address the same content areas within each unit, the knowledge tests address the material in more specific terms.

The school determined appropriate item weights for converting each knowledge test grade into a percentage score. See Appendix F for a list of these weights. Since each test has different item weights, we entered the school converted percentage score and the number of correct responses for each test. The maximum number of correct responses equals the total possible per test. The school requires a score of 63% or higher to pass each exam. Students who fail a test participate in instructor oral remediation, night study, and retesting. Examinees cannot retest until the next academic day. The instructor assigns the minimum passing score to those students who pass the retest, and the school uses that minimum score to compute the final school grade (FSG). All students who fail the retest appear before the Academic Review Board. The school then decides upon the student's status. We entered only the initial test scores for each examinee, because the school assigns a score of 63 for all successful retests.

Columns	Format	Description	Valid Ranges, Values
01-03	A3	School Name (MM2)	Alpha Numeric (MM2).
05-13	I9	Social Security Number	Digits
15-17	A3	Student Action Code	Alpha only. See Appendix B.
19-23	F5.1	**#204 - Quiz 1:** Main propulsion plant/ machinery nomenclature, shipboard watch org., PQS program, shipboard piping systems, operating principles of piping system components, tracing piping systems, heat exchangers, piping system components, tag-out system	0.0-100.0, -1.0=missing

Table 12 (Cont'd)

25-29	F5.1	**#305 - Converted Score for Knowledge Test 1:** Quiz 1 content plus 600 PSI static display piping systems components & alignment	0.0-100.0, -1.0=missing
31-32	I2	#305 - Number of correct items	Digits, 0-50, -1=missing
34-38	F5.1	**#206 - Quiz 2:** 3-M syst. & metal fastners	0.0-100.0, -1.0=missing
40-44	F5.1	**#208 - Quiz 3:** Common hand tools, pipe/ tubing/ fittings, lubricants, packing/ gaskets/ insulation, precision measuring	0.0-100.0, -1.0=missing
46-50	F5.1	**#309 - Converted Score for Knowledge Test 2:** Content from Quiz 2 and Quiz 3	0.0-100.0, -1.0=missing
52-53	I2	#309 - Number of correct items	Digits, 0-40, -1=missing
55-59	F5.1	**#212 - Quiz 4:** Globe/ball/gate/needle/ butterfly/plug-cock/ check/relief/sintinel valves, external valve inspection, centrifugal pumps, jet pumps, rotary pumps	0.0-100.0, -1.0=missing
61-65	F5.1	**#313 - Converted Score for Knowledge Test 3:** Quiz 4 content plus centrifugal/reciprocating, & 600 PSI static display pumps	0.0-100.0, -1.0=missing
67-68	I2	#313 - Number of correct items	Digits, 0-40, -1=missing
70-74	F5.1	**#214 - Quiz 5:** Firemain system, quxiliary machinery cooling water system (AMCW), waste water & oily water system	0.0-100.0, -1.0=missing

Table 12 (Cont'd)

Line Number 02 - Continuation of Scores from Knowledge Tests, Comprehensive Tests, and Quizzes			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**#317 - Converted Score for Knowledge Test 4:** Quiz 5 content plus main drain system, potable water system, low pressure air system, communication devices, single agent syst., halon extinguishing system, bearings, gears, couplings, & plastics control	0.0-100.0, -1.0=missing
07-08	I2	**#317** - Number of correct items	Digits, 0-40, -1=missing
10-14	F5.1	**#319 - Converted Score for Comprehensive Knowledge Test 1:** Content from tests 204 to 317 plus intro to cold iron & cold iron trainer lab	0.0-100.0, -1.0=missing
16-17	I2	**#319** - Number of correct items	Digits, 0-50, -1=missing
19-23	F5.1	**#223 - Quiz 6:** Damage control, equipment technical manuals, basic steam cycle, boilers	0.0-100.0, -1.0=missing
25-29	F5.1	**#224 - Quiz 7:** Fuel oil service syst. 600 PSI static display-fuel oil service system	0.0-100.0, -1.0=missing
31-35	F5.1	**#325 - Converted Score for Knowledge Test 5:** Content from Quiz 6 and Quiz 7 plus combustion air	0.0-100.0, -1.0=missing
37-38	I2	**#325** - Number of correct items	Digits, 0-39, -1=missing

Table 12 (Cont'd)

40-44	F5.1	**#227 - Quiz 8:** Main steam system, 600 PSI static display main steam system, auxiliary steam system, heat stress	0.0-100.0, -1.0=missing
46-50	F5.1	**#328 - Converted Score for Knowledge Test 6:** Quiz 8 content plus reduced pressure steam & superheater protection steam	0.0-100.0, -1.0=missing
52-53	I2	#328 - Number of correct items	Digits, 0-32, -1=missing
55-59	F5.1	**#230 - Quiz 9:** Main Propulsion engine and main lube oil system	0.0-100.0, -1.0=missing
61-65	F5.1	**#331 - Converted Score for Knowledge Test 7:** Quiz 9 content plus strainer lab, bearing lab, lube oil purification & transfer system, 600 PSI static display main lube oil system	0.0-100.0, -1.0=missing
67-68	I2	#331 - Number of correct items	Digits, 0-40, -1=missing
70-74	F5.1	**#334 - Converted Score for Knowledge Test 8:** Diaphragm control valve, lube oil purifier, gland seal/gland exhaust/sea-water circulating system, main condenser, 600 PSI static display main condenser	0.0-100.0, -1.0=missing
76-77	I2	#334 - Number of correct items	Digits, 0-30, -1=missing

Table 12 (Cont'd)

Line Number 03 - Continuation of Scores for Knowledge tests and Quizzes, Final Comprehensive and Performance Test			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**#235 - Quiz 10:** Main condensate system/ main air removal	0.0-100.0, -1.0=missing
07-11	F5.1	**#237 - Quiz 11:** Main feed system, DFT cutaway/ spray nozzle lab, steam drains	0.0-100.0, -1.0=missing
13-17	F5.1	**#338 - Converted Score for Knowledge Test 9:** Content from Quiz 10 and Quiz 11 plus aux. exhaust/ escape steam piping, 600 PSI static display auxiliary exhaust	0.0-100.0, -1.0=missing
19-20	I2	#338 - Number of correct items	Digits, 0-40, -1=missing
22-26	F5.1	**#239 - Quiz 12:** Distilling plant	0.0-100.0, -1.0=missing
28-32	F5.1	**#341 - Converted Score for Knowledge Test 10:** Quiz 12 content plus make up/ excess/reserve feed, water chemistry, noise awareness, & throttleboard stimulator	0.0-100.0, -1.0=missing
34-35	I2	#341 - Number of correct items	Digits, 0-33, -1=missing
37-41	F5.1	**#242 - Quiz 13:** Basic electricity	0.0-100.0, -1.0=missing
43-47	F5.1	**#344 - Converted Score for Knowledge Test 11:** Quiz 13 content plus ship service, burbo generator, electrical distribution, IC alarms	0.0-100.0, -1.0=missing
49-50	I2	#344 - Number of correct items	Digits, 0-33, -1=missing

Table 12 (Cont'd)

52-56	F5.1	**#144 - Performance Test (oral board comprehensive exam):** Basic steam cycle	0.0-100.0, -1.0=missing
58-62	F5.1	**#349 - Converted Score for Comprehensive Knowledge Test 2:** Hot plant indoctrination, main propulsion, aux. syst	0.0-100.0, -1.0=missing
64-65	I2	#349 - Number of correct items	Digits, 0-80, -1=missing
Note: To determine the FSG, the MM school uses a weighted average (see Appendix F) of all tests: 13 quizzes, 12 knowledge, 2 comprehensive, and 1 performance.			
67-71	F5.1	Final School Grade	0.0-100.0, -1.0=missing

Table 13

Operations Specialist

Line Number 01 - Personal and Class Data, Written and Performance Test Scores

Note: The school modified the test forms in August 1990. Test form A refers to the current test form in use, and test form B refers to the previous test form. Changes occurred in the sequence and the number of tests given; however, the test content did not change. In some cases, the school consolidated the performance and written tests into one test. For these tests, the actual test scores reflect performance on the written portion of the tests since the school evaluated the performance tests on a pass/fail basis. We have inserted notes throughout the record layout to indicate the occurrence of a sequence change or a consolidation of test material. Where sequence changes occurred between test forms, we placed the form associated with each test name in parentheses (e.g., Form B only).

Columns	Format	Description	Valid Ranges,Values
01-02	A2	School name	Alpha only (OS).
04-12	I9	Social security number	Digits
14-16	A3	Student Action Code	Alpha, -1=missing. See Appendix B.
18	A1	Test Form	A=New, B=Old

Note: We designated written test scores as (W), performance test scores as (P), and tests derived from a performance test and a written test as (P/W). Each time an examinee passes a retest, the school assigns the minimum passing score of 70% and uses that minimum score in calculating the final school grade (FSG). Scores less than 70 indicate an initial failure that ultimately resulted in a passing score and the assignment of the minimum score; therefore, we entered only the score of the first attempt. The school calculated the FSG by taking a mean of all test and blitz summary scores. Since May of 1991, the school calculates the FSG based only on test scores. However, instructors continue to mistakenly and non-uniformly include blitz averages in the computation of the FSG.

Table 13 (Cont'd)

20-24	F5.1	**Security/Bearings (W)** - Tests knowledge on procedures for handling classified material and procedures for converting True, Relative, and Reciprocal Bearings and Target Angles.	0.0-100.0, -1.0=missing
26-30	F5.1	**Basic Maneuvering Board (P/W)** - Tests knowledge and ability to solve Relative Motion problems on a Maneuvering Board for either ownship or contact course, speed, and closest point of approach.	0.0-100.0, -1.0=missing
32-36	F5.1	**Advanced Maneuvering Board 1 (P)** - Tests knowledge and ability to determine a revised closest point of approach and to compute ownship course change to avoid a contact by a specified distance.	0.0-100.0, -1.0=missing
School flip-flopped the sequence of the following two tests on			
38-42	F5.1	**Internal Communications - (Test Form B only) (P/W)** - Tests knowledge and ability to communicate with another station on sound powered phone circuits.	0.0-100.0, -1.0=missing -2.0=not administered
44-48	F5.1	**Maneuvering Board 2 (Form B only) (P)** - Tests knowledge and ability to compute on ownship's maneuver to change its assigned station. Tests knowledge and ability to use the maneuvering board to determine the apparent, relative, and true direction and speed of the wind.	0.0-100.0, -1.0=missing -2.0=not administered

Table 13 (Cont'd)

50-54	F5.1	**Advanced Maneuvering Board 2 (Test Form A only) (P)** - Tests knowledge and ability to compute on ownship's maneuver to change its assigned station. Tests knowledge and ability to use the maneuvering board to determine the apparent, relative, and true direction and speed of the wind.	0.0-100.0, -1.0=missing -2.0=not administered
56-60	F5.1	**Internal Communication/3 Minute Rule (Test Form A only) (P/W)** - Tests knowledge and ability to communicate with another station on sound powered phone circuits and use the 3 minute rule to solve for speed.	0.0-100.0, -1.0=missing -2.0=not administered
62-66	F5.1	**Publications/Logs (P/W)** - Tests knowledge and ability to maintain a Combat Information Center (CIC) Log using proper abbreviations. Tests knowledge and ability to use proper CIC publications.	0.0-100.0, -1.0=missing

Note: The school consolidated the content of the following two Form B tests into other version A tests. The school included the content of Maneuvering Board 3 into the Advanced Maneuvering Board 2 test (Line number 01, Columns 49-53), and the content of the 3 minute rule with the Internal Communication test (Line number 01, Columns 55-59).

Table 13 (Cont'd)

68-72	F5.1	**Maneuvering Board 3 (Test Form B only) (P)** - Tests knowledge and ability to compute on ownship's maneuver to change its assigned station and use the maneuvering board to determine the apparent, relative, and true direction/speed of wind.	0.0-100.0, -1.0=missing -2.0=not administered
74-78	F5.1	**3 Minute Rule/Symbols (Test Form B only) (W)** - Tests knowledge and ability to use 3 minute rule to solve for speed.	0.0-100.0, -1.0=missing -2.0=not administered
Line Number 02 - Exam Scores Continued			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**Signal Book Formation (P)** - Tests knowledge and ability to encode and decode given signals, and use Signal Book to put ships in formation.	0.0-100.0, -1.0=missing -2.0=not administered
07-11	F5.1	**Cartesian Grid (P)** - Tests knowledge and ability to plot contacts on a Cartesian Grid.	0.0-100.0, -1.0=missing
13-17	F5.1	**External Communications (P/W)** - Tests knowledge and ability to communicate with another ship on a radiotelephone circuit.	0.0-100.0, -1.0=missing
Note: The computer program flip-flopped the sequence of the following two tests on sheet two of the form			
19-23	F5.1	**Air Plotter (Test Form B) (P/W)** -Tests knowledge and ability to plot contacts with amplifying information on an Air Summary Board.	0.0-100.0, -1.0=missing -2.0=not administered

Table 13 (Cont'd)

25-29	F5.1	**Surface Summary (Test Form B only) (P)** - Tests knowledge and ability to plot contacts with amplifying information on a Surface Summary Board.	0.0-100.0, -1.0=missing -2.0=not administered
31-35	F5.1	**Surface Summary (Test Form A only) (P)** - Tests knowledge and ability to plot contacts with amplifying information on a Surface Summary Board.	0.0-100.0, -1.0=missing -2.0=not administered
37-41	F5.1	**Air Plotter (Test Form A only) (P/W)** - Tests knowledge and ability to plot contacts with amplifying information on an Air Summary Board.	0.0-100.0, -1.0=missing -2.0=not administered
43-47	F5.1	**Dead Reckoning Tracer (DRT) (P)** - Tests knowledge and ability to perform duties of a Dead Reckoning Tracer operator using DRT plotting procedures, symbology and abbreviations. Tests knowledge and ability to compute course and speed on two surface contacts.	0.0-100.0, -1.0=missing
49-53	F5.1	**Charts Sea & Anchor (W)** - Tests knowledge of Chart Correction Card System and purpose of the Notice to Mariners. Tests the ability to locate charts by name and number for transit situations.	0.0-100.0, -1.0=missing

Table 13 (Cont'd)

55-59	F5.1	**Coastal Navigation (P)** - Tests knowledge and ability to perform duties of the Navigation Plotter, to plot coastal navigation fixes, to plot dead reckoning positions along intended track, to compute course and speed made good between two navigation fixes, to compute set and drift between a dead reckoning position and a navigation fix, to compute and plot an estimated position, and to plot an operating area and to record navigational fix data.	0.0-100.0, -1.0=missing
61-65	F5.1	**67/25/25G /Rules of the Road (ROR) (W)** - Tests knowledge and ability to perform duties of Radar Plan Position Indicator Operator, detect, plot, and report all surface or air contacts, distinguishing them from weather, land, and sea return. Tests ability to obtain CPA (closest point of approach) bearing range and time, and course and speed on three surface contacts. Tests knowledge of the SPS/67 Radar Set Control. Tests knowledge of an overtaking, crossing, and meeting situation, and the purpose and types of navigation lights.	0.0-100.0, -1.0=missing

Table 13 (Cont'd)

67-71	F5.1	**SPA-25F PT (P)** - Tests ability to compute revised CPA (bearing, range, and time), to solve for CPA for each contact, and to perform duties of Radar Scope Operator, detect, plot and report all surface and air contacts.	0.0-100.0, -1.0=missing
Note: The school consolidated the following Air and Surface NTDS WTN tests and the Air and Surface NTDS PT tests from Form B into a single written test and a single performance test, respectively, on Form A.			
73-77	F5.1	**Air NTDS (Test Form B) (W)** - Tests knowledge of the duties of Naval Tactical Data System Input Console (NTDS) Operator in the Air Tracker mode of operation.	0.0-100.0, -1.0=missing -2.0=not administered
Line Number 03 - Exam Scores Continued			
Columns	Format	Description	Valid Ranges, Values
01-05	F5.1	**Air NTDS (Test Form B only) (P)** - Tests ability to perform duties of NTDS Input Console Operator in the Air Tracker mode of operation.	0.0-100.0, -1.0=missing -2.0=not administered
07-11	F5.1	**Surface NTDS (Test Form B only) (P)** - Tests ability to perform duties of NTDS Input Console Operator in the Surface Tracker mode of operation.	0.0-100.0, -1.0=missing -2.0=not administered
13-17	F5.1	**Surface NTDS (Test Form B only) (W)** - Tests knowledge of the duties of NTDS Input Console Operator in the Surface Tracker mode of operation.	0.0-100.0, -1.0=missing -2.0=not administered

Table 13 (Cont'd)

19-23	F5.1	**NTDS (Test Form A only) (W)** - Tests knowledge of the duties of NTDS Input Console Operator in the Surface Tracker and Air Tracker mode of operation.	0.0-100.0, -1.0=missing -2.0=not administered
25-29	F5.1	**NTDS PT (Test Form A only) (P)** - Tests ability to perform duties of NTDS Input Console Operator in the Surface Tracker and Air Tracker mode of operation.	0.0-100.0, -1.0=missing -2.0=not administered
Note: Before May 1991, the school calculated the Final School Grade as the mean of all test scores and the two blitz averages. After this date, the school intended the FSG to consist of a mean of only the test scores; however, instructors occasionally continue to include blitzes in the FSG calculations.			
31-36	F6.2	**Final School Grade**	0.00-100.00, -1.00=missing
Line Number 04 - Blitz Scores			
Note: As of May 1991, the school no longer includes blitzes in calculating the Final School Grade. The instructors currently use blitzes only as a tool to evaluate the weekly progress of the students. The school decided that including the blitzes in the FSG conflicted with the purpose of the blitzes: identifying problem areas where students need additional training. Instructors score the blitzes at their own discretion. Most of the instructors graded on a 1-100% scale; however, on a few occasions the instructors graded the blitzes on a satisfactory/unsatisfactory basis. We assigned a missing value to blitz scores graded on a satisfactory/unsatisfactory basis since virtually all students pass. A few of the score sheets also contain two scores for only one blitz. Since the two blitz scores reflected performance in the same content area, we entered the average of the two blitz scores in such cases. The same types of changes that occurred between versions of the test forms also occurred on the blitz forms. We used the same procedure of documenting sequence changes for blitzes that we utilized in the test forms section of this layout. For blitz content descriptions with a corresponding test, see test descriptions in the test portion of this layout. We included descriptions of those blitzes not adequately described in the test portion of this layout.			

Table 13 (Cont'd)

Columns	Format	Description	Valid Ranges, Values
01-03	I3	Security/Bearings/Radar Sys/3M (Material, Maintenance and Management System) (Test Form A only)	Digits, 0-100, -1=missing -2=not administered
05-07	I3	Security (Test Form B only)	Digits, 0-100, -1=missing -2=not administered
09-11	I3	Bearing (Test Form B only)	Digits, 0-100, -1=missing -2=not administered
13-15	I3	Basic Maneuvering Board	Digits, 0-100, -1=missing
17-19	I3	3M (Material, Maintenance, and Management) System/Combat Information Control (CIC) Radar Systems (Test Form B only)	Digits, 0-100, -1=missing -2=not administered
21-23	I3	Advanced Maneuvering Board I	Digits, 0-100, -1=missing
25-27	I3	Sound Powered Phone Talker (Test Form B only) - Tests knowledge of procedures and ability to use sound powered phone equipment.	Digits, 0-100, -1=missing -2=not administered
29-31	I3	Advanced Maneuvering Board II	Digits, 0-100, -1=missing
33-35	I3	Internal Communications/3 Minute Rule (Test Form A only)	Digits, 0-100, -1=missing -2=not administered
37-39	I3	Publications and Log keeping	Digits, 0-100, -1=missing
41-43	I3	Maneuvering Board III (Test Form B only)	Digits, 0-100, -1=missing -2=not administered
45-47	I3	3 Minute Rule and Plotting Symbology (Test Form B only)	Digits, 0-100, -1=missing -2=not administered
49-51	I3	Signal Book	Digits, 0-100, -1=missing
53-55	I3	Formations	Digits, 0-100, -1=missing

Table 13 (Cont'd)

57-59	I3	External Communications (Test Form B only)	Digits, 0-100, -1=missing -2=not administered
61-63	I3	External Communications/Cartesian Grid (Test Form A only)	Digits, 0-100, -1=missing -2=not administered
65-67	I3	Air Plotting (Cartesian Grid) (Test Form B only) - Tests ability to plot contacts on a Cartesian Grid.	Digits, 0-100, -1=missing -2=not administered
69-71	I3	Surface Summary Plotter (Test Form B only)	Digits, 0-100, -1=missing -2=not administered
73-75	I3	Air Plotting (Polar Coordinates) (Test Form B only) - Tests ability to plot contacts with amplifying information of an Air Summary Board.	Digits, 0-100, -1=missing -2=not administered
77-80	I4	Total Points	Digits, 0-1600, -1=missing
Line Number 05 - Blitz Scores Continued			
Column	Format	Description	Valid Ranges, Values
01-06	F6.2	Blitz Average	0-100.00, -1.00=missing
08-10	I3	Dead Reckoning Tracer (DRT) System/DRT Surface Plotting	Digits, 0-100, -1=missing
12-14	I3	Man Overboard Plotting/Anti Submarine Warfare (ASW) Plotting (Test Form A Only) - Tests ability to perform duties of a DRT using DRT symbology on two surface contacts.	Digits, 0-100, -1=missing
16-18	I3	Chart Systems/Sea & Anchor Detail	Digits, 0-100, -1=missing
20-22	I3	Coastal Navigation	Digits, 0-100, -1=missing

Table 13 (Cont'd)

24-26	I3	Surface Search Radar (SPS-67)/ Surface Scope Operator (SPA-25)	Digits, 0-100, -1=missing
28-30	I3	Air Scope Operator (SPA-25G)	Digits, 0-100, -1=missing
32-34	I3	Introduction to NTDS/Symbology/Basic Input/User Modes (Test Form B only)	Digits, 0-100, -1=missing -2=not administered
36-38	I3	Introduction to NTDS (Test Form A only)	Digits, 0-100, -1=missing -2=not administered
40-42	I3	Surface Tracker (Test Form A only)	Digits, 0-100, -1=missing -2=not administered
44-46	I3	UPA-59A (Test Form B Only) - Tests ability to use equipment necessary to perform duties of Naval Tactical Data System (NTDS) in the Air Tracker mode.	Digits, 0-100, -1=missing -2=not administered
48-50	I3	UPA 59/Air Tracker (Test Form A only)	Digits, 0-100, -1=missing -2=not administered
52-54	I3	ID Operator (Test Form A only) - Tests knowledge of equipment procedures and ability to use Identification (ID) operator.	Digits, 0-100, -1=missing -2=not administered
56-59	I4	Total Points	Digits, 0-1000, -1=missing
61-66	F6.2	Blitz Average	0-100.00, -1.00=missing

Table 14

Radioman (RM)

Line Number 01 - Personal Data; Phase I and Phase II Knowledge, Performance, and Comprehensive tests			
Note: All test scores represent initial scores only. Knowledge tests require a minimum score of 80 to pass. Students are allowed up to 2 retests, however, the highest score attainable is 80. Performance tests require a minimum score of 100 to pass. Students are allowed up to 2 retests, however, the highest score attainable is the initial test score. Comprehensive tests require a minimum score of 75 to pass. Students are allowed up to 2 retests, however, the highest score attainable is 75. The Academic Review Board (ARB) determines the student's status if the 2nd retest is failed.			
Columns	Format	Description	Valid Ranges, Values
01-02	A2	School name	Alpha only (RM).
04-12	I9	Social security number	Digits
14-16	A3	Student Action Code	Alpha, -1=missing. See Appendix B.
Note: New course curriculum was implemented approximately October 1990. The curriculum variable indicates which curriculum the student received.			
18-19	I2	Curriculum variable	0=old, 1=new, -1=missing
21-25	F5.1	#210- knowledge test covering Communication Organization	0.0-100.0, -1=missing
27-28	I2	Number of retests on test #210	Digits 0-2, -1=missing
30-34	F5.1	#330- knowledge test covering Security	0.0-100.0, -1=missing
36-37	I2	Number of retests on test #330	Digits 0-2, -1=missing
39-43	F5.1	#440- old curriculum only- knowledge test covering Message Format (Parts, Components, Elements)	0.0-100.0, -1=missing
45-46	I2	Number of retests on test #440	Digits 0-2, -1=missing

Table 14 (Cont'd)

48-52	F5.1	#441- knowledge test covering Basic Message Format	0.0-100.0, -1=missing
54-55	I2	Number of retests on test #441	Digits 0-2, -1=missing
57-61	F5.1	#442- End of Phase I Comprehensive test	0.0-100.0, -1=missing
63-64	I2	Number of retests on test #442	Digits 0-2, -1=missing
66-70	F5.1	#550- knowledge test covering Radiowave Propagation and Modes of Operation	0.0-100.0, -1=missing
72-73	I2	Number of retests on test #550	Digits 0-2, -1=missing
75-79	F5.1	#610- knowledge test covering Safety	0.0-100.0, -1=missing
Line Number 02 - Continuation of Phase II Knowledge, Performance, and Comprehensive tests; Phase III Knowledge, Performance, and Comprehensive tests			
Columns	Format	Description	Valid Ranges, Values
01-02	I2	Number of retests on test #610	Digits 0-2, -1=missing
04-08	F5.1	#510- knowledge test covering Basic Communications Equipment	0.0-100.0, -1=missing
10-11	I2	Number of retests on test #510	Digits 0-2, -1=missing
13-17	F5.1	#760- performance test covering Communication System Construction	0.0-100.0, -1=missing
19-20	I2	Number of retests on test #760	Digits 0-2, -1=missing
22-26	F5.1	#511- performance test covering Planned Maintenance Sub-system (PMS)	0.0-100.0, -1=missing
28-29	I2	Number of retests on test #511	Digits 0-2, -1=missing

Table 14 (Cont'd)

31-35	F5.1	#025- knowledge test covering Theater Nuclear Warfare	0.0-100.0, -1=missing
37-38	I2	Number of retests on test #025	Digits 0-2, -1=missing
40-44	F5.1	#133- end of Phase II Comprehensive test	0.0-100.0, -1=missing
46-47	I2	Number of retests on test #133	Digits 0-2, -1=missing
49-53	F5.1	#110- performance test covering Message Processing Inrouter/File Clerk	0.0-100.0, -1=missing
55-56	I2	Number of retests on test #110	Digits 0-2, -1=missing
58-62	F5.1	#131- knowledge test covering NAVMACS Initialization	0.0-100.0, -1=missing
64-65	I2	Number of retests on test #131	Digits 0-2, -1=missing
67-71	F5.1	#132- old curriculum only- performance test covering NAVMACS BCST Operation	0.0-100.0, -1=missing
73-74	I2	Number of retests on test #132	Digits 0-2, -1=missing
76-80	F5.1	#830- knowledge test covering Message Processing Outrouter	0.0-100.0, -1=missing
Line Number 03 - Phase III Knowledge, Performance, and Comprehensive tests; Final School Grade (FSG)			
Columns	Format	Description	Valid Ranges, Values
01-02	I2	Number of retests on test #830	Digits 0-2, -1=missing
04-08	F5.1	#930- knowledge test covering RTTY Circuit Operations, Call Signs, Prosigns, and Operating Signals	0.0-100.0, -1=missing

Table 14 (Cont'd)

10-11	I2	Number of retests on test #930	Digits 0-2, -1=missing
13-17	F5.1	#123- knowledge test covering Circuit Operations and Radiotelephone	0.0-100.0, -1=missing
19-20	I2	Number of retests on test #123	Digits 0-2, -1=missing
22-26	F5.1	#464- knowledge test covering Tapecutting Corrections	0.0-100.0, -1=missing
28-29	I2	Number of retests on test #464	Digits 0-2, -1=missing
31-35	F5.1	#470- performance test covering UGC-6 Operator Maintenance	0.0-100.0, -1=missing
37-38	I2	Number of retests on test #470	Digits 0-2, -1=missing
40-44	F5.1	#002- performance test covering Circuit Operations	0.0-100.0, -1=missing
46-47	I2	Number of retests on test #002	Digits 0-2, -1=missing
49-53	F5.1	#026- end of Phase III Comprehensive test	0.0-100.0, -1=missing
55-56	I2	Number of retests on test #026	Digits 0-2, -1=missing
Note: Test #003 requires a minimum score of 70 to pass. Students are allowed up to 2 retests, however, the highest score attainable on a retest is 70.			
58-62	F5.1	#003- old curriculum only- Ace Lab	0.0-100.0, -1=missing
64-65	I2	Number of retests on test #003	Digits 0-2, -1=missing
Note: Final School Grade (FSG) is a complex composite of average scores for all Knowledge, Performance, and Comprehensive tests			
67-71	F5.1	Final Student Grade	0.0-100.0, -1=missing

Table 15

Apprentice Air Traffic Control Operator (27230)

Line Number 01 - Personal Data and Student Training Hours

Note: Student training hours represent the number of hours a student takes to complete a block. Blocks III & V each include two training sections (a & b). Students receive a status variable only if disenrolled from class; otherwise, the variable is coded as missing.

In January 1991, the school changed the curriculum from five Blocks to six Blocks, covering the same material but in a slightly different order. The school broke the former Block I, National Air Traffic Training Program (NATTP), into two parts. The school formed the Federal Aviation Administration (FAA) computer-based instruction (CBI) component into Block VI, called Federal Control Tower Operator (CTO) Criteria. Finally, they renamed the remainder of Block I Air Traffic Control Fundamentals.

The school also changed the training hours for the blocks, although the total hours stayed the same at 600:

	Block								
Curriculum	I	II	IIIa	IIIb	IV	Va	Vb	VI	Total
Former	155	55.5	77.5	40	73.5	40	158.5		600
Current	81.5	56	78.5	40	73.5	48	149	73.5	600

Students frequently spent more than these hours in training, sometimes up to twice as many hours in certain Blocks.

Columns	Format	Description	Valid Ranges, Values
01-03	A3	School Name	Alpha only (ATC).
05-13	I9	Social Security Number	Digits
15-16	A2	Student Action Code	Alpha only; -1=missing. See Appendix B.
18-19	I2	Curriculum (former: prior to January 21, 1991; current: January 22, 1991 and after)	Digits, 1=former, 2=current, -1=missing.
21-25	F5.1	Student training hours for National Air Traffic Training Program (Block I) (former curriculum only)	0.0-265.0, -1.0=missing -2.0=not administered

Table 15 (Cont'd)

27-31	F5.1	Student training hours for Air Traffic Control Fundamentals (Block I) (current curriculum only)	0.0-200.0, -1.0=missing -2.0=not administered
33-37	F5.1	Student training hours for Control Tower Procedures (Block II)	0.0-200.0, -1.0=missing
39-43	F5.1	Student training hours for Control Tower Operation: Basic Tower Operation (Block IIIa)	0.0-200.0, -1.0=missing
45-49	F5.1	Student training hours for Control Tower Operation: Advanced Tower Operation (Block IIIb)	0.0-100.0, -1.0=missing
51-55	F5.1	Student training hours for Radar Approach Control Procedures (Block IV)	0.0-220.0, -1.0=missing
57-61	F5.1	Student training hours for Radar Approach Control Operation: Basic Approach Control Operation (Block Va)	0.0-100.0, -1.0=missing
63-67	F5.1	Student training hours for Radar Approach Control Operation: Advanced Approach Control Operation (Block Vb)	0.0-270.0, -1.0=missing
69-73	F5.1	Student training hours for Federal Control Tower Operator Criteria (Block VI) (current curriculum only)	0.0-100.0, -1.0=missing -2.0=not administered
75-79	F5.1	Total Student Training Hours	100.0-999.0, -1.0=missing

Table 15 (Cont'd)

Line Number 02 - Test Grades for Written Knowledge Tests; Performance Scores; Quiz Result Summaries; and Individual Quiz Results for Training Block IV

Note: RGI entered test grades representing the scores attained on only the first written knowledge tests for Training Blocks I, II, IV, & VI. Students who fail the exam retake it after remediation. For those passing the retest, the school assigns a grade of 70 and uses it in calculating the Final School Grade (FSG). In the former curriculum, FSG is the mean of the three written knowledge tests. In the current curriculum, FSG is the mean of the four written knowledge tests. The school does not administer written tests in Training Blocks III and V.

Columns	Format	Description	Valid Ranges, Values
01-03	I3	Test grade for National Air Traffic Training Program (Block I) (former curriculum only)	Digits, 0-100, -1=missing -2=not administered
05-07	I3	Test grade for Air Traffic Control Fundamentals (Block I) (current curriculum only)	Digits, 0-100, -1=missing -2=not administered
09-11	I3	Test grade for Control Tower Procedures (Block II)	Digits, 0-100, -1=missing
13-15	I3	Test grade for Radar Approach Control Procedures (Block IV)	Digits, 0-100, -1=missing
17-19	I3	Test grade for Federal Control Tower Operator Criteria (Block VI) (current curriculum only)	Digits, 0-100, -1=missing -2=not administered
21-23	I3	Final School Grade (FSG)	Digits, 0-100, -1=missing

Note: Students receive performance scores for only Training Blocks III & V. Since Blocks III & V each include two training sections, students receive a total of four performance scores. School instructors score the performance tests on a Satisfactory (S) or an Unsatisfactory (U) basis. For research purposes, we scored an "S" as a 1 and a "U" as a 0. RGI entered the initial score for each performance score.

Table 15 (Cont'd)

25-26	I2	Control Tower Operation: Basic Tower Operation (Block IIIa)	1="S", 0="U", -1=missing
28-29	I2	Control Tower Operation: Advanced Tower Operation (Block IIIb)	1="S", 0="U", -1=missing
31-32	I2	Radar Approach Control Operation: Basic Approach Control Operation (Block Va)	1="S", 0="U", -1=missing
34-35	I2	Radar Approach Control Operation: Advanced Approach Control Operation (Block Vb)	1="S", 0="U", -1=missing

Note: During training block IV, students receive quizzes covering specified course objectives. Students receive either an "S" or a "U" on the quizzes, depending on whether they meet the passing score. The passing score (the standard) depends upon the number of items per quiz:

Number of items on quiz:	3	4	5	6	7	8	9	10	11	12	13	14	15
Standard:	2	3	3	4	5	5	6	7	8	9	9	10	11

Students who fail a quiz retake it until they pass. For research purposes, we entered the sum of the "U"s on the initial quizzes for training block IV from the school's Summary Data Sheets form 667 into the database.

37-38	I2	Radar Approach Control Procedures (Block IV)	Digits, 0-29, -1=missing

Table 15 (Cont'd)

Note: We also entered scores for Block IV quizzes. For this data, we entered the number of correct responses per quiz. The school changed the curriculum during data collection. For this reason, the number of quizzes and the number of items per quiz differs. Students in class numbers through June 21, 1990 received up to 32 quizzes labeled 1a through 7c (Curriculum 1). Students in class numbers from June 22, 1990 through January 21, 1991 received up to 29 quizzes labeled 1a through 1ac (Curriculum 2). Students with class numbers from January 22, 1991 through September 29, 1991 received 23 quizzes labeled 1a through 1w (Curriculum 3). Students in class numbers from September 30, 1991 to the present receive 24 quizzes labeled 1a through 1x (Curriculum 4). However, Summary Data Sheets for both Curricula 3 and 4 list the quizzes as 1a through 1w. The school continued to use old summary sheets after September 29, 1991.

For defining the class dates we used the entry date in the upper left-hand corner of the 156 form instead of the current class number located in the upper-right hand corner of the 156 form.

The following Block IV quiz information represents the curricula effective January 21, 1991 and September 30, 1991 (Curricula 3 and 4). For each quiz, the highest end of the range equals the number possible and remains constant for all students taking the quiz.

40-45	3(I2)	Class Entry Date (YYMMDD)	Digits, 90-92, 01-12, 01-31, -1=missing
47-48	I2	**Block IV** (Curriculum 3 only) **PC1 Quiz 1a:** Identify procedures used to apply IFR separation.	Digits, 00-09, (number correct) -1=missing, -2=not administered
50-51	I2	**Block IV** (Curriculum 4 only) **PC1 Quiz 1a:** Identify procedures used to apply IFR separation.	Digits, 00-09, -1=missing -2=not administered
53-54	I2	**PC1 Quiz 1b:** Identify procedures used to control IFR departures.	Digits, 00-06, -1=missing -2=not administered
56-57	I2	**PC2 Quiz 1c:** Identify procedures used to issue holding instructions.	Digits, 00-06, -1=missing -2=not administered
59-60	I2	**PC2 Quiz 1d:** Identify procedures used to control IFR arrivals.	Digits, 00-09, -1=missing -2=not administered

Table 15 (Cont'd)

62-63	I2	**PC3 Quiz 1e:** Identify general radar procedures applied to aircraft.	Digits, 00-05, -1=missing -2=not administered
Note: The school added Quiz 1f into the curriculum in September 1991. The school administered this quiz to students with class entry date numbers from 910930 to the present.			
65-66	I2	**PC3 Quiz 1f** (Curriculum 4 only): Identify general principles about airport surveillance radar (ASR) indicators.	Digits, 00-04, -1=missing, -2=not administered
68-69	I2	**PC3 Quiz 1f** (Curriculum 3), **1g** (Curriculum 4): Identify basic facts about electronic combat.	Digits, 00-05, -1=missing -2=not administered
71-72	I2	**PC3 Quiz 1g** (Curriculum 3), **1h** (Curriculum 4): Identify procedures used to assign beacon codes.	Digits, 00-10, -1=missing -2=not administered
74-75	I2	**PC4 Quiz 1h** (Curriculum 3), **1i** (Curriculum 4): Identify procedures used to establish radar identification.	Digits, 00-09, -1=missing -2=not administered
77-78	I2	**PC4 Quiz 1i** (Curriculum 3), **1j** (Curriculum 4): Identify procedures used to vector aircraft.	Digits, 00-09, -1=missing -2=not administered

Table 15 (Cont'd)

Line Number - 03 Quiz Results for Block IV, Curricula 4, 3, and 2			
Columns	Format	Description	Valid Ranges, Values
01-02	I2	**PC4 Quiz 1j** (Curriculum 3) **1k** (Curriculum 4): Identify procedures used to apply radar separation.	Digits, 00-11, -1=missing -2=not administered
04-05	I2	**PC5 Quiz 1k** (Curriculum 3), **1l** (Curriculum 4): Identify procedures used to issue low altitude alerts.	Digits, 00-04, -1=missing -2=not administered
07-08	I2	**PC5 Quiz 1l** (Curriculum 3), **1m** (Curriculum 4): Identify procedures used to provide additional services.	Digits, 00-08, -1=missing -2=not administered
10-11	I2	**PC5 Quiz 1m** (Curriculum 3), **1n** (Curriculum 4): Identify services provided under terminal radar program.	Digits, 00-10, -1=missing -2=not administered
13-14	I2	**PC6 Quiz 1n** (Curriculum 3), **1o** (Curriculum 4): Identify procedures used to control radar arrivals	Digits, 00-14, -1=missing -2=not administered
16-17	I2	**PC6 Quiz 1o** (Curriculum 3), **1p** (Curriculum 4): Identify procedures used to confirm aircraft altitudes.	Digits, 00-04, -1=missing -2=not administered
19-20	I2	**PC6 Quiz 1p** (Curriculum 3), **1q** (Curriculum 4): Identify the procedures used to transfer radar identification of aircraft.	Digits, 00-12, -1=missing -2=not administered
22-23	I2	**PC7 Quiz 1q** (Curriculum 3), **1r** (Curriculum 4): Identify procedures used to control radar arrivals.	Digits, 00-15, -1=missing -2=not administered

Table 15 (Cont'd)

25-26	I2	**PC7 Quiz 1r** (Curriculum 3), **1s** (Curriculum 4): Identify procedures to control visual approaches.	Digits, 00-04, -1=missing -2=not administered
28-29	I2	**PC7 Quiz 1s** (Curriculum 3) **1t** (Curriculum 4): Identify general principles about contact approaches.	Digits, 00-04, -1=missing -2=not administered
31-32	I2	**PC8 Quiz 1t** (Curriculum 3), **1u** (Curriculum 4): Identify procedures used to control radar approaches.	Digits, 00-05, -1=missing -2=not administered
34-35	I2	**PC8 Quiz 1u** (Curriculum 3), **1v** (Curriculum 4): Identify procedures used to control ASR approaches.	Digits, 00-08, -1=missing -2=not administered
37-38	I2	**PC9 Quiz 1v** (Curriculum 3), **1w** (Curriculum 4): Identify general principles about precision approach radar (PAR) indicators.	Digits, 00-04, -1=missing -2=not administered
40-41	I2	**PC9 Quiz 1w** (Curriculum 3), **1x** (Curriculum 4): Identify procedures used to control PAR approaches.	Digits, 00-08, -1=missing -2=not administered
Note: The school cannot provide specific Block IV quiz content for the following quizzes used in classes 900628 through 910121 (Curriculum 2). The school labeled the quizzes 1a-1ac on the Summary Data Sheet. However, we renamed the quizzes and entered them as they appeared on the Performance Checklists because we could not determine the specific quiz content. The actual number of quizzes that the school administered during this time period may not match the number of quizzes specified on the summary sheet. For each quiz, the highest end of the range equals the number possible and remains constant for all students taking the quiz.			
43-44	I2	**PC1 Quiz 1**	Digits, 00-08, (number correct) -1=missing, -2=not administered
46-47	I2	**PC2 Quiz 1**	Digits, 00-05, -1=missing -2=not administered

Table 15 (Cont'd)

49-50	I2	**PC2 Quiz 2**	Digits, 00-10, -1=missing -2=not administered
52-53	I2	**PC2 Quiz 3**	Digits, 00-09, -1=missing -2=not administered
55-56	I2	**PC3 Quiz 1**	Digits, 00-04, -1=missing -2=not administered
58-59	I2	**PC3 Quiz 2**	Digits, 00-09, -1=missing -2=not administered
61-62	I2	**PC3 Quiz 3**	Digits, 00-10, -1=missing -2=not administered
64-65	I2	**PC4 Quiz 1**	Digits, 00-09, -1=missing -2=not administered
67-68	I2	**PC4 Quiz 2**	Digits, 00-09, -1=missing -2=not administered
70-71	I2	**PC4 Quiz 3**	Digits, 00-04, -1=missing -2=not administered
73-74	I2	**PC5 Quiz 1**	Digits, 00-03, -1=missing -2=not administered
76-77	I2	**PC5 Quiz 2**	Digits, 00-04, -1=missing -2=not administered
79-80	I2	**PC5 Quiz 3**	Digits, 00-04, -1=missing -2=not administered
Line Number 04 - Quiz Results for Block IV Curricula 2 and 1			
Columns	Format	Description	Valid Ranges, Values
01-02	I2	**PC5 Quiz 4**	Digits, 00-10, -1=missing -2=not administered
04-05	I2	**PC6 Quiz 1**	Digits, 00-14, -1=missing
07-08	I2	**PC6 Quiz 2**	Digits, 00-06, -1=missing
10-11	I2	**PC7 Quiz 1**	Digits, 00-06, -1=missing
13-14	I2	**PC7 Quiz 2**	Digits, 00-10, -1=missing
16-17	I2	**PC7 Quiz 3**	Digits, 00-04, -1=missing
19-20	I2	**PC7 Quiz 4**	Digits, 00-04, -1=missing
22-23	I2	**PC8 Quiz 1**	Digits, 00-10, -1=missing
25-26	I2	**PC8 Quiz 2**	Digits, 00-04, -1=missing

Table 15 (Cont'd)

28-29	I2	PC8 Quiz 3	Digits, 00-08, -1=missing
31-32	I2	PC9 Quiz 1	Digits, 00-04, -1=missing
34-35	I2	PC9 Quiz 2	Digits, 00-09, -1=missing
37-38	I2	PC9 Quiz 3	Digits, 00-05, -1=missing
Note: The school cannot provide specific Block IV quiz content for classes prior to 900625 (Curriculum 1). The school labeled the quizzes 1a through 7c on the Summary Data Sheets. However, we renamed the quizzes and entered them as they appeared on the Performance Checklists because we could not determine the specific quiz content. The actual number of quizzes that the school administered may not match the number of quizzes specified in the summary sheet. For each quiz, the highest end of the range equals the number possible and remains constant for all students taking the quiz.			
40-41	I2	PC1 Quiz 1	Digits, 00-07, (number correct) -1=missing
43-44	I2	PC2 Quiz 1	Digits, 00-11, -1=missing
46-47	I2	PC2 Quiz 2	Digits, 00-07, -1=missing
49-50	I2	PC2 Quiz 3	Digits, 00-10, -1=missing
52-53	I2	PC3 Quiz 1	Digits, 00-04, -1=missing
55-56	I2	PC3 Quiz 2	Digits, 00-10, -1=missing
58-59	I2	PC3 Quiz 3	Digits, 00-10, -1=missing
61-62	I2	PC4 Quiz 1	Digits, 00-10, -1=missing
64-65	I2	PC4 Quiz 2	Digits, 00-10, -1=missing
67-68	I2	PC4 Quiz 3	Digits, 00-06, -1=missing
70-71	I2	PC5 Quiz 1	Digits, 00-04, -1=missing
73-74	I2	PC5 Quiz 2	Digits, 00-05, -1=missing
76-77	I2	PC5 Quiz 3	Digits, 00-10, -1=missing
79-80	I2	PC6 Quiz 1	Digits, 00-09, -1=missing
Line Number 05 - Quiz Results for Block IV, Curriculum 1			
Columns	Format	Description	Valid Ranges, Values
01-02	I2	PC6 Quiz 2	Digits, 00-04, -1=missing
04-05	I2	PC6 Quiz 3	Digits, 00-06, -1=missing

Table 15 (Cont'd)

07-08	I2	PC7 Quiz 1	Digits, 00-10, -1=missing
10-11	I2	PC7 Quiz 2	Digits, 00-04, -1=missing
13-14	I2	PC7 Quiz 3	Digits, 00-10, -1=missing
16-17	I2	PC7 Quiz 4	Digits, 00-04, -1=missing
19-20	I2	PC8 Quiz 1	Digits, 00-10, -1=missing
22-23	I2	PC8 Quiz 2	Digits, 00-04, -1=missing
25-26	I2	PC8 Quiz 3	Digits, 00-04, -1=missing
28-29	I2	PC8 Quiz 4	Digits, 00-10, -1=missing
31-32	I2	PC8 Quiz 5	Digits, 00-04, -1=missing
34-35	I2	PC9 Quiz 1	Digits, 00-07, -1=missing
37-38	I2	PC9 Quiz 2	Digits, 00-04, -1=missing
40-41	I2	PC9 Quiz 3	Digits, 00-10, -1=missing

Table 16

Apprentice Personnel Specialist (73230)

Line Number 01 - Personal Data, Typing Test Scores, Training Hours, and Test Grades			
Note: Students receive a status variable only if disenrolled from class, otherwise the variable is coded as missing.			
Columns	Format	Description	Valid Ranges,Values
01-03	A3	School name	Alpha only (APS).
05-13	I9	Social security number	Digits
15-16	A2	Student Action Code	Alpha, -1=missing. See Appendix B.
Note: Students must type a minimum of 15 words per minute (WPM) with no more than three errors to pass the Block I By-Pass test and to by-pass the 6 additional typing tests in Blocks I - VI. Students must attain or retain a minimum typing speed of 15 WPM with no more than five errors to pass the final typing test and the Air Force Performance Test (AFPT) 70.			
18-20	I3	Block I typing By-Pass test. Words typed per minute.	0-100, -1=missing
22-24	I3	Final typing test. Words typed per minute.	0-100, -1=missing
26-28	I3	AFPT 70 typing test. Words typed per minute.	0-100, -1=missing
Note: Student training hours represent the number of hours a student takes to complete a block.			
30-34	F5.1	Student training hours for Orientation (Block I).	0.0-150.0, -1.0=missing
36-40	F5.1	Student training hours for Introduction to Personnel and General Administrative Procedures (Block II).	0.0-150.0, -1.0=missing
42-46	F5.1	Student training hours for Unit Orderly Room and Customer Assistance Section (Block III).	0.0-150.0, -1.0=missing

Table 16 (Cont'd)

48-52	F5.1	Student training hours for Quality Force Section (Block IV).	0.0-150.0, -1.0=missing
54-58	F5.1	Student training hours for Career Progression Section (Block V).	0.0-150.0, -1.0=missing
60-64	F5.1	Student training hours for Personnel Utilization Section (Block VI).	0.0-150.0, -1.0=missing
66-70	F5.1	Student training hours for Personnel Data System (Block VII).	0.0-150.0, -1.0=missing
Note: Test grades represent the grades attained on the final exams for Blocks II-VII. The block V exam contains 25 items; all other exams contain 40 items. If the student fails the final exam, he/she retakes the test and needs to attain a minimum grade of 70% to pass, except on the Block V exam where students need a 72%. Some students receive an initial test grade lower than the minimum passing grade. These students must retake the block test. All students get a passing score on the first retake; however, the block grade for these students always equals the minimum passing score.			
72-74	I3	Test grade for Introduction to Personnel and General Administrative Procedures (Block II).	0-100, -1=missing
76-78	I3	Test grade for Unit Orderly Room and Customer Assistance Section (Block III).	0-100, -1=missing

Table 16 (Cont'd)

Line Number 02 - Test Grades Continued, Final School Grade, Block Quiz and Retest Data			
Columns	Format	Description	Valid Ranges, Values
01-03	I3	Test grade for Quality Force Section (Block IV).	0-100, -1=missing
05-07	I3	Test grade for Career Progression Section (Block V).	0-100, -1=missing
09-11	I3	Test grade for Personnel Utilization Section (Block VI).	0-100, -1=missing
13-15	I3	Test grade for Personnel Data System (Block VII).	0-100, -1=missing
17-19	I3	Final school grade	0-100, -1=missing
Note: Students must take from 7 - 18 quizzes before taking the final exam for a block. The quizzes are scored on a Satisfactory (S)/ Unsatisfactory (U) basis. If the student fails the first block exam, he/she repeats all block quizzes and takes a block retest. Numbers for quiz data represent total number of "U"s on the first attempt.			
21-22	I2	Block II initial quizzes	0-17, -1=missing
24-25	I2	Block II retest quizzes	0-17, -1=missing
27-28	I2	Block III initial quizzes	0-18, -1=missing
30-31	I2	Block III retest quizzes	0-18, -1=missing
33-34	I2	Block IV initial quizzes	0-12, -1=missing
36-37	I2	Block IV retest quizzes	0-12, -1=missing
39-401	I2	Block V initial quizzes	0- 7, -1=missing
42-43	I2	Block V restest quizzes	0- 7, -1=missing
45-46	I2	Block VI initial quizzes	0-16, -1=missing
48-49	I2	Block VI retest quizzes	0-16, -1=missing
51-52	I2	Block VII initial quizzes	0-13, -1=missing
54-55	I2	Block VII retest quizzes	0-13, -1=missing

Table 17

Fire Support Specialist (13F)

Line Number 01 - Personal and Class Data, Written (W) and Performance (P) Test Scores

Note: Students receive an action code only if dropped from the class. The course average is calculated by taking the sum of all test scores and dividing it by the total points possible (1000). The first 2 digits in the class standing variable indicate students' rank, the last 2 digits indicate the number of students in the class. The first 3 digits of the class number indicate the number of the class, the last 2 digits indicate the year of the class. Sometimes instructors divide classes into sections of approximately 10 students. The section number variable indicates the section to which the student was assigned.

Columns	Format	Description	Valid Ranges, Values
01-03	A3	School name	Alphanumeric (13F).
05-13	I9	Social security number	Digits
15-16	I2	Student Action Code	Digits, -1=missing. See Appendix B.
18-22	F5.1	Course average	70.0-100.0, -1.0=missing
24-27	2(I2)	Class standing	Student rank = 01-40 No. of students = 01-40 -1=missing
29-33	I5	Class number	Digits, 00190-50191, -1=missing
35-36	I2	Section number	Digits, 1-5, -1=missing

Note: The 13F school generates composite scores for the instructional departments of Communications and Electronics (Test 1), Target Acquisition (Tests 2-4), and Fire Support and Combined Arms Operations (Tests 5-13). In addition, the school generates composite scores for branches within each department. The composite scores for the Communications and Electronics and Target Acquisition Departments are the same as their respective branch scores since each department has only one branch. The Fire Support and Combined Arms Operations Department branch composites are 13F duties and knowledge of the Fire Support Vehicle (FSV) (Tests 5 and 6), advanced 13F duties (Tests 7 and 8), and Target Shoots (9-11). The school calculates composite scores by dividing the number of points achieved by the number of points possible. Since it is possible to generate the composite scores from the test scores, we did not enter the scores in the database. The school assigns a score of 70 to all retests. The number of tries variables indicate the number of trials needed by the student to pass each test. A 0 equals test not administered, a 1 equals passed on first attempt, and a 2 equals passed on second attempt. Each time the number of tries equals 2, the score will equal 70 because the school assigns the minimum passing score to all those passing a retest. Tests 8 and 13 are given to fast track students only. Fast track students do not receive tests 7 and 12. The school dropped the fast track program OCT 91. Tests 12 and 13 are scored pass/fail and are not included in composite scores. The variables used for tests 12 and 13 indicate the number of trials needed to pass each test. A test score of 0.00 indicates the school did not administer the test to the student. The number of tries variable is the sum of the "not administered" and the "missing" values.

Columns	Format	Description	Valid Ranges, Values
38-43	F6.2	**Test 1:** Radio and Communication (W).	143.50-205.00, -1.00=missing
45	I1	Number of tries on Test 1.	Digits: 0, 1, or 2
47-51	F5.2	**Test 2:** Map Symbols and Features (W).	47.50-95.00, -1.00=missing
53	I1	Number of tries on Test 2.	Digits: 0, 1, or 2
55-59	F5.2	**Test 3:** Day Land Navigation by Terrain Association (P).	28.00-40.00, -1.00=missing
61	I1	Number of tries on Test 3.	Digits: 0, 1, or 2
63-67	F5.2	**Test 4:** Map and Terrain Association Field Exercise (P).	28.00-40.00, -1.00=missing

Table 17 (Cont'd)

69	I1	Number of tries on Test 4.	Digits: 0, 1, or 2
71-75	F5.2	**Test 5:** Duties of the Fire Support Specialist (W).	03.00-75.00, -1.00=missing
77	I1	Number of tries on Test 5.	Digits: 0, 1, or 2
Line Number 02 - Written (W) and Performance (P) Test Scores (continued)			
Columns	Format	Description	Valid Ranges, Values
01-06	F6.2	**Test 6:** Fire Support Vehicle (FSV) (P).	94.50-135.00, -1.00=missing
08	I1	Number of tries on Test 6.	Digits: 0, 1, or 2
10-15	F6.2	**Test 7:** Digital Message Device (DMD) & Firing Test for Regular Track Soldiers (W).	53.46-110.00, -1.00=missing
17	I1	Number of tries on Test 7.	Digits: 0, 1, or 2
19-24	F6.2	**Test 8:** Digital Message Device (DMD) & Firing Test for Fast Track Soldiers (W).	77.00-110.00, -1.00=missing
26	I1	Number of tries on Test 8.	Digits: 0, 1, or 2
28-33	F6.2	**Test 9:** Practice Shoot #1 (P).	70.00-100.00, -1.00=missing
35	I1	Number of tries on Test 9.	Digits: 0, 1, or 2
37-42	F6.2	**Test 10:** Practice Shoot #2 (P).	70.00-100.00, -1.00=missing
44	I1	Number of tries on Test 10.	Digits: 0, 1, or 2
46-51	F6.2	**Test 11:** Practice Shoot #3 (P).	70.00-100.00, -1.00=missing
53	I1	Number of tries on Test 11.	Digits: 0, 1, or 2
55	I1	**Test 12:** Final Test, Regular Track (Pass/Fail), (W), number of tries.	Digits: 0, 1, or 2

Table 17 (Cont'd)

57	I1	**Test 13:** Final Test, Fast Track (Pass/Fail), (W), number of tries.	Digits: 0, 1, or 2
Line Number 03 - Composite Test Scores (Criterion Summary)			
Columns	Format	Description	Valid Ranges, Values
01-09	I9	Social Security Number	Digits
11-17	F7.3	Final School Grade (FSG)	0.00-100.00
19-25	F7.3	Test over Maps and Radio	0.00-100.00
27-33	F7.3	Test over Firing	0.00-100.00

Table 18

Heavy Antiarmor Weapons Crewman (11H)

Line Number 01 - Personal Data and Performance Measures for: Training Objective (TO) 1, Assemble TOW Launcher; TO 2, Inspect TOW Launcher; and TO 3, Maintain TOW Launcher

Note: Student Action Code reflects why the school dropped a student. Each TO consists of several performance measures. RGI distinguished between students not tested on a performance measure and students with missing values on a performance measure. The numbers documented for each performance measure represent the number of No Gos for that performance measure. For students who did not complete a task within the time allowed, the instructor documented subsequent performance measures with a No Go.

Columns	Format	Description	Valid Ranges, Values
01-03	A3	School Name	Alphanumeric (11H).
05-13	I9	Social Security Number	Digits
15-16	I2	Student Action Code	1=Medical Reasons 2=Failed to Qualify 3=Discharged 4=Unknown -1=missing See Appendix B.
Note: TO 1, assemble TOW launcher, consists of the following 16 performance measures (up to 3 No Gos each).			
18-19	I2	1. Place tripod legs in locked position	Digits, 0-3, -1=missing, -2=not administered
21-22	I2	2. Level tripod	Digits, 0-3, -1=missing, -2=not administered
24-25	I2	3. Carry traversing unit by control knobs	Digits, 0-3, -1=missing, -2=not administered
27-28	I2	4. Lock groove coupling clamp	Digits, 0-3, -1=missing, -2=not administered
30-31	I2	5. Carry daysight tracker	Digits, 0-3, -1=missing, -2=not administered
33-34	I2	6. Lock daysight tracker	Digits, 0-3, -1=missing, -2=not administered
36-37	I2	7. Secure launch tube	Digits, 0-3, -1=missing, -2=not administered

Table 18 (Cont'd)

39-40	I2	8. Handle nightsight properly	Digits, 0-3, -1=missing, -2=not administered
42-43	I2	9. Check nightsight	Digits, 0-3, -1=missing, -2=not administered
45-46	I2	10. Set nightsight FOV switch	Digits, 0-3, -1=missing, -2=not administered
48-49	I2	11. Lock nightsight handle	Digits, 0-3, -1=missing, -2=not administered
51-52	I2	12. Connect post amplifier cable	Digits, 0-3, -1=missing, -2=not administered
54-55	I2	13. Connect battery	Digits, 0-3, -1=missing, -2=not administered
57-58	I2	14. Install battery	Digits, 0-3, -1=missing, -2=not administered
60-61	I2	15. Connect cell cord	Digits, 0-3, -1=missing, -2=not administered
63-64	I2	16. Name each component	Digits, 0-3, -1=missing, -2=not administered
Note: TO 2, inspect TOW 2 launcher and missile, consists of the following 3 performance measures (up to 3 No Gos each).			
66-67	I2	1. Conduct system check-out	Digits, 0-3, -1=missing, -2=not administered
69-70	I2	2. Report malfunctions	Digits, 0-3, -1=missing -2=not administered
72-73	I2	3. Perform preoperational missile inspection	Digits, 0-3, -1=missing, -2=not administered
Note: TO 3, maintain TOW 2 launcher, consists of the following 7 performance measures (up to 3 No Gos each).			
75-76	I2	1. Conduct visual inspection	Digits, 0-3, -1=missing, -2=not administered
78-79	I2	2. Describe correction of deficiencies	Digits, 0-3, -1=missing, -2=not administered

Table 18 (Cont'd)

Line Number 02 - Performance Measures for: TO 3, Maintain TOW 2 Launcher (continued); TO 4, Load Encased Missile; TO 5, Action For TOW 2 Misfire; and TO 6, Determine If Target Is Engageable			
Columns	Format	Description	Valid Ranges, Values
01-02	I2	3. Name cleaning material	Digits, 0-3, -1=missing, -2=not administered
04-05	I2	4. Report any deficiencies	Digits, 0-3, -1=missing, -2=not administered
07-08	I2	5. Describe how to spot paint the launcher	Digits, 0-3, -1=missing, -2=not administered
10-11	I2	6. Check desicant bags	Digits, 0-3, -1=missing, -2=not administered
13-14	I2	7. Check humidity indicators	Digits, 0-3, -1=missing, -2=not administered
Note: TO 4, load encased missile, consists of the following 12 performance measures (up to 2 No Gos each).			
16-17	I2	1. Lock down system	Digits, 0-2, -1=missing, -2=not administered
19-20	I2	2. Raise bridge clamp and close trigger cover	Digits, 0-2, -1=missing, -2=not administered
22-23	I2	3. Inspect missile	Digits, 0-2, -1=missing, -2=not administered
25-26	I2	4. Remove electrical connector dust cover	Digits, 0-2, -1=missing, -2=not administered
28-29	I2	5. Handle and load missile correctly	Digits, 0-2, -1=missing, -2=not administered
31-32	I2	6. Use two hands to close and lock bridge clamp	Digits, 0-2, -1=missing, -2=not administered
34-35	I2	7. Check backblast area	Digits, 0-2, -1=missing, -2=not administered
37-38	I2	8. Raise arming lever	Digits, 0-2, -1=missing, -2=not administered
40-41	I2	9. Lower arming lever	Digits, 0-2, -1=missing, -2=not administered

Table 18 (Cont'd)

43-44	I2	10. Unload missile correctly	Digits, 0-2, -1=missing, -2=not administered
46-47	I2	11. Replace forward handling rings	Digits, 0-2, -1=missing, -2=not administered
49-50	I2	12. Tag missile	Digits, 0-2, -1=missing, -2=not administered
Note: TO 5, action for TOW 2 misfire, consists of the following 4 performance measures (up to 2 No Gos each).			
52-53	I2	1. Check battery, coil cord connector & bridge clamp	Digits, 0-2, -1=missing, -2=not administered
55-56	I2	2. Lower and raise arming lever	Digits, 0-2, -1=missing, -2=not administered
58-59	I2	3. Perform correct actions after third misfire	Digits, 0-2, -1=missing, -2=not administered
61-62	I2	4. Remain clear of front and rear of launcher	Digits, 0-2, -1=missing, -2=not administered
Note: TO 6, determine if target is engageable, consists of the following 5 performance measures (up to 3 No Gos each).			
64-65	I2	1. Specify if target 1 is within range, engageable, or not engageable	Digits, 0-3, -1=missing, -2=not administered
67-68	I2	2. Specify if target 2 is within range, enageable, or not engageable	Digits, 0-3, -1=missing, -2=not administered
70-71	I2	3. Specify if target 3 is within range, engageable, or not enageable	Digits, 0-3, -1=missing, -2=not administered
73-74	I2	4. Specify if target 4 is within range, engageable or not engageable	Digits, 0-3, -1=missing, -2=not administered
76-77	I2	5. Specify if target 5 is within range, engageable or not engageable	Digits, 0-3, -1=missing, -2=not administered

Table 18 (Cont'd)

Line Number 03 - Performance Measures for TO 7, Prepare Antiarmor Range Card; and TO 8, Determine TOW Firing Limits			
Note: TO 7, prepare antiarmor range card, consists of the following 20 performance measures (up to 3 No Gos each).			
Columns	Format	Description	Valid Ranges, Values
01-02	I2	1a. Correct weapon symbol	Digits, 0-3, -1=missing, -2=not administered
04-05	I2	1b. Arrows drawn to weapons position	Digits, 0-3, -1=missing, -2=not administered
07-08	I2	1c. Left and right limits	Digits, 0-3, -1=missing, -2=not administered
10-11	I2	1d. All target engagement locations	Digits, 0-3, -1=missing, -2=not administered
13-14	I2	1e. TRPs, to include the TRP number	Digits, 0-3, -1=missing, -2=not administered
16-17	I2	1f. A maximum engagement line	Digits, 0-3, -1=missing, -2=not administered
19-20	I2	1g. All prominent terrain features	Digits, 0-3, -1=missing, -2=not administered
22-23	I2	1h. All dead space	Digits, 0-3, -1=missing, -2=not administered
25-26	I2	1i. Unit, not to exceed company	Digits, 0-3, -1=missing, -2=not administered
28-29	I2	1j. Magnetic north arrow	Digits, 0-3, -1=missing, -2=not administered
31-32	I2	1k. Type of position	Digits, 0-3, -1=missing, -2=not administered
34-35	I2	1l. Type of weapon	Digits, 0-3, -1=missing, -2=not administered
37-38	I2	1m. Correct interval between circles	Digits, 0-3, -1=missing, -2=not administered
40-41	I2	1n. Date	Digits, 0-3, -1=missing, -2=not administered
43-44	I2	1o(1) Direction on target engagement locations	Digits, 0-3, -1=missing, -2=not administered

Table 18 (Cont'd)

46-47	I2	1o(2) Range on target engagement locations	Digits, 0-3, -1=missing, -2=not administered
49-50	I2	1o(3) Description on target engagement locations	Digits, 0-3, -1=missing, -2=not administered
52-53	I2	1o(4) TRP number for all TRPs on target engagement location	Digits, 0-3, -1=missing, -2=not administered
55-56	I2	2. Ensure range card is readable	Digits, 0-3, -1=missing, -2=not administered
58-59	I2	3. State two copies required	Digits, 0-3, -1=missing, -2=not administered
Note: TO 8, determine TOW firing limitations, consists of the following 12 performance measures (up to 2 No Gos each).			
61-62	I2	1. Reduction of range over bodies of water	Digits, 0-2, -1=missing, -2=not administered
64-65	I2	2. Fire from TOW carriers	Digits, 0-2, -1=missing, -2=not administered
67-68	I2	3. Fire over electrical wires	Digits, 0-2, -1=missing, -2=not administered
70-71	I2	4. Fire in windy condtions	Digits, 0-2, -1=missing, -2=not administered
73-74	I2	5. Fire through smoke and area fires	Digits, 0-2, -1=missing, -2=not administered
76-77	I2	6. Fire from bunkers and buildings	Digits, 0-2, -1=missing, -2=not administered
79-80	I2	6a. Room size	Digits, 0-2, -1=missing, -2=not administered
Line Number 04 - Performance Measures for: TO 8 (Determine TOW Firing Limitations, continued), Qualification Score, Event 1 Data and Event 2 Protective Mask Data			
Columns	Format	Description	Valid Ranges, Values
01-02	I2	6b. Ventilation	Digits, 0-2, -1=missing, -2=not administered
04-05	I2	6c. Debris	Digits, 0-2, -1=missing, -2=not administered

Table 18 (Cont'd)

07-08	I2	6d. Noise	Digits, 0-2, -1=missing, -2=not administered
10-11	I2	6e. Clearance requirements	Digits, 0-2, -1=missing, -2=not administered
13-14	I2	6f. Muzzle clearance	Digits, 0-2, -1=missing, -2=not administered
Note: The school uses a TOW Tracking Performance Scorecard to document students' TOW tracking scores. Students may perform in up to 8 events. The school defines an event as the sum of 10 shots. The score for each shot (0-100) reflects time on target from firing to hit/miss. RGI entered event totals as they appeared on the scorecard. Researchers who calculate totals may find different totals. The Qualification Score is the highest event total. School instructors state that students frequently practiced more than what is documented on the scorecard. Event 1 consists of the following 10 event shots and total score.			
16-19	I4	Qualification Score	Digits, 0-1000, -1=missing, -2=not administered
21-23	I3	Event 1 - first shot	Digits, 0-100, -1=missing, -2=not administered
25-27	I3	Event 1 - second shot	Digits, 0-100, -1=missing, -2=not administered
29-31	I3	Event 1 - third shot	Digits, 0-100, -1=missing, -2=not administered
33-35	I3	Event 1 - fourth shot	Digits, 0-100, -1=missing, -2=not administered
37-39	I3	Event 1 - fifth shot	Digits, 0-100, -1=missing, -2=not administered
41-43	I3	Event 1 - sixth shot	Digits, 0-100, -1=missing, -2=not administered
45-47	I3	Event 1 - seventh shot	Digits, 0-100, -1=missing, -2=not administered

Table 18 (Cont'd)

49-51	I3	Event 1 - eighth shot	Digits, 0-100, -1=missing, -2=not administered
53-55	I3	Event 1 - ninth shot	Digits, 0-100, -1=missing, -2=not administered
57-59	I3	Event 1 - tenth shot	Digits, 0-100, -1=missing, -2=not administered
61-64	I4	Event 1 - Total	Digits, 0-1000, -1=missing, -2=not administered
Note: Event 2 consists of the following 10 event shots and total score.			
66-68	I3	Event 2 - first shot	Digits, 0-100, -1=missing, -2=not administered
70-72	I3	Event 2 - second shot	Digits, 0-100, -1=missing, -2=not administered
74-76	I3	Event 2 - third shot	Digits, 0-100, -1=missing, -2=not administered
Line Number 05 - Event 2 Protective Mask Data (continued) and Event 3 Data			
Columns	Format	Description	Valid Ranges, Values
01-03	I3	Event 2 - fourth shot	Digits, 0-100, -1=missing, -2=not administered
05-07	I3	Event 2 - fifth shot	Digits, 0-100, -1=missing, -2=not administered
09-11	I3	Event 2 - sixth shot	Digits, 0-100, -1=missing, -2=not administered
13-15	I3	Event 2 - seventh shot	Digits, 0-100, -1=missing, -2=not administered

Table 18 (Cont'd)

17-19	I3	Event 2 - eighth shot	Digits, 0-100, -1=missing, -2=not administered
21-23	I3	Event 2 - ninth shot	Digits, 0-100, -1=missing, -2=not administered
25-27	I3	Event 2 - tenth shot	Digits, 0-100, -1=missing, -2=not administered
29-32	I4	Event 2 - total	Digits, 0-1000, -1=missing, -2=not administered
Note: The school specifies that students wear protective masks for the last five shots in practice Event 2. RGI found that the instructor sometimes documents these scores elsewhere or does not document them at all. The following variable identifies where the instructor documented these scores.			
34	I1	Protective mask	0=not documented at all 1=documented in correct place (Event 2) 2=documented at the end of HMMWV 3=documented at the end of Event 4 (End of TOW) 4=documented outside of forms
Note: Event 3 consists of the following 10 event shots and total score.			
36-38	I3	Event 3 - first shot	Digits, 0-100, -1=missing, -2=not administered
40-42	I3	Event 3 - second shot	Digits, 0-100, -1=missing, -2=not administered
44-46	I3	Event 3 - third shot	Digits, 0-100, -1=missing, -2=not administered
48-50	I3	Event 3 - fourth shot	Digits, 0-100, -1=missing, -2=not administered
52-54	I3	Event 3 - fifth shot	Digits, 0-100, -1=missing, -2=not administered

Table 18 (Cont'd)

56-58	I3	Event 3 - sixth shot	Digits, 0-100, -1=missing, -2=not administered
60-62	I3	Event 3 - seventh shot	Digits, 0-100, -1=missing, -2=not administered
64-66	I3	Event 3 - eighth shot	Digits, 0-100, -1=missing, -2=not administered
68-70	I3	Event 3 - ninth shot	Digits, 0-100, -1=missing, -2=not administered
72-74	I3	Event 3 - tenth shot	Digits, 0-100, -1=missing, -2=not administered
76-79	I4	Event 3 - total	Digits, 0-1000, -1=missing, -2=not administered
Line Number 06 - Event 4 and 5 Data			
Note: Event 4 consists of the following 10 event shots and total score.			
Columns	Format	Description	Valid Ranges, Values
01-03	I3	Event 4 - first shot	Digits, 0-100, -1=missing, -2=not administered
05-07	I3	Event 4 - second shot	Digits, 0-100, -1=missing, -2=not administered
09-11	I3	Event 4 - third shot	Digits, 0-100, -1=missing, -2=not administered
13-15	I3	Event 4 - fourth shot	Digits, 0-100, -1=missing, -2=not administered
17-19	I3	Event 4 - fifth shot	Digits, 0-100, -1=missing, -2=not administered

Table 18 (Cont'd)

21-23	I3	Event 4 - sixth shot	Digits, 0-100, -1=missing, -2=not administered
25-27	I3	Event 4 - seventh shot	Digits, 0-100, -1=missing, -2=not administered
29-31	I3	Event 4 - eighth shot	Digits, 0-100, -1=missing, -2=not administered
33-35	I3	Event 4 - ninth shot	Digits, 0-100, -1=missing, -2=not administered
37-39	I3	Event 4 - tenth shot	Digits, 0-100, -1=missing, -2=not administered
41-44	I4	Event 4 - total	Digits, 0-1000, -1=missing, -2=not administered
Note: Event 5 consists of the following 10 event shots and total score.			
46-48	I3	Event 5 - first shot	Digits, 0-100, -1=missing, -2=not administered
50-52	I3	Event 5 - second shot	Digits, 0-100, -1=missing, -2=not administered
54-56	I3	Event 5 - third shot	Digits, 0-100, -1=missing, -2=not administered
58-60	I3	Event 5 - fourth shot	Digits, 0-100, -1=missing, -2=not administered
62-64	I3	Event 5 - fifth shot	Digits, 0-100, -1=missing, -2=not administered
66-68	I3	Event 5 - sixth shot	Digits, 0-100, -1=missing, -2=not administered

Table 18 (Cont'd)

70-72	I3	Event 5 - seventh shot	Digits, 0-100, -1=missing, -2=not administered
74-76	I3	Event 5 - eighth shot	Digits, 0-100, -1=missing, -2=not administered
78-80	I3	Event 5 - ninth shot	Digits, 0-100, -1=missing, -2=not administered
Line Number 07 - Event 5 Data (continued) and Event 6 and 7 Data			
Columns	Format	Description	Valid Ranges, Values
01-03	I3	Event 5 - tenth shot	Digits, 0-100, -1=missing, -2=not administered
05-08	I4	Event 5 - total	Digits, 0-1000, -1=missing, -2=not administered
Note: Event 6 consists of the following 10 event shots and total score.			
10-12	I3	Event 6 - first shot	Digits, 0-100, -1=missing, -2=not administered
14-16	I3	Event 6 - second shot	Digits, 0-100, -1=missing, -2=not administered
18-20	I3	Event 6 - third shot	Digits, 0-100, -1=missing, -2=not administered
22-24	I3	Event 6 - fourth shot	Digits, 0-100, -1=missing, -2=not administered
26-28	I3	Event 6 - fifth shot	Digits, 0-100, -1=missing, -2=not administered
30-32	I3	Event 6 - sixth shot	Digits, 0-100, -1=missing, -2=not administered

Table 18 (Cont'd)

34-36	I3	Event 6 - seventh shot	Digits, 0-100, -1=missing, -2=not administered
38-40	I3	Event 6 - eighth shot	Digits, 0-100, -1=missing, -2=not administered
42-44	I3	Event 6 - ninth shot	Digits, 0-100, -1=missing, -2=not administered
46-48	I3	Event 6 - tenth shot	Digits, 0-100, -1=missing, -2=not administered
50-53	I4	Event 6 - total	Digits, 0-1000, -1=missing, -2=not administered
Note: Event 7 consists of the following 10 event shots and total score.			
55-57	I3	Event 7 - first shot	Digits, 0-100, -1=missing, -2=not administered
59-61	I3	Event 7 - second shot	Digits, 0-100, -1=missing, -2=not administered
63-65	I3	Event 7 - third shot	Digits, 0-100, -1=missing, -2=not administered
67-69	I3	Event 7 - fourth shot	Digits, 0-100, -1=missing, -2=not administered
71-73	I3	Event 7 - fifth shot	Digits, 0-100, -1=missing, -2=not administered
75-77	I3	Event 7 - sixth shot	Digits, 0-100, -1=missing, -2=not administered

Table 18 (Cont'd)

Line Number 08 - Event 7 Data (continued), Event 8 Data, Training Indication Variable, ITV Qualification Score, and ITV TO Performance Measures			
Columns	Format	Description	Valid Ranges, Values
01-03	I3	Event 7 - seventh shot	Digits, 0-100, -1=missing, -2=not administered
05-07	I3	Event 7 - eighth shot	Digits, 0-100, -1=missing, -2=not administered
09-11	I3	Event 7 - ninth shot	Digits, 0-100, -1=missing, -2=not administered
13-15	I3	Event 7 - tenth shot	Digits, 0-100, -1=missing, -2=not administered
17-20	I4	Event 7 - total	Digits, 0-1000, -1=missing, -2=not administered
Note: Event 8 consists of the following 10 event shots and total score.			
22-24	I3	Event 8 - first shot	Digits, 0-100, -1=missing, -2=not administered
26-28	I3	Event 8 - second shot	Digits, 0-100, -1=missing, -2=not administered
30-32	I3	Event 8 - third shot	Digits, 0-100, -1=missing, -2=not administered
34-36	I3	Event 8 - fourth shot	Digits, 0-100, -1=missing, -2=not administered
38-40	I3	Event 8 - fifth shot	Digits, 0-100, -1=missing, -2=not administered

Table 18 (Cont'd)

42-44	I3	Event 8 - sixth shot	Digits, 0-100, -1=missing, -2=not administered
46-48	I3	Event 8 - seventh shot	Digits, 0-100, -1=missing, -2=not administered
50-52	I3	Event 8 - eighth shot	Digits, 0-100, -1=missing, -2=not administered
54-56	I3	Event 8 - ninth shot	Digits, 0-100, -1=missing, -2=not administered
58-60	I3	Event 8 - tenth shot	Digits, 0-100, -1=missing, -2=not administered
62-65	I4	Event 8 - total	Digits, 0-1000, -1=missing, -2=not administered
Note: After completing TOW 2 system training, students attend either HMMWV or ITV training school. The training indication variable identifies which school the student attended. Most often, the qualification score for ITV or HMMWV training reflects the sum of ten shots on the student's final event. However, RGI found cases where the qualification score does not reflect the student's final event score or the highest score. Each ITV training objective consists of several performance measures.			
67-68	I2	Training indication variable	Digits, 1=HMMWV, 2=ITV, -1=missing
70-73	I4	ITV Qualification score	Digits, 1-1000, -1=missing, -2=not administered
75-76	I2	M243 Smoke Grenade Launcher: Load	Digits, 0-2, -1=missing, -2=not administered
78-79	I2	M243 Smoke Grenade Launcher: Arm	Digits, 0-2, -1=missing, -2=not administered
Line Number 09 - ITV TO Performance Measures (continued)			

Table 18 (Cont'd)

Columns	Format	Description	Valid Ranges, Values
01-02	I2	M243 Smoke Grenade Launcher: Fire	Digits, 0-2, -1=missing, -2=not administered
04-05	I2	M243 Smoke Grenade Launcher: Unload	Digits, 0-2, -1=missing, -2=not administered
07-08	I2	M60 Machine gun: Mount	Digits, 0-2, -1=missing, -2=not administered
10-11	I2	M60 Machine gun: Stow	Digits, 0-2, -1=missing, -2=not administered
13-14	I2	M60 Machine gun: Dismount	Digits, 0-2, -1=missing, -2=not administered
16-17	I2	Crew Drill: SQD Leader	Digits, 0-2, -1=missing, -2=not administered
19-20	I2	Crew Drill: Gunner	Digits, 0-2, -1=missing, -2=not administered
22-23	I2	Crew Drill: Loader	Digits, 0-2, -1=missing, -2=not administered
25-26	I2	Crew Drill: Driver	Digits, 0-2, -1=missing, -2=not administered
28-29	I2	Dismounting and Assembly the M220A1: SQD Leader	Digits, 0-2, -1=missing, -2=not administered
31-32	I2	Dismounting and Assembly the M220A1: Gunner	Digits, 0-2, -1=missing, -2=not administered
34-35	I2	Dismounting and Assembly the M220A1: Loader	Digits, 0-2, -1=missing, -2=not administered
37-38	I2	Dismounting and Assembly the M220A1: Driver	Digits, 0-2, -1=missing, -2=not administered
40-41	I2	Intercom Equipment: Receive Message	Digits, 0-2, -1=missing, -2=not administered
43-44	I2	Intercom Equipment: Transmit Message	Digits, 0-2, -1=missing, -2=not administered
46-47	I2	Turret Operation: SQD Leader	Digits, 0-2, -1=missing, -2=not administered
49-50	I2	Turret operation: Gunner	Digits, 0-2, -1=missing, -2=not administered
52-53	I2	Turret operation: Loader	Digits, 0-2, -1=missing, -2=not administered

Table 18 (Cont'd)

55-56	I2	Turret operation: Driver	Digits, 0-2, -1=missing, -2=not administered
58-59	I2	Troubleshooting: SQD Leader	Digits, 0-2, -1=missing, -2=not administered
61-62	I2	Troubleshooting: Gunner	Digits, 0-2, -1=missing, -2=not administered
64-65	I2	Troubleshooting: Loader	Digits, 0-2, -1=missing, -2=not administered
67-68	I2	Troubleshooting: Driver	Digits, 0-2, -1=missing, -2=not administered
70-71	I2	Reload Dual Launcher: Gunner	Digits, 0-2, -1=missing, -2=not administered
73-74	I2	Reload Dual Launcher: Loader	Digits, 0-2, -1=missing, -2=not administered
76-77	I2	Immediate Action: SQD Leader	Digits, 0-2, -1=missing, -2=not administered
79-80	I2	Immediate Action: Gunner	Digits, 0-2, -1=missing, -2=not administered
Line Number 10 - ITV TO Performance Measures (continued), HMMWV Qualification Score, and HMMWV TO Performance Measures			
Columns	Format	Description	Valid Ranges, Values
01-02	I2	Immediate Action: Loader	Digits, 0-2, -1=missing, -2=not administered
04-05	I2	Immediate Action: Driver	Digits, 0-2, -1=missing, -2=not administered
07-08	I2	React to Fire Commands: SQD Leader	Digits, 0-2, -1=missing, -2=not administered
10-11	I2	React to Fire Commands: Gunner	Digits, 0-2, -1=missing, -2=not administered
13-14	I2	Determine Target Engageability: SQD Leader	Digits, 0-2, -1=missing, -2=not administered
16-17	I2	Determine Target Engageability: Gunner	Digits, 0-2, -1=missing, -2=not administered
19-20	I2	Emergency Action Procedures: SQD Leader	Digits, 0-2, -1=missing, -2=not administered

Table 18 (Cont'd)

22-23	I2	Emergency Action Procedures: Gunner	Digits, 0-2, -1=missing, -2=not administered
25-26	I2	Emergency Action Procedures: Loader	Digits, 0-2, -1=missing, -2=not administered
28-29	I2	Manual Acquisition and Tracking: SQD Leader	Digits, 0-2, -1=missing, -2=not administered
31-32	I2	Manual Acquisition and Tracking: Gunner	Digits, 0-2, -1=missing, -2=not administered
34-35	I2	Manual Acquisition and Tracking: Loader	Digits, 0-2, -1=missing, -2=not administered
37-38	I2	Engage Targets: Gunner	Digits, 0-2, -1=missing, -2=not administered
Note: Some of the following HMMWV TOs consist of several performance measures.			
40-43	I4	HMMWV Qualification score	Digits, 0-1000, -1=missing -2=not administered
45-46	I2	Stow BII on HMMWV	Digits, 0-3, -1=missing, -2=not administered
48-49	I2	Conduct PMCS on HMMWV	Digits, 0-3, -1=missing, -2=not administered
51-52	I2	Install and Stow the M220A1	Digits, 0-3, -1=missing, -2=not administered
54-55	I2	Destruction of the HMMWV	Digits, 0-3, -1=missing, -2=not administered
57-58	I2	Prepare the M966: SQD Leader	Digits, 0-3, -1=missing, -2=not administered
60-61	I2	Prepare the M966: Gunner	Digits, 0-3, -1=missing, -2=not administered
63-64	I2	Prepare the M966: Loader/Dr	Digits, 0-3, -1=missing, -2=not administered
66-67	I2	Load, Arm, Unload: Gunner	Digits, 0-3, -1=missing, -2=not administered
69-70	I2	Load, Arm, Unload: Loader/Dr	Digits, 0-3, -1=missing, -2=not administered
72-73	I2	Reload: Gunner	Digits, 0-3, -1=missing, -2=not administered

Table 18 (Cont'd)

75-76	I2	Reload: Loader/Dr	Digits, 0-3, -1=missing, -2=not administered
78-79	I2	Immediate Action: SQD Leader	Digits, 0-3, -1=missing, -2=not administered
Line Number 11 - HMMWV Training Objectives and Performance Measures (continued) and ITV or HMMWV Event 1 Data			
Columns	Format	Description	Valid Ranges, Values
01-02	I2	Immediate Action: Gunner	Digits, 0-3, -1=missing, -2=not administered
04-05	I2	Immediate Action: Loader	Digits, 0-3, -1=missing, -2=not administered
07-08	I2	Immediate Action: Driver	Digits, 0-3, -1=missing, -2=not administered
10-11	I2	React to Fire Command: SQD Leader	Digits, 0-3, -1=missing, -2=not administered
13-14	I2	React to Fire Command: Gunner	Digits, 0-3, -1=missing, -2=not administered
16-17	I2	React to Fire Command: Loader/Dr	Digits, 0-3, -1=missing, -2=not administered
19-20	I2	Dismount and Assemble the M220A2: SQD Leader	Digits, 0-3, -1=missing, -2=not administered
22-23	I2	Dismount and Assemble the M220A2: Gunner	Digits, 0-3, -1=missing, -2=not administered
25-26	I2	Dismount and Assemble the M220A2: Loader/Dr	Digits, 0-3, -1=missing, -2=not administered
28-29	I2	Installing: SQD Leader	Digits, 0-3, -1=missing, -2=not administered
31-32	I2	Installing: Gunner	Digits, 0-3, -1=missing, -2=not administered
34-35	I2	Installing: Loader/Dr	Digits, 0-3, -1=missing, -2=not administered
37-38	I2	Recognize Friendly and Threat Vehicles	Digits, 0-3, -1=missing, -2=not administered

Table 18 (Cont'd)

Note: The following event data represent TOW simulator tracking scores for HMMWV and ITV schools. Students perform up to 3 events for HMMWV and up to 5 events for ITV. (To determine whether these data represent HMMWV or ITV events, researchers should refer to the Training Indication Variable on line number 8, column number 67.) The HMMWV events are M966 TOW Tracking Performance events. The ITV events are ITV Tracking Performance events. RGI entered event totals as they appeared on the scorecard. Researchers who calculate totals may find different totals. Finally, school instructors stated that students frequently practiced more than what is documented on the scorecard.

40-42	I3	Event 1 - first shot	Digits, 0-100, -1=missing, -2=not administered
44-46	I3	Event 1 - second shot	Digits, 0-100, -1=missing, -2=not administered
48-50	I3	Event 1 - third shot	Digits, 0-100, -1=missing, -2=not administered
52-54	I3	Event 1 - fourth shot	Digits, 0-100, -1=missing, -2=not administered
56-58	I3	Event 1 - fifth shot	Digits, 0-100, -1=missing, -2=not administered
60-62	I3	Event 1 - sixth shot	Digits, 0-100, -1=missing, -2=not administered
64-66	I3	Event 1 - seventh shot	Digits, 0-100, -1=missing, -2=not administered
68-70	I3	Event 1 - eighth shot	Digits, 0-100, -1=missing, -2=not administered
72-74	I3	Event 1 - ninth shot	Digits, 0-100, -1=missing, -2=not administered
76-78	I3	Event 1 - tenth shot	Digits, 0-100, -1=missing, -2=not administered

Table 18 (Cont'd)

Line Number 12 - ITV or HMMWV Event 2 Data, Event 3 Data			
Note: Event 2 consists of the following 10 event shots and total score.			
Columns	Format	Description	Valid Ranges, Values
01-04	I4	Event 1 - total	Digits, 0-1000, -1=missing, -2=not administered
06-08	I3	Event 2 - first shot	Digits, 0-100, -1=missing, -2=not administered
10-12	I3	Event 2 - second shot	Digits, 0-100, -1=missing, -2=not administered
14-16	I3	Event 2 - third shot	Digits, 0-100, -1=missing, -2=not administered
18-20	I3	Event 2 - fourth shot	Digits, 0-100, -1=missing, -2=not administered
22-24	I3	Event 2 - fifth shot	Digits, 0-100, -1=missing, -2=not administered
26-28	I3	Event 2 - sixth shot	Digits, 0-100, -1=missing, -2=not administered
30-32	I3	Event 2 - seventh shot	Digits, 0-100, -1=missing, -2=not administered
34-36	I3	Event 2 - eighth shot	Digits, 0-100, -1=missing, -2=not administered
38-40	I3	Event 2 - ninth shot	Digits, 0-100, -1=missing, -2=not administered
42-44	I3	Event 2 - tenth shot	Digits, 0-100, -1=missing, -2=not administered

Table 18 (Cont'd)

46-49	I4	Event 2 - total	Digits, 0-1000, -1=missing, -2=not administered
Note: Event 3 consists of the following 10 event shots and total score.			
51-53	I3	Event 3 - first shot	Digits, 0-100, -1=missing, -2=not administered
55-57	I3	Event 3 - second shot	Digits, 0-100, -1=missing, -2=not administered
59-61	I3	Event 3 - third shot	Digits, 0-100, -1=missing, -2=not administered
63-65	I3	Event 3 - fourth shot	Digits, 0-100, -1=missing, -2=not administered
67-69	I3	Event 3 - fifth shot	Digits, 0-100, -1=missing, -2=not administered
71-73	I3	Event 3 - sixth shot	Digits, 0-100, -1=missing, -2=not administered
75-77	I3	Event 3 - seventh shot	Digits, 0-100, -1=missing, -2=not administered
Line Number 13 - Event 3 Data (continued) and Event 4 and 5 Data			
Columns	Format	Description	Valid Ranges, Values
01-03	I3	Event 3 - eighth shot	Digits, 0-100, -1=missing, -2=not administered
05-07	I3	Event 3 - ninth shot	Digits, 0-100, -1=missing, -2=not administered
09-11	I3	Event 3 - tenth shot	Digits, 0-100, -1=missing, -2=not administered

Table 18 (Cont'd)

13-16	I4	Event 3 - total	Digits, 0-1000, -1=missing, -2=not administered
Note: Event 4 consists of the following 10 event shots and total score.			
18-20	I3	Event 4 - first shot	Digits, 0-100, -1=missing, -2=not administered
22-24	I3	Event 4 - second shot	Digits, 0-100, -1=missing, -2=not administered
26-28	I3	Event 4 - third shot	Digits, 0-100, -1=missing, -2=not administered
30-32	I3	Event 4 - fourth shot	Digits, 0-100, -1=missing, -2=not administered
34-36	I3	Event 4 - fifth shot	Digits, 0-100, -1=missing, -2=not administered
38-40	I3	Event 4 - sixth shot	Digits, 0-100, -1=missing, -2=not administered
42-44	I3	Event 4 - seventh shot	Digits, 0-100, -1=missing, -2=not administered
46-48	I3	Event 4 - eighth shot	Digits, 0-100, -1=missing, -2=not administered
50-52	I3	Event 4 - ninth shot	Digits, 0-100, -1=missing, -2=not administered
54-56	I3	Event 4 - tenth shot	Digits, 0-100, -1=missing, -2=not administered
58-61	I4	Event 4 - total	Digits, 0-1000, -1=missing, -2=not administered

Table 18 (Cont'd)

Note: Event 5 consists of the following 10 event shots and total score.			
63-65	I3	Event 5 - first shot	Digits, 0-100, -1=missing, -2=not administered
67-69	I3	Event 5 - second shot	Digits, 0-100, -1=missing, -2=not administered
71-73	I3	Event 5 - third shot	Digits, 0-100, -1=missing, -2=not administered
75-77	I3	Event 5 - fourth shot	Digits, 0-100, -1=missing, -2=not administered
Line Number 14 - Event 5 Data (continued)			
Columns	Format	Description	Valid Ranges, Values
01-03	I3	Event 5 - fifth shot	Digits, 0-100, -1=missing, -2=not administered
05-07	I3	Event 5 - sixth shot	Digits, 0-100, -1=missing, -2=not administered
09-11	I3	Event 5 - seventh shot	Digits, 0-100, -1=missing, -2=not administered
13-15	I3	Event 5 - eighth shot	Digits, 0-100, -1=missing, -2=not administered
17-19	I3	Event 5 - ninth shot	Digits, 0-100, -1=missing, -2=not administered
21-23	I3	Event 5 - tenth shot	Digits, 0-100, -1=missing, -2=not administered
25-28	I4	Event 5 - total	Digits, 0-1000, -1=missing, -2=not administered

Table 19

Tank Crewman (19K)

Line Number 01 - Personal and Class Data and Performance Test Scores

Note: RGI received student data that included an Armor Stakes score sheet and score sheets for three training modules or GATEs. Due to the inconsistency of the GATE sheets and the numerous GATE versions, both between and within classes, we only entered data from the Armor Stakes score sheet.

The Armor Stakes is an end-of-course, comprehensive exam that includes tasks from GATEs I, II and III. The school divides the Armor Stakes test into five separate stations. The five Armor Stakes versions we received differed in station order presentation and station content. In Version A, the school administers the Weapons/Communications station first and the Nuclear, Biological and Chemical Defence (NBC) station last. In Versions B, C, D and E the school administers the NBC station first and the Weapons/Communications station last. The school administers the Maintenance station, Land Nav/First Aid station, and Loader's Station (stations 2, 3 and 4, respectively) in the same order for all four versions of Armor Stakes. The content for all five stations differs only slightly between Versions A, B, C, D and E.

Order of Stations

Version A	Versions B, C, D & E
1. Weapons/Communications	1. NBC
2. Maintenance	2. Maintenance
3. Land Nav/First Aid	3. Land Nav/First Aid
4. Loader's Station	4. Loader's Station
5. NBC	5. Weapons/Communications

For all five Armor Stakes Versions, a station contains between four and nine tasks. The school allows a soldier two attempts to pass each task, assigning a "GO" or "NO-GO" accordingly. The soldiers need to pass 75% of the tasks administered within a station, otherwise they must retake that station. For each Armor Stakes task, we assigned a 1 for passing on the first attempt, a 2 for passing on the second attempt, and a 3 for failing a task.

Table 19 (Cont'd)

Throughout testing, the school administered Armor Stakes Versions A and B to different classes periodically. The school administered Armor Stakes Version C to a group of soldiers who completed GATE III on 04/07/91. The school did not indicate when these soldiers completed the Armor Stakes. In addition, the school administered Armor Stakes Version D to a group of soldiers on 05/28/91 and Version E to three soldiers on 05/25-05/26/91. The school indicated that their numerous revisions to the curricula accounted for the separate versions. See Appendix G for performance task location within each version.

All Armor Stakes tasks are performance tasks. The school records no Final School Grade (FSG) or measure of time spent in training.

Columns	Format	Description	Valid Ranges, Values
01-03	A3	School name	Alphanumeric (19k)
05-13	I9	Social security number	Digits
15-29	A15	Student name	Alphanumeric
31-32	I2	Student action code	1=Medical reason 2=Failed to qualify 3=Discharge 4=Unknown -1=missing See Appendix B.
34	A1	Armor Stakes Version	A=Weapons/Communications tasks administered first B=NBC tasks administered first C=Students administered GATE III on 04/07/91 D=Students administered Armor Stakes on 05/28/91 E=Students administered Armor Stakes on 05/25-05/26/91

Table 19 (Cont'd)

Note: The school administered Armor Stakes Version A, as shown in this layout, to the majority of soldiers. However, on some occasions, the school administered tasks 6, 7, and 8 from station 1 as tasks 4, 5, and 6, in station 4, respectively, and task 7 from station 4 as task 6 in station 1. The sub-version variable (ie. 1 or 2) indicates which task order the soldiers received. The school indicated that equipment availability, weather conditions and instructors discretion determine who received which tasks and their ordering. Armor Stakes Version A students completed the following tasks.			
36-37	I2	**Armor Stakes A sub-version**	Digits, 1=most prevalent, as shown in this layout 2=alternate administration order as described in note above -1=not applicable (Armor Stakes Versions B, C, D, or E)
39-40	I2	**Station 1- Weapons/Communications/ Task 1:** Maintain an M9 pistol	Digits, 1-3, -1=missing -2=not administered
42-43	I2	**Station 1- Weapons/Communications/ Task 2:** Load an M16A1 rifle	Digits, 1-3, -1=missing -2=not administered
45-46	I2	**Station 1- Weapons/Communications/ Task 3:** Unload an M16A1 rifle	Digits, 1-3, -1=missing -2=not administered
48-49	I2	**Station 1- Weapons/Communications/ Task 4:** Correct malfunctions of an M16A1 rifle	Digits, 1-3, -1=missing -2=not administered
51-52	I2	**Station 1- Weapons/Communications/ Task 5:** Recognize friendly and threat vehicles and aircraft	Digits, 1-3, -1=missing -2=not administered

Table 19 (Cont'd)

54-55	I2	**Station 1-Weapons/Communications/ Task 6:** Prepare/operate FM radio set	Digits, 1-3, -1=missing -2=not administered
57-58	I2	**Station 1-Weapons/Communications/ Task 7:** Operate intercommunication set AN/VIC-1 on a tracked vehicle	Digits, 1-3, -1=missing -2=not administered
60-61	I2	**Station 1-Weapons/Communications/ Task 8:** Send a radio message	Digits, 1-3, -1=missing -2=not administered
63-64	I2	**Station 2-Maintenance/ Task 1:** Extinguish a fire on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered
66-67	I2	**Station 2-Maintenance/ Task 2:** Vehicle maintenance (171-126-1012) Troubleshoot the M1/M1A1 tank using drivers control panel warning and caution lights	Digits, 1-3, -1=missing -2=not administered
69-70	I2	**Station 2-Maintenance/ Task 3:** Vehicle maintenance (171-126-1017) Perform before-operations checks and services on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered
72-73	I2	**Station 2-Maintenance/ Task 4:** Vehicle maintenance (171-126-1018) Perform during-operations checks and services on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered

Table 19 (Cont'd)

75-76	I2	**Station 2-Maintenance/ Task 5:** Vehicle maintenance (171-126-1019) Perform after-operations checks and services on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered
78-79	I2	**Station 2-Maintenance/ Task 6:** Maintain operator's part of equipment record folder	Digits, 1-3, -1=missing -2=not administered
Line Number 02 - Performance Test Scores for Armor Stakes Versions A & B			
Columns	Format	Description	Valid Ranges, Values
01-02	I2	**Station 3-Land Nav/First Aid/Task 1:** Identify terrain features on a map	Digits, 1-3, -1=missing -2=not administered
04-05	I2	**Station 3-Land Nav/First Aid/Task 2:** Determine the grid coordinates of a point on a military map using the military grid reference system	Digits, 1-3, -1=missing -2=not administered
07-08	I2	**Station 3-Land Nav/First Aid/Task 3:** Splint a suspected fracture	Digits, 1-3, -1=missing -2=not administered
10-11	I2	**Station 3-Land Nav/First Aid/Task 4:** Put on a field or pressure dressing	Digits, 1-3, -1=missing -2=not administered
13-14	I2	**Station 4-Loader's Station/Task 1:** Prepare loader's station for operation on an M1/M1A1 tank (171-126-1023)	Digits, 1-3, -1=missing -2=not administered

Table 19 (Cont'd)

16-17	I2	**Station 4-Loader's Station/Task 2:** Prepare loader's station for operation on an M1/M1A1 tank (171-122-1017) Install/remove an M240 loader's machine gun on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered
19-20	I2	**Station 4-Loader's Station/Task 3:** Clear and load an M240 machine gun	Digits, 1-3, -1=missing -2=not administered
22-23	I2	**Station 4-Loader's Station/Task 4:** Load and unload the 105mm main gun on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered
25-26	I2	**Station 4-Loader's Station/Task 5:** Secure loader's station on an M1/M1A1 tank (171-126-1024)	Digits, 1-3, -1=missing -2=not administered
28-29	I2	**Station 4-Loader's Station/Task 6:** Secure loader's station on an M1/M1A1 tank (171-122-1017) Install/remove an M240 loader's machine gun on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered
31-32	I2	**Station 4-Loader's Station/Task 7:** Clear a .50 cal M2 HB machine gun to prevent accidental discharge	Digits, 1-3, -1=missing -2=not administered
34-35	I2	**Station 4-Loader's Station/Task 8:** Inspect 120mm ammunition for serviceability	Digits, 1-3, -1=missing -2=not administered
37-38	I2	**Station 5-NBC/Task 1:** Put on, wear, remove and store an M25A1 protective mask with hood	Digits, 1-3, -1=missing -2=not administered

Table 19 (Cont'd)

40-41	I2	**Station 5-NBC/Task 2:** Recognize and react to chemical or biological hazard	Digits, 1-3, -1=missing -2=not administered
43-44	I2	**Station 5-NBC/Task 3:** React to nuclear hazard	Digits, 1-3, -1=missing -2=not administered
46-47	I2	**Station 5-NBC/Task 4:** Decontaminate your skin and personal equipment	Digits, 1-3, -1=missing -2=not administered
Note: The school administers either tasks 5 and 6 or 7 and 8 from station 5 to the soldiers. However, the school periodically administers all four tasks to the soldiers. The school indicated that equipment availability, weather conditions and instructor's discretion determine who received which tasks.			
49-50	I2	**Station 5-NBC/Task 5:** Administer nerve agent antidote to self (self-aid)	Digits, 1-3, -1=missing -2=not administered
52-53	I2	**Station 5-NBC/Task 6:** Use M8 detector paper to detect chemical agent	Digits, 1-3, -1=missing -2=not administered
55-56	I2	**Station 5-NBC/Task 7:** Administer first aid to a nerve agent casualty (buddy-aid)	Digits, 1-3, -1=missing -2=not administered
58-59	I2	**Station 5-NBC/Task 8:** Use M9 detector paper to detect chemical agent	Digits, 1-3, -1=missing -2=not administered
Note: Armor Stakes Version B students completed the following tasks.			
61-62	I2	**Station 1-NBC/Task 1:** Put on, wear, remove, and store your M25, M25A1 protective mask with hood	Digits, 1-3, -1=missing -2=not administered
64-65	I2	**Station 1-NBC/Task 2:** Recognize and react to chemical or biological hazard	Digits, 1-3, -1=missing -2=not administered
67-68	I2	**Station 1-NBC/Task 3:** React to nuclear hazard	Digits, 1-3, -1=missing -2=not administered

Table 19 (Cont'd)

70-71	I2	**Station 1-NBC/Task 4:** Decontaminate your skin and personal equipment	Digits, 1-3, -1=missing -2=not administered
Note: The school administers either tasks 5 and 6 or tasks 7 and 8 from station 1 to most of the soldiers. However, the school periodically administers all four tasks to the soldiers. The school indicated that equipment availability, weather conditions and instructor's discretion determine who receives which tasks.			
73-74	I2	**Station 1-NBC/Task 5:** Administer nerve agent antidote to self (self-aid)	Digits, 1-3, -1=missing -2=not administered
76-77	I2	**Station 1-NBC/Task 6:** Use M-8 detection paper to ID chemical agents	Digits, 1-3, -1=missing -2=not administered
79-80	I2	**Station 1-NBC/Task 7:** Administer first aid to a nerve agent casualty (buddy-aid)	Digits, 1-3, -1=missing -2=not administered
Line Number 03 - Performance Test Scores for Armor Stakes Version B & C			
Columns	Format	Description	Valid Ranges, Values
01-02	I2	**Station 1-NBC/Task 8:** Use M-9 detection paper to ID chemical agents	Digits, 1-3, -1=missing -2=not administered
04-05	I2	**Station 2-Maintenance/ Task 1:** Extinguish a fire on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered
07-08	I2	**Station 2-Maintenance/ Task 2:** Troubleshoot the M1/M1A1 tank using drivers instrument control panel, warning and caution lights	Digits, 1-3, -1=missing -2=not administered

Table 19 (Cont'd)

10-11	I2	**Station 2-Maintenance/ Task 3:** Perform before-operations checks and services on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered
13-14	I2	**Station 2-Maintenance/ Task 4:** Perform during-operations checks and service on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered
16-17	I2	**Station 2-Maintenance/ Task 5:** Perform after-operations checks and service on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered
19-20	I2	**Station 2-Maintenance/ Task 6:** Maintain operators part of equipment record folder	Digits, 1-3, -1=missing -2=not administered
22-23	I2	**Station 3-Land Nav/First Aid/Task 1:** ID terrain features on a map	Digits, 1-3, -1=missing -2=not administered
25-26	I2	**Station 3-Land Nav/First Aid/Task 2:** Determine grid coordinates	Digits, 1-3, -1=missing -2=not administered
Note: The school administered task 3 to some soldiers, in addition to tasks 1, 2, 4, and 5 from station 3. The school indicated that equipment availability, weather conditions and instructor's discretion determine who receives which tasks.			
28-29	I2	**Station 3-Land Nav/First Aid/Task 3:** Estimate range	Digits, 1-3, -1=missing -2=not administered
31-32	I2	**Station 3-Land Nav/First Aid/Task 4:** Splint a suspected fracture	Digits, 1-3, -1=missing -2=not administered
34-35	I2	**Station 3-Land Nav/First Aid/Task 5:** Put on a field pressure dressing	Digits, 1-3, -1=missing -2=not administered

Table 19 (Cont'd)

37-38	I2	**Station 4-Loader's Station/Task 1:** Inspect 120mm ammunition for serviceability	Digits, 1-3, -1=missing -2=not administered
40-41	I2	**Station 4-Loader's Station/Task 2:** Prepare loader's station for operations on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered
43-44	I2	**Station 4-Loader's Station/Task 3:** Install and remove loader's M240 machine gun on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered
46-47	I2	**Station 4-Loader's Station/Task 4:** Clear and load an M240 machine gun	Digits, 1-3, -1=missing -2=not administered
49-50	I2	**Station 4-Loader's Station/Task 5:** Load and unload the 105mm main gun on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered
52-53	I2	**Station 4-Loader's Station/Task 6:** Secure loader's station on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered
Note: The school administered task 7 from station 4 to most soldiers. The school indicated that equipment availability, weather conditions and instructor's discretion determine who receives which tasks.			
55-56	I2	**Station 4-Loader's Station/Task 7:** Install and remove loader's M240 machine gun on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered
58-59	I2	**Station 4-Loader's Station/Task 8:** Clear a .50 cal M2 HB machine gun	Digits, 1-3, -1=missing -2=not administered

Table 19 (Cont'd)

61-62	I2	**Station 5-Weapons/Communications/ Task 1:** Maintain an M9 pistol	Digits, 1-3, -1=missing -2=not administered
64-65	I2	**Station 5-Weapons/Communications/ Task 2:** Load, reduce stoppage and clear an M16A1/A2 rifle	Digits, 1-3, -1=missing -2=not administered
67-68	I2	**Station 5-Weapons/Communications/ Task 3:** Recognize friendly and threat armored vehicle and aircraft	Digits, 1-3, -1=missing -2=not administered
70-71	I2	**Station 5-Weapons/Communications/ Task 4:** Prepare/operate FM radio set	Digits, 1-3, -1=missing -2=not administered
73-74	I2	**Station 5-Weapons/Communications/ Task 5:** Operate intercom set AN/VRC-1 on a tracked vehicle	Digits, 1-3, -1=missing -2=not administered
76-77	I2	**Station 5-Weapons/Communications/ Task 6:** Send a radio message	Digits, 1-3, -1=missing -2=not administered
Note: Armor Stakes Version C students completed the following tasks.			
79-80	I2	**Station 1-NBC/Task 1:** Put on, wear, remove and store M25 protective mask with hood	Digits, 1-3, -1=missing -2=not administered

Table 19 (Cont'd)

Line Number 04 - Performance Test Scores for Armor Stakes Version C			
Columns	Format	Description	Valid Ranges, Values
01-02	I2	**Station 1-NBC/Task 2:** Recognize and react to chemical or biological hazard	Digits, 1-3, -1=missing -2=not administered
04-05	I2	**Station 1-NBC/Task 3:** React to a nuclear hazard	Digits, 1-3, -1=missing -2=not administered-
07-08	I2	**Station 1-NBC/Task 4:** Decontaminate your skin and personal equipment	Digits, 1-3, -1=missing -2=not administered
10-11	I2	**Station 1-NBC/Task 5:** Use M-8 detector paper to ID chemical agent	Digits, 1-3, -1=missing -2=not administered
13-14	I2	**Station 1-NBC/Task 6:** Administer nerve agent antidote to self (self-aid)	Digits, 1-3, -1=missing -2=not administered
16-17	I2	**Station 1-NBC/Task 7:** Administer first aid to a nerve agent casualty (buddy-aid)	Digits, 1-3, -1=missing -2=not administered
19-20	I2	**Station 1-NBC/Task 8:** Use M9 paper to detect chemical agent	Digits, 1-3, -1=missing -2=not administered
22-23	I2	**Station 2-Maintenance/ Task 1:** Extinguish a fire on an M1/M1A1 series tank	Digits, 1-3, -1=missing -2=not administered
25-26	I2	**Station 2-Maintenance/ Task 2:** Troubleshoot the M1/M1A1 tank using drivers instrument control panel warning and caution lights	Digits, 1-3, -1=missing -2=not administered

Table 19 (Cont'd)

28-29	I2	**Station 2-Maintenance/ Task 3:** Perform before-operations checks and services on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered
31-32	I2	**Station 2-Maintenance/ Task 4:** Perform during-operations checks and services on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered
34-35	I2	**Station 2-Maintenance/ Task 5:** Perform after-operations checks and services on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered
37-38	I2	**Station 2-Maintenance/ Task 6:** Maintain operators part of equipment record folder	Digits, 1-3, -1=missing -2=not administered
40-41	I2	**Station 3-Land Nav/First Aid/Task 1:** Identify terrain features on a map	Digits, 1-3, -1=missing -2=not administered
43-44	I2	**Station 3-Land Nav/First Aid/Task 2:** Determine the grid coordinates	Digits, 1-3, -1=missing -2=not administered
46-47	I2	**Station 3-Land Nav/First Aid/Task 3:** Splint a suspected fracture	Digits, 1-3, -1=missing -2=not administered
49-50	I2	**Station 3-Land Nav/First Aid/Task 4:** Put on a field or pressure dressing	Digits, 1-3, -1=missing -2=not administered
52-53	I2	**Station 4-Loader's Station/Task 1:** Prepare loader's station for operations	Digits, 1-3, -1=missing -2=not administered

Table 19 (Cont'd)

55-56	I2	**Station 4-Loader's Station/Task 2:** Install/remove loader's M240 machine gun	Digits, 1-3, -1=missing -2=not administered
58-59	I2	**Station 4-Loader's Station/Task 3:** Clear/load M240 machine gun	Digits, 1-3, -1=missing -2=not administered
61-62	I2	**Station 4-Loader's Station/Task 4:** Load/unload 105mm main gun	Digits, 1-3, -1=missing -2=not administered
64-65	I2	**Station 4-Loader's Station/Task 5:** Secure loader's station	Digits, 1-3, -1=missing -2=not administered
67-68	I2	**Station 4-Loader's Station/Task 6:** Inspect 120mm ammunition	Digits, 1-3, -1=missing -2=not administered
70-71	I2	**Station 4-Loader's Station/Task 7:** Clear M2 HB machine gun	Digits, 1-3, -1=missing -2=not administered
73-74	I2	**Station 5-Weapons/Communications/ Task 1:** Maintain an M9 pistol	Digits, 1-3, -1=missing -2=not administered
76-77	I2	**Station 5-Weapons/Communications/ Task 2:** Unload and M16A1/M16A2 rifle	Digits, 1-3, -1=missing -2=not administered
79-80	I2	**Station 5-Weapons/Communications/ Task 3:** Recognize friendly and threat armored vehicles and aircraft	Digits, 1-3, -1=missing -2=not administered

Table 19 (Cont'd)

Line Number 05 - Performance Test Scores for Armor Stakes Versions C & D			
Columns	Format	Description	Valid Ranges, Values
01-02	I2	**Station 5-Weapons/Communications/ Task 4:** Prepare radio set AN/VRC-64 or AN/GRC-160 for operation	Digits, 1-3, -1=missing -2=not administered
04-05	I2	**Station 5-Weapons/Communications/ Task 5:** Operate radio set AN/VRC-64 or AN/GRC-160	Digits, 1-3, -1=missing -2=not administered
07-08	I2	**Station 5-Weapons/Communications/ Task 6:** Operate intercom set AN/VRC-1 on a tracked vehicle	Digits, 1-3, -1=missing -2=not administered
10-11	I2	**Station 5-Weapons/Communications/ Task 7:** Send a radio message	Digits, 1-3, -1=missing -2=not administered
Note: Armor Stakes Version D soldiers completed the following tasks.			
13-14	I2	**Station 1-NBC/Task 1:** Put on, wear, remove and store M25/M25A1	Digits, 1-3, -1=missing -2=not administered
16-17	I2	**Station 1-NBC/Task 2:** Recognize and react to chemical or biological hazard	Digits, 1-3, -1=missing -2=not administered
19-20	I2	**Station 1-NBC/Task 3:** React to a nuclear hazard	Digits, 1-3, -1=missing -2=not administered
22-23	I2	**Station 1-NBC/Task 4:** Decontaminate your skin and personal equipment	Digits, 1-3, -1=missing -2=not administered
25-26	I2	**Station 1-NBC/Task 5:** Administer nerve agent antidote to self (self-aid)	Digits, 1-3, -1=missing -2=not administered

Table 19 (Cont'd)

28-29	I2	**Station 1-NBC/Task 6:** Use M8 paper to identify chemical agent	Digits, 1-3, -1=missing -2=not administered
31-32	I2	**Station 1-NBC/Task 7:** Administer first aid to a nerve agent casualty (buddy-aid)	Digits, 1-3, -1=missing -2=not administered
34-35	I2	**Station 1-NBC/Task 8:** Use M9 paper to detect chemical agent	Digits, 1-3, -1=missing -2=not administered
37-38	I2	**Station 2-Maintenance/ Task 1:** Extinguish a fire on an M1/M1A1 series tank	Digits, 1-3, -1=missing -2=not administered
40-41	I2	**Station 2-Maintenance/ Task 2:** Perform before, during, and after-operation checks and services on an M1/M1A1 series tank	Digits, 1-3, -1=missing -2=not administered
43-44	I2	**Station 2-Maintenance/ Task 3:** Maintain operators part of equipment record folder	Digits, 1-3, -1=missing -2=not administered
46-47	I2	**Station 2-Maintenance/ Task 4:** Troubleshoot the M1/M1A1 tank using drivers control panel warning and caution lights	Digits, 1-3, -1=missing -2=not administered
49-50	I2	**Station 3-Land Nav/First Aid/Task 1:** Identify terrain features on a map	Digits, 1-3, -1=missing -2=not administered
52-53	I2	**Station 3-Land Nav/First Aid/Task 2:** Determine the grid coordinates of a point on a military map	Digits, 1-3, -1=missing -2=not administered

Table 19 (Cont'd)

55-56	I2	**Station 3-Land Nav/First Aid/Task 3:** Splint a suspected fracture	Digits, 1-3, -1=missing -2=not administered
58-59	I2	**Station 3-Land Nav/First Aid/Task 4:** Put on a field or pressure dressing	Digits, 1-3, -1=missing -2=not administered
61-62	I2	**Station 4-Loader's Station/Task 1:** Prepare/operate FM radio sets	Digits, 1-3, -1=missing -2=not administered
64-65	I2	**Station 4-Loader's Station/Task 2:** Send a radio message	Digits, 1-3, -1=missing -2=not administered
67-68	I2	**Station 4-Loader's Station/Task 3:** Prepare loader's station for operation on an M1/M1A1 series tank	Digits, 1-3, -1=missing -2=not administered
70-71	I2	**Station 4-Loader's Station/Task 4:** Clear and load an M240 machine gun	Digits, 1-3, -1=missing -2=not administered
73-74	I2	**Station 4-Loader's Station/Task 5:** Load/unload the 105mm main gun on an M1/M1A1 series tank	Digits, 1-3, -1=missing -2=not administered
76-77	I2	**Station 4-Loader's Station/Task 6:** Secure loader's station on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered
79-80	I2	**Station 4-Loader's Station/Task 7:** Inspect 120mm ammunition for serviceability	Digits, 1-3, -1=missing -2=not administered

Table 19 (Cont'd)

Line Number 06 - Performance Test Scores for Armor Stakes Versions D & E			
Columns	Format	Description	Valid Ranges, Values
01-02	I2	**Station 4-Loader's Station/Task 8:** Communicate using visual signaling techniques mounted	Digits, 1-3, -1=missing -2=not administered
04-05	I2	**Station 5-Weapons/Task 1:** Maintain an M9 pistol	Digits, 1-3, -1=missing -2=not administered
07-08	I2	**Station 5-Weapons/Task 2:** Clear cal .50 M9 machine gun to prevent accidental discharge	Digits, 1-3, -1=missing -2=not administered
10-11	I2	**Station 5-Weapons/Task 3:** Clear an M16A1/A2 rifle	Digits, 1-3, -1=missing -2=not administered
13-14	I2	**Station 5-Weapons/Task 4:** Recognize friendly and threat armored vehicles and aircraft	Digits, 1-3, -1=missing -2=not administered
Note: Armor Stakes Version E students completed the following tasks.			
16-17	I2	**Station 1-NBC/Task 1:** Put on, wear, remove and store M25/M25A1	Digits, 1-3, -1=missing -2=not administered
19-20	I2	**Station 1-NBC/Task 2:** Recognize and React to chemical or biological hazard	Digits, 1-3, -1=missing -2=not administered
22-23	I2	**Station 1-NBC/Task 3:** Decontaminate your skin and personal equipment	Digits, 1-3, -1=missing -2=not administered
25-26	I2	**Station 1-NBC/Task 4:** Administer nerve agent antidote to self (self aid)	Digits, 1-3, -1=missing -2=not administered
28-29	I2	**Station 1-NBC/Task 5:** Use M8 paper to identify chemical agent	Digits, 1-3, -1=missing -2=not administered

Table 19 (Cont'd)

31-32	I2	**Station 1-NBC/Task 6:** Administer first aid to a nerve agent casualty (buddy aid)	Digits, 1-3, -1=missing -2=not administered
34-35	I2	**Station 1-NBC/Task 7:** Use M9 paper to detect chemical agent	Digits, 1-3, -1=missing -2=not administered
37-38	I2	**Station 2-Maintenance/ Task 1:** Extinguish a fier on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered
40-41	I2	**Station 2-Maintenance/ Task 2:** Perform before-operation checks and services on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered
43-44	I2	**Station 2-Maintenance/ Task 3:** Perform during-operations checks and services on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered
46-47	I2	**Station 2-Maintenance/ Task 4:** Perform after-operations checks and services on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered
49-50	I2	**Station 2-Maintenance/ Task 5:** Maintain operators part of equipment record folder	Digits, 1-3, -1=missing -2=not administered
52-53	I2	**Station 3-Land Nav/First Aid/Task 1:** Identify terrain features on a map	Digits, 1-3, -1=missing -2=not administered
55-56	I2	**Station 3-Land Nav/First Aid/Task 2:** Determine the grid coordinates of a point on a military map	Digits, 1-3, -1=missing -2=not administered

Table 19 (Cont'd)

58-59	I2	**Station 3-Land Nav/First Aid/Task 3:** Splint a suspected fracture	Digits, 1-3, -1=missing -2=not administered
61-62	I2	**Station 3-Land Nav/First Aid/Task 4:** Put on a field or pressure dresing	Digits, 1-3, -1=missing -2=not administered
64-65	I2	**Station 4-Loader's Station/Task 1:** Prepare/operate FM radio sets	Digits, 1-3, -1=missing -2=not administered
67-68	I2	**Station 4-Loader's Station/Task 2:** Send a radio message	Digits, 1-3, -1=missing -2=not administered
70-71	I2	**Station 4-Loader's Station/Task 3:** Prepare loader's station for operation on an M1/M1A1 series tank	Digits, 1-3, -1=missing -2=not administered
73-74	I2	**Station 4-Loader's Station/Task 4:** Clear and load and M240 machine gun	Digits, 1-3, -1=missing -2=not administered
76-77	I2	**Station 4-Loader's Station/Task 5:** Load/unload the 105mm main gun on an M1/M1A1 series tank	Digits, 1-3, -1=missing, -2=not administered
79-80	I2	**Station 4-Loader's Station/Task 6:** Secure loader's station on an M1/M1A1 tank	Digits, 1-3, -1=missing -2=not administered

Table 19 (Cont'd)

Line Number 07 - Performance Test Scores for Armor Stakes Version E continued

Columns	Format	Description	Valid Ranges, Values
01-02	I2	**Station 4-Loader's Station/Task 7:** Inspect 120mm ammunition for serviceability	Digits, 1-3, -1=missing -2=not administered
04-05	I2	**Station 4-Loader's Station/Task 8:** Communicate using visual signaling techniques mounted	Digits, 1-3, -1=missing -2=not administered
07-08	I2	**Station 5-Weapons/Task 1:** Maintain an M9 pistol	Digits, 1-3, -1=missing -2=not administered
10-11	I2	**Station 5-Weapons/Task 2:** Clear cal .5o M2 machine gun to prevent accidental discharge	Digits, 1-3, -1=missing -2=not administered
13-14	I2	**Station 5-Weapons/Task 3:** Clear an M16A1/A2 rifle	Digits, 1-3, -1=missing -2=not administered
16-17	I2	**Station 5-Weapons/Task 4:** Recognize friendly and threat armored vehicles and aircraft	Digits, 1-3, -1=missing -2=not administered

Additional Predictor Data Calculations

For the purpose of extracting summary predictor data, the Assembling Objects, Target Identification, One-hand Tracking, and Two-hand Tracking Subtests required additional item level data calculations to obtain all summary variables required by NPRDC. Database personnel derived these additional calculations from a conversation between Dr. David Alderton (NPRDC) and Scott Oppler (American Institute for Research (AIR)) on May 19, 1992, and comments in Statistical Analysis Systems (SAS) code written by Dr. Alderton. Database personnel calculated and extracted all predictor summary data using the SAS product on an IBM 4381 mainframe computer environment. The subheadings below present a brief synopsis describing the additioal calculation process for the four applicable ECAT subtests.

Assembling Objects.

Database processes divided the subtest into two parts, consisting of Items 1-15 (Part 1), and Items 16-32 (Part 2), and calculated the Proportion Attempted and Proportion Correct variables for each part. Calculations did not include missing items.

Target Identification.

Database processes calculated the summary variables for this subtest in the described steps which follow:

(1) Designate the first three items as practice items. Do not use them in further calculataions.

(2) If an item timed out, set the decision time and response time to missing. If there was an accuracy reflecting an incorrect response, set the decision time and response time to missing. If the decision time was less than 0.1, set the decision time, response time, and accuracy to missing. If the response time was less than 0.01, set the decision time, response time, and accuracy to missing. If the recalculated accuracy is less than 1/3 of total valid items correct, then set final summary scores to missing.

(3) Determine the proportion correct of non-practice items after screening items in the first two steps. Determine the median response time across all valid, correct items.

(4) Determine the average of the clipped easy item mean decision time and the clipped difficult item mean decision time. Following the three practice items, the easy item ordinal positions are: 1, 3, 5, 6, 7, 10, 13, 14, 15, 17, 18, 19, 23, 26, 27, 28, 30, 32, 34, 36. The difficult item ordinal positions are: 2, 4, 8, 9, 11, 12, 16, 20, 21, 22, 24, 25, 29, 31, 33, 35. Critical substeps follow:

    (a) After initial screening, sort items by easy and difficult.

(b) Clip by discarding the minimum and maximum values within both groups (e.g. easy and difficult).

(c) Calculate the clipped mean within each group.

(d) Average the two means from each group.

One-Hand and Two-Hand Tracking.

There were three practice items, and three valid, but not-to-be-scored items that were not used in any calculations. Database processes dropped subjects who had more than two missing items. Database personnel recalculated the mean item accuracy to three decimal places.

File Layouts.

Table 19 presents the file layout for the Criterion Summary Scores, line 1, of the Criterion/Predictor Summary File for all schools in the study. Table 20 presents the file layout for the Predictory Summary Data, lines 2-17, for all schools in the study. The Predictor Summary Data includes the Pre-enlistment ASVAB standard scores. Table 21 presents the Post-enlistment ASVAB Equated Standard Scores, line 18, included for Navy schools only.

Table 20

Line 1 - Criterion Summary Scores

SCHOOL	SSAN 1-9 I9	CRIT1 10-16 F7.3	CRIT2 17-23 F7.3	CRIT3 24-30 F7.3	CRIT4 31-37 F7.3	CRIT5 38-44 F7.3	CRIT6 45-51 F7.3	CRIT7 52-58 F7.3	CRIT8 59-65 F7.3	CRIT9 66-72 F7.3	GROUP[1] 73-73 A1	SA 74- A
NAVYAC	<SSN>	FSG	PERF	FAA	-	-	-	-	-	-	-	SA
NAVYAE	<SSN>	FSG	SUM2	-	-	-	-	-	-	-	-	SA
NAVYAMS	<SSN>	FSG	PERF	-	-	-	-	-	-	-	-	SA
NAVYAO	<SSN>	FSG	PRACT	-	-	-	-	-	-	-	-	SA
NAVYAV[3]	<SSN>	FSG	BSCAV	ADVAV	PERF	-	-	-	-	-	GROUP	SA
NAVYEM	<SSN>	FSG	PHASE1	-	-	-	-	-	-	-	-	SA
NAVYET[4]	<SSN>	FSG-P1	FSG-P2	PERF	-	-	-	-	-	-	FORM	SA
NAVYEN[5]	<SSN>	FSG	-	-	-	-	-	-	-	-	FORM	SA
NAVYFC	<SSN>	FSG	RADAR	-	-	-	-	-	-	-	-	SA
NAVYGM	<SSN>	FSG	HALF1	HALF2	-	-	-	-	-	-	-	SA
NAVYMM1	<SSN>	FSG	-	-	-	-	-	-	-	-	"1"	SA
NAVYMM2	<SSN>	FSG	-	-	-	-	-	-	-	-	"2"	SA
NAVYOS[6]	<SSN>	FSG	WRIT	PERF	-	-	-	-	-	-	FORM	-
NAVYRM	<SSN>	FSG	PHASE3	-	-	-	-	-	-	-	-	SA
KEES732	<SSN>	FSG	HOURS	TYPING	-	-	-	-	-	-	-	SA
KEES272[7]	<SSN>	FSG	BLK2	BLK3A	BLK3B	BLK5A	BLK5B	FAA	-	-	CURRIC	SA
SILL13F	<SSN>	FSG	MP&RD	FIRING	-	-	-	-	-	-	-	-
BENN11H[8]	<SSN>	TOALL	EVT1TO	EVT2TO	EVT3TO	EVTSUM	TO_1	TO_2	TO_3	ITVTOW	TRACK	-
KNOX19K	<SSN>	COMM	WEPON	LNDNV	LOADER	MAINT	NBC	AVG	-	-	-	-

[1]Criterion Variables are conditional based on the GROUP variable. For each school where the GROUP variable is applicable, t grouping label (e.g. GROUP, FORM, CURRIC, TRACK) corresponds to the label used in Criterion Development for 18 Technic Training Schools in the Navy, Army, and Air Force, RGI, Inc., September, 1992. Also refer to this document for detailed informati concerning the selection of groups in each school.

[2]Student Action Code variable. See Appendix B.

[3]If GROUP = 1, then PERF is blank. If GROUP = 2(group 2a) or GROUP = 3(group 2b), then BASAV and ADVAV are blank.

[4]If FORM = 1, PERF was calculated based on a Phase 2 Class Convening Date prior to 91090(Julian). If FORM = 2, PERF w calculated based on a Phase 2 Class Convening Date subsequent to 91089(Julian).

[5]If FORM = A, FSG = FSGA. If FORM = B, FSG = FSGB. If FORM = C, FSG = FSGC.

[6]If FORM = A, Criteria Variables correspond to Form A Curriculum. If FORM = B, Criteria Variables correspond to Form B curriculu

[7]If CURRIC = 1 then BLK2 is BLANK. If CURRIC = 2 then BLK3B is BLANK.

[8]If TRACK = 1 (HMMWV) then HMMWV Training Track scores were used for TO_1; TO_2, TO_3, and ITVTOW are BLANK. TRACK = 2 (ITV), ITV Training Track scores were used for TO_1, TO_2, TO_3, and ITVTOW. All Criterion Variables for this sch are I4, with the exception of TOALL, which is F7.3.

Table 21

Predictor Data Extract File

(Line Numbers 02-17)

Line Number 02 – Demographic Data			
Columns	Format	Description	Valid Ranges, Values
01-09	I9	Social Security Number	DIGITS
10-24	A15	Last Name	ALPHA
25-34	A10	First Name	ALPHA
35	A1	Middle Initial	ALPHA
36-40	I5	Zip Code	DIGITS
41-44	A4	Citizenship Code	(See Appendix H)
45	A1	Gender	M=Male F=Female
46	A1	Population Group	C=Caucasian M=Asian N=Black R=American Indian X=Other
47	A1	Ethnic Group	(See Appendix I)
48	A1	Merge Status Flag	(See Appendix J)
50-51	A2	State	(See Appendix K)
53	I1	Race/Ethnic Combination	1 = Caucasian 2 = Black 3 = Asian 4 = Hispanic 5 = Native American 6 = Other

Table 21 (Cont'd)

Line Number 03 -- Pre-enlistment and Test Site Data			
Columns	Format	Description	Valid Ranges, Values
01-06	3(I2)	Date of Birth (YYMMDD)	Year=00 to 99 Month=01 to 12 Day=01 to 31
07-08	I2	Years of Education	01-18
09	A1	Achieved Level of Education	(See Appendix L)
10-12	A3	Pre-enlistment ASVAB Form	11-19 followed by A, B, or C or 01C or 02C
13-14	I2	Pre-enlistment GS Standard Score	00 to 75
15-16	I2	Pre-enlistment AR Standard Score	00 to 75
17-18	I2	Pre-enlistment WK Standard Score	00 to 75
19-20	I2	Pre-enlistment PC Standard Score	00 to 75
21-22	I2	Pre-enlistment NO Standard Score	00 to 75
23-24	I2	Pre-enlistment CS Standard Score	00 to 75
25-26	I2	Pre-enlistment AS Standard Score	00 to 75
27-28	I2	Pre-enlistment MK Standard Score	00 to 75
29-30	I2	Pre-enlistment MC Standard Score	00 to 75
31-32	I2	Pre-enlistment EI Standard Score	00 to 75
33-34	I2	Pre-enlistment VE Standard Score	00 to 75
35-40	3(I2)	Pre-enlistment ASVAB Date (YYMMDD)	Year=86 to 91 Month=01 to 12 Day=01 to 31
41-42	I2	AFQT Percentile Score	00 to 99

Table 21 (Cont'd)

Line Number 03 -- Pre-enlistment and Test Site Data (Cont'd)			
Columns	Format	Description	Valid Ranges, Values
43-45	A3	MOS/AFSC/NEC School Code	(See Appendix M)
48-49	I2	MEPS Identification Code	00 to 99
51-52	I2	Predictor Test Site Code	BE=Ft. Benning KE=Keesler AFB KN=Ft. Knox GL=NTC Great Lakes OR=NTC Orlando RT=RTC San Diego SI=Ft. Sill
Line Number 04 -- ECAT Examinee InFormation Data			
Columns	Format	Description	Valid Ranges, Values
01-09	I9	Social Security Number	DIGITS
11-13	F3.1	ECAT System Version Number	(See Appendix N)
15-20	I 6	ECAT System Version Date	910307 = ECAT Ver. 5.0 910312 = ECAT Ver. 4.0 910326 = ECAT Ver. 3.5 901203 = ECAT Ver. 3.0 900817 = ECAT Ver. 2.0 900513 = ECAT Ver. 1.5 900201 = ECAT Ver. 1.0
22	I1	Education Level	1 = College, 1 Yr. or More 2 = H.S. Graduate 3 = 9-11 Yrs. 4 = 8 Yrs. or Less 5 = 12 Yrs., Non-graduate
24	I1	Language	1 = English 2 = Spanish 3 = Chinese 4 = Other
26	I1	Is Examinee Right Handed?	1 = Yes 2 = No

Table 21 (Cont'd)

Line Number 04 -- ECAT Examinee Information Data (Cont'd)			
Columns	Format	Description	Valid Ranges, Values
28-33	3(I2)	ECAT Test Date (YYMMDD)	Year=00 to 99 Month=01 to 12 Day=01 to 31
35-38	I4	ECAT Response Pedestal Ser. No.	1000 to 1999
Line Number 05 -- ECAT Subtest Version Data			
Columns	Format	Description	Valid Ranges, Values
1-3	F3.1	SM Software Version	0.0=ECAT Ver. 2.0 1.1=ECAT Ver. 3.0-5.0
5-7	F3.1	SR Software Version	0.0=ECAT Ver. 2.0 2.2=ECAT Ver. 3.0-5.0
9-11	F3.1	ID Software Version	0.0=ECAT Ver. 2.0 2.2=ECAT Ver. 3.0,4.0 3.0=ECAT Ver. 5.0,3.5
13-15	F3.1	AO Software Version	0.0=ECAT Ver. 2.0 2.1=ECAT Ver. 3.0-5.0
17-19	F3.1	OR Software Version	0.0=ECAT Ver. 2.0 2.1=ECAT Ver. 3.0-5.0
21-23	F3.1	MC Software Version	0.0=ECAT Ver. 2.0 2.1=ECAT Ver 3.0-5.0
25-28	F4.1	TID Software Version	0.0=ECAT Ver. 2.0 10.1=ECAT Ver. 3.0-5.0
30-33	F4.1	TR1 Software Version	0.0=ECAT Ver. 2.0 10.1=ECAT Ver. 3.0-5.0
35-38	F4.1	TR2 Sfotware Version	0.0=ECAT Ver. 2.0 10.1=ECAT Ver. 3.0-5.0

Table 21 (Cont'd)

Line Number 06 -- ECAT Subtest Instruction Times			
Columns	Format	Description	Valid Ranges, Values
1-4	I4	SM Instruction Time(In Seconds)	0 to 9999
6-9	I4	SR Instruction Time(In Seconds)	0 to 9999
11-14	I4	ID Instruction Time(In Seconds)	0 to 9999
16-19	I4	AO Instruction Time(In Seconds)	0 to 9999
21-24	I4	OR Instruction Time(In Seconds)	0 to 9999
26-29	I4	MC Instruction Time(In Seconds)	0 to 9999
31-36	I6	TID Instruction Time(In Seconds)	0 to 999999
38-43	I6	TR1 Instruction Time(In Seconds)	0 to 999999
45-50	I6	TR2 Instruction Time(In Seconds)	0 to 999999
Line Number 07 -- ECAT Subtest Test Times			
Columns	Format	Description	Valid Ranges, Values
1-4	I4	SM Testing Time(In Seconds)	0 to 9999
6-9	I4	SR Testing Time(In Seconds)	0 to 9999
11-14	I4	ID Testing Time(In Seconds)	0 to 9999
16-19	I4	AO Testing Time(In Seconds)	0 to 9999
21-24	I4	OR Testing Time(In Seconds)	0 to 9999
26-29	I4	MC Testing Time(In Seconds)	0 to 9999
31-36	I6	TID Testing Time(In Seconds)	0 to 999999
38-43	I6	TR1 Testing Time(In Seconds)	0 to 999999

Table 21 (Cont'd)

Line Number 07 -- ECAT Subtest Test Times (Cont'd)			
Columns	Format	Description	Valid Ranges, Values
45-50	I6	TR2 Testing Time(In Seconds)	0 to 999999
Line Number 08 -- ECAT Keyboard Subtest Quick Response Flags			
Columns	Format	Description	Valid Ranges, Values
01-02	I2	SM Subtest Quick Response Flags	0 to 35
04-05	I2	SR Subtest Quick Response Flags	0 to 35
07-08	I2	ID Subtest Quick Response Flags	0 to 80
10-11	I2	AO Subtest Quick Response Flags	0 to 32
13-14	I2	OR Subtest Quick Response Flags	0 to 24
16-17	I2	MC Subtest Quick Response Flags	0 to 32
Line Number 09 -- SM Subtest Summary			
Columns	Format	Description	Valid Ranges, Values
01-07	F7.3	Average Item Response Latency	0.000 to 999.999
09-15	F7.3	Proportion of Digits Entered Correctly	0.000 to 1.000
17-23	F7.3	Proportion of Digits Attempted	0.000 to 1.000
25-31	F7.3	Proportion of All SM Subtest Items with	0.000 to 1.000
Line Number 10 -- SR Subtest Summary			
Columns	Format	Description	Valid Ranges, Values
01-07	F7.3	Arithmetic Mean Item Response Latency	0.000 to 999.999
09-15	F7.3	Proportion of SR Subtest Items Correct	0.000 to 1.000
17-23	F7.3	Proportion of SR Subtest Items Attempted	0.000 to 1.000

Table 21 (Cont'd)

Line Number 11 – ID Subtest Summary			
Columns	Format	Description	Valid Ranges, Values
01	I1	Block Administration Order	1=Block Order 1,2,3,4 2=Block Order 2,1,4,3 3=Block Order 4,3,1,2 4=Block Order 4,3,2,1
03-09	F7.3	Geometric Mean Component Response Latency	0.000 to 999.999
11-17	F7.3	Geometric Mean Decision Response Latency	0.000 to 999.999
19-25	F7.3	Proportion of ID Subtest Items Correct	0.000 to 1.000
27-33	F7.3	Proportion of ID Subtest Items Attempted	0.000 to 1.000 -1.000 = Missing
Line Number 12 – AO Subtest Summary			
Columns	Format	Description	Valid Ranges, Values
01-07	F7.3	Arithmetic Mean Item Response Latency	0.000 to 999.999
09-15	F7.3	Proportion of all AO Subtest Items Correct	0.000 to 1.000
17-23	F7.3	Proportion of all AO Subtest Items Attempted	0.000 to 1.000
25-31	F7.3	Proportion of AO Part 1 (Items 1-15) Correct	0.000 to 1.000
33-39	F7.3	Proportion of AO Part 1 (Items 1-15) Attempted	0.000 to 1.000
41-47	F7.3	Proportion of AO Part 2 (Items 16-32) Correct	0.000 to 1.000
49-55	F7.3	Proportion of AO Part 2 (Items 16-32) Attempted	0.000 to 1.000

Table 21 (Cont'd)

Line Number 13 -- OR Subtest Summary

Columns	Format	Description	Valid Ranges, Values
01-07	F7.3	Arithmetic Mean Item Response Latency	0.000 to 999.999
09-15	F7.3	Proportion of OR Subtest Items Correct	0.000 to 1.000
17-23	F7.3	Proportion of OR Subtest Items Attempted	0.000 to 1.000

Line Number 14 -- MC Subtest Summary

Columns	Format	Description	Valid Ranges, Values
01-07	F7.3	Arithmetic Mean Item Response Latency	0.000 to 999.999
09-15	F7.3	Proportion of MC Subtest Items Correct	0.000 to 1.000
17-23	F7.3	Proportion of MC Subtest Items Attempted	0.000 to 1.000

Line Number 15 -- Target Identification Response Pedestal Subtest Summary

Columns	Format	Description	Valid Ranges, Values
01-02	I 2	Number of Non-practice (Valid) Items Attempted	00 to 36
04-05	I 2	Number of Non-practice (Valid) Items Correct	00 to 36
07-11	F 5.2	Mean Clipped Easy/Difficult Decision Times	0.00 to 9.99
13-17	F 5.2	Median Valid Movement Time	0.00 to 9.99
19-25	F 7.3	Proportion Correct of Screened Valid Responses	0.000 to 1.000
27-33	F 7.3	Proportion of Valid Items Attempted	0.000 to 1.000

Table 21 (Cont'd)

Line Number 15 -- Target Identification Response Pedestal Subtest Summary (Cont'd)			
Columns	Format	Description	Valid Ranges, Values
35-36	I 2	Number of Times LT Hand Used	00 to 36
38-39	I 2	Number of Times RT Hand Used	00 to 36
41-42	I 2	Number of Times Unknown Hand	00 to 36
Line Number 16 -- One-hand Tracking Response Pedestal Subtest Sumary			
Columns	Format	Description	Valid Ranges, Values
01-02	I 2	JoyStick Used	1 = Right, 2 = Left
04-05	I 2	Number of Valid/Scored Items Attempte	00 to 18
07-13	F7.2	Standard Deviation-Avg. LOG*1000 +1 of RMS (Valid/Scored Items Attempted)	0.00 to 9999.99
15-20	F 6.2	Average RMS Distance Off Target (All 24 Subtest Items)	0.00 to 999.99
22-29	F 8.3	Mean LOG*1000+1 of RMS (Valid/Scored Items Attempted)	0.000 to 9999.000
Line Number 17 -- Two-hand Tracking Response Pedestal Subtest Summary			
Columns	Format	Description	Valid Ranges, Values
01-02	I 2	Number of Valid/Scored Items Attempte	00 to 18
04-10	F7.2	Standard Deviation-Avg. LOG*1000 +1 of RMS (Valid/Scored Items Attempted)	0.00 to 9999.99
12-17	F 6.2	Average RMS Distance Off Target (All 24 Subtest Items)	0.00 to 999.99
19-26	F 8.3	Average LOG*1000+1 of RMS (Valid/Scored Items Attempted)	0.000 to 9999.000

Table 22

Navy Study Post-Enlistment Data

(Line Number 18)

Line Number 18 -- Navy Post-Enlistment ASVAB Data			
Columns	Format	Description	Valid Ranges, Values
01-09	I9	Social Security Number	DIGITS
11-13	A3	Post-Enlistment ASVAB Form	01C = CAT-ASVAB Form 1 02C = CAT-ASVAB Form 2 11A = ASVAB Form 11A 11B = ASVAB Form 11B 11C = ASVAB Form 11C 13A = ASVAB Form 13A 13B = ASVAB Form 13B
15-16	I2	GS Subtest Equated Standard Score	00..65
18-19	I2	AR Subtest Equated Standard Score	00..64
21-22	I2	WK Subtest Equated Standard Score	00..61
24-25	I2	PC Subtest Equated Standard Score	00..61
27-28	I2	NO Subtest Equated Standard Score	00..62
30-31	I2	CS Subtest Equated Standard Score	00..71
33-34	I2	AS Subtest Equated Standard Score	00..68
36-37	I2	MK Subtest Equated Standard Score	00..67
39-40	I2	MC Subtest Equated Standard Score	00..70
42-43	I2	EI Subtest Equated Standard Score	00..69
45-46	I2	VE Equated Standard Score	00..75
48-49	I2	AFQT Equated Standard Score	00..99
51-57	F7.3	Post-enlistment Editing Flag	0.000 to 999.999

APPENDIX A

CRITERION/PREDICTOR DATA TAPE FILE INFORMATION

Criterion/Predictor Data Tape File Information

Tape Number	File Name	File Number	Record Length	Block Size	Blocking Factor	Number of Records	N
2617 & 3449							
	NAVYAC.CRIT	1	80	4800	60	222	111
	NAVYAE.CRIT	2	80	4800	60	1456	364
	NAVYAO.CRIT	3	80	4800	60	879	293
	NAVYAMS.CRIT	4	80	4800	60	1240	310
	NAVYAV.CRIT	5	80	4800	60	10560	704
	NAVYEM.CRIT	6	80	4800	60	2997	999
	NAVYET.CRIT	7	80	4800	60	1572	131
	NAVYEN.CRIT	8	80	4800	60	4140	1035
	NAVYFC.CRIT	9	80	4800	60	5260	1052
	NAVYGM.CRIT	10	80	4800	60	1928	482
	NAVYMM1.CRIT	11	80	4800	60	748	374
	NAVYMM2.CRIT	12	80	4800	60	2130	710
	NAVYOS.CRIT	13	80	4800	60	4645	929
	NAVYRM.CRIT	14	80	4800	60	990	330
	KEES272.CRIT	15	80	4800	60	3540	708
	KEES732.CRIT	16	80	4800	60	1072	536
	SILL13F.CRIT	17	80	4800	60	2038	1019
	BENN11H.CRIT	18	80	4800	60	15890	1135
	KNOX19K.CRIT	19	80	4800	60	10703	1529
	NAVYAC.CRITPRED	20	80	4800	60	1998	111
	NAVYAE.CRITPRED	21	80	4800	60	4122	229
	NAVYAO.CRITPRED	22	80	4800	60	5202	289
	NAVYAMS.CRITPRED	23	80	4800	60	5526	307
	NAVYAV.CRITPRED	24	80	4800	60	8154	453
	NAVYEM.CRITPRED	25	80	4800	60	17298	961
	NAVYET.CRITPRED	26	80	4800	60	2340	130
	NAVYEN.CRITPRED	27	80	4800	60	18540	1030
	NAVYFC.CRITPRED	28	80	4800	60	15498	861
	NAVYGM.CRITPRED	29	80	4800	60	7974	443
	NAVYMM1.CRITPRED	30	80	4800	60	6714	373
	NAVYMM2.CRITPRED	31	80	4800	60	12654	703
	NAVYOS.CRITPRED	32	80	4800	60	14400	800
	NAVYRM.CRITPRED	33	80	4800	60	5382	299
	KEES272.CRITPRED	34	80	4800	60	12002	706
	KEES732.CRITPRED	35	80	4800	60	9095	535
	SILL13F.CRITPRED	36	80	4800	60	17323	1019
	BENN11H.CRITPRED	37	80	4800	60	18224	1072
	KNOX19K.CRITPRED	38	80	4800	60	25636	1508

APPENDIX B

STUDENT ACTION CODES

Student Action Codes

Appendix B lists and defines student action codes for the three services in the study. Student action codes indicate the reasons a school dropped a student from training.

Table B-1

Student Action Codes (Navy)

CODE	DEFINITION	ACTION[a]
A__	ACADEMIC SETBACK PREFIX	
ATU	Possible typographical error (AMS school)	N
F__	ACADEMIC ATTRITION PREFIX	
FAC	Lack of reading skills	R
FAF	Lack of math skills	R
FAG	Lack of comprehension/retention of material	R/T
FAJ	Lack of comprehension/retention of material	R
FAM	Lack of language proficiency	R
FCD	Lack of manual skills/dexterity in use of tools	R/T
FCG	Lack of knowledge application	R/T
FCJ	Lack of knowledge application	R
G__	NON-ACADEMIC ATTRITION PREFIX	
GA_	MOTIVATIONAL ATTRITION	
GAA	Disinterest/Negative military attitude	R/T
GAD	Disinterest/Dropped at student's request	R/T
GAG	Lack of performance/Not school of choice	R/T
GAJ	Lack of performance/Not school of choice	R
GAM	Lack of performance/Not what expected	R
GAN	Lack of performance/Negative training attitude	R/T
GAQ	Lack of performance/Negative training attitude	R
GB_	ADMINISTRATIVE ATTRITION	
GBA	Alcohol rehabilitation	R/T
GBB	Alcohol rehabilitation	D/S
GBG	Hardship	R/T
GBH	Hardship	D/S
GBJ	Hardship	R

[a]Note: Action indicates the student's future status after attrition.

R/T	Reassigned/Transferred
D/S	Discharged/Separated
R	Reclassified
N	Not Defined

Table B-1 (cont'd)

CODE	DEFINITION	ACTION[a]
GC_ THRU GG_	MEDICAL ATTRITION	
GCB	Pregnancy	D/S
GCE	Orthopedic/Service connected	D/S
GCG	Orthopedic/Pre-Service	R/T
GCH	Orthopedic/Pre-Service	D/S
GCL	Podiatry/Service connected	D/S
GDS	Neurology/Service connected	D/S
GDY	Dermatology/Pre-Service	D/S
GEB	Internal Medicine/Service connected	D/S
GEC	Internal Medicine/Service connected	R
GEE	Internal Medicine/Pre-Service	D/S
GEL	Ear, Nose, Throat/Pre-Service	D/S
GEM	Ear, Nose, Throat/Pre-Service	R
GEV	Psychiatric/Service connected	D/S
GEY	Psychiatric/Pre-Service	D/S
GFB	Psychiatric (Suicidal)/Service connected	D/S
GFE	Psychiatric (Suicidal)/Pre-Service	D/S
GFH	Psychological (Personality Disorders)	D/S
GFL	Psychological (Enuresis)	D/S
GFP	Psychological (Sleepwalking)	D/S
GFQ	Psychological (Sleepwalking)	R
GFR	Psychological (Situation reaction)	R/T
GGA	Other medical/Service connected	R/T
GGB	Other medical/Service connected	D/S
GGC	Other medical/Service connected	R
GGD	Other medical/Pre-Service	R/T
GGE	Other medical/Pre-Service	D/S
	OTHER NON ACADEMIC ATTRITION	
GHA	Legal (Arrest by civil authorities)	R/T
GHE	Legal (Civil conviction)	D/S
GHN	Legal (Misconduct)	R/T
GHP	Legal (Misconduct)	D/S
GHR	Legal (Substance abuse)	R/T
GHS	Legal (Substance abuse)	D/S
GHV	Homosexuality	D/S

[a]Note: Action indicates the student's future status after attrition.

R/T	Reassigned/Transferred
D/S	Discharged/Separated
R	Reclassified
N	Not defined

Table B-1 (cont'd)

CODE	DEFINITION	ACTION[a]
GJB	Death/Non-Training related	D/S
GKL	Obesity	D/S
GLH	Fraudulent Enlistment (Drug subsequence)	D/S
GLS	Fraudulent Enlistment (Arrest pre-service)	D/S
GMB	Erroneous Enlistment	D/S
GNE	Other Non-Academic	D/S
GUR	Legal (Declared deserter)	D/S
H__	ADMINISTRATIVE DISENROLLMENT PREFIX	
HAC	Cancellation of class/course	R
HBC	Rating or program conversion	R
HCA	Change in student's orders	R/T
HCB	Change in student's orders	D/S
HCC	Change in student's orders	R
HDA	Failure to meet prerequisites	R/T
HDC	Failure to meet prerequisites	R
HDD	Possible typographical error (EN and ET schools)	
HDJ	Possible typographical error (ET school)	
HEA	Failure to meet security requirements	R/T
HEB	Failure to meet security requirements	D/S
HEC	Failure to meet security requirements	R
ZXX	Administrative drop/Restart at a later date	
ZRD	Completed training	

[a]Note: Action indicates the student's future status after attrition.

R/T	Reassigned/Transferred
D/S	Discharged/Separated
R	Reclassified
N	Not Defined

Table B-2

Student Action Codes (Air Force)

Air Traffic Controller (27230)		Personnel Specialist (73230)	
CODE[a]	DEFINITION	CODE[a]	DEFINITION
LA	Academic Deficiency	I	Incomplete
LG	Separated Service		
LI	Misconduct	U	Unsuccessful
LJ	Entry into the Military Academy		
LL	Death - Training Related		
LM	Medical		
LP	Prerequisite Deficiency		
LQ	Death - Other		
LR	Performance Deficiency		
LS	Security		
LT	Administrative Reasons		
LU	Unsuitability		
LV	Compassionate		
LW	Excessive Absence (including AWOL)		
LX	Other		

[a]Air Force codes result in the student's immediate elimination from training.

Table B-3

Student Action Codes (Army)

CODE[a]	DEFINITION
1	Medical Reasons
2	Failed to Qualify
3	Discharged
4	Unknown

[a]Army codes result in the student's immediate elimination from training.

APPENDIX C

AVIATION ELECTRICIAN'S MATE (AE) TEST WEIGHTS

Aviation Electrician's Mate (AE) Test Weights

The following is a table of test weights and unit grade weights for the computation of Final School Grade for Aviation Electrician's Mate (AE).

Test	Weight
Knowledge Progress Test (module #301)	100% = Unit 0 Grade
Knowledge Progress Test (module #311)	100% = Unit 1 Grade
Performance Progress Test (module #322) Knowledge Progress Test (module #321)	30% 70% = Unit 2 Grade
Performance Progress Test (module #332) Knowledge Progress Test (module #331)	30% 70% = Unit 3 Grade
Performance Progress Test (module #342) Within-course Comprehensive Test I (module #341)	30% 70% = Unit 4 Grade
Performance Progress Test (module #352) Knowledge Progress Test (module #351)	30% 70% = Unit 5 Grade
Knowledge Progress Test (module #361)	100% = Unit 6 Grade
Performance Progress Test (module #372) Knowledge Progress Test (module #371)	40% 60% = Unit 7 Grade
Performance Progress Test (module #382) Knowledge Progress Test (module #381)	40% 60% = Unit 8 Grade

Aviation Electrician's Mate (AE) Test Weights (Cont'd)

Test	Weight
Performance Progress Test (module #392)	10%
Performance Progress Test (module #393)	10%
Performance Progress Test (module #394)	10%
Performance Progress Test (module #395)	10%
Performance Progress Test (module #396)	10%
Within-course Comprehensive Test II (module #391)	50%
	= Unit 9 Grade
Performance Progress Test (module #402)	10%
Performance Progress Test (module #403)	10%
Performance Progress Test (module #404)	5%
Knowledge Progress Test (module #401)	75%
	= Unit 10 Grade
Performance Progress Test (module #412)	40%
Knowledge Progress Test (module #411)	60%
	= Unit 11 Grade
Performance Progress Test (module #422)	30%
Knowledge Progress Test (module #421)	70%
	= Unit 12 Grade
Performance Progress Test (module #432)	5%
Performance Progress Test (module #433)	10%
Performance Progress Test (module #434)	10%
Performance Progress Test (module #435)	5%
Performance Progress Test (module #436)	10%
Knowledge Progress Test (module #431)	60%
	= Unit 13 Grade
Performance Progress Test (module #442)	50%
Within-course Comprehensive Test III (module #441)	50%
	= Unit 14 Grade
Knowledge Progress Test (module #451)	100%
	= Unit 15 Grade

Aviation Electrician's Mate (AE) Test Weight's (Cont'd)

Test	Weight
Unit 0 Grade	3%
Unit 1 Grade	5%
Unit 2 Grade	6%
Unit 3 Grade	6%
Unit 4 Grade	8%
Unit 5 Grade	7%
Unit 6 Grade	5%
Unit 7 Grade	5%
Unit 8 Grade	7%
Unit 9 Grade	10%
Unit 10 Grade	6%
Unit 11 Grade	8%
Unit 12 Grade	7%
Unit 13 Grade	5%
Unit 14 Grade	10%
Unit 15 Grade	2%
	= Final School Grade

APPENDIX D

AVIATION STRUCTURAL MECHANIC - STRUCTURES (AMS) TEST WEIGHTS

Aviation Structural Mechanic - Structures (AMS) Test Weights

The following is a table of test weights and unit grade weights for the computation of Final School Grade for Aviation Structural Mechanic - Structures (AMS).

Test	Weight
Knowledge Test (module #101)	60%
Practical Work (module #103)	40%
	= Unit 1 Grade
Knowledge Test (module #201)	40%
Performance Test (module #202)	60%
	= Unit 2 Grade
Knowledge Test (module #311)	70%
Practical Work (module #313)	30%
	= Unit 3, Section 1 Grade
Knowledge Test (module #321)	25%
Performance Test (module #322)	50%
Practical Work (module #323)	25%
	= Unit 3, Section 2 Grade
Knowledge Test (module #411)	60%
Practical Work (module #413)	40%
	= Unit 4, Section 1 Grade
Knowledge Test (module #421)	30%
Performance Test (module #422)	50%
Practical Work (module #423)	20%
	= Unit 4, Section 2 Grade
Knowledge Test (module #431)	40%
Practical Work (module #433)	60%
	= Unit 4, Section 3 Grade
Knowledge Test (module #441)	20%
Performance Test (module #442)	50%
Practical Work (module #443)	30%
	= Unit 4, Section 4 Grade

Aviation Structural Mechanic - Structures (AMS) Test Weights (Cont'd)

Test	Weight
Knowledge Test (module #511)	30%
Knowledge Test (module #521)	30%
Practical Work (module #513)	40%
	= Unit 5 Grade
Knowledge Test (module #611)	60%
Practical Work (module #613)	40%
	= Unit 6, Section 1 Grade
Knowledge Test (module #621)	60%
Practical Work (module #623)	40%
	= Unit 6, Section 2 Grade
Final Comprehensive Test (module #700)	100%
Unit 1 Grade	3%
Unit 2 Grade	7%
Unit 3, Section 1 Grade	7%
Unit 3, Section 2 Grade	10%
Unit 4, Section 1 Grade	15%
Unit 4, Section 2 Grade	15%
Unit 4, Section 3 Grade	7.5%
Unit 4, Section 4 Grade	7.5%
Unit 5 Grade	7%
Unit 6, Section 1 Grade	7%
Unit 6, Section 2 Grade	7%
Final Comprehensive Exam	7%
	= Final School Grade

APPENDIX E

AVIATION TECHNICIAN (AV) CHANGES AND TEST WEIGHTS

Aviation Technician (AV) Changes and Test Weights

Before June 28, 1991 (Julian: 91178), the school weighted the course lab scores and included these scores in the FSG. On this date, the school changed its scoring method for labs to satisfactory/unsatisfactory and no longer included lab scores in the FSG. Because of these changes, the school revised its test weighting scheme. Below, we provide both weighting systems (before and after the changes of June 28, 1991). In both tables, the school provided RGI with the school assigned weights and we calculated the contribution of each test to the FSG.

Table C-1 applies to students enrolled before Julian date 91178. The AV school altered its curriculum three times while using this weighting system. The school added Test 700 to Part 6, then added Test 445 to Part 4, then removed Test 500 from Part 5. The present AV instructors did not work at the AV school at the time of these changes. Consequently, the school did not know how the previous instructors redistributed the test weights to adjust for the changes. Furthermore, the AV school records do not indicate the effect of these changes upon the test weights. Without this information, we developed assumptions for these weights, based upon earlier and later trends in the school's methods of weight distribution. Then, we randomly selected several ISS cases and used a hand calculator to confirm the assumed weights. In Table C-1, we marked each assumed weight with an asterisk.

Table C-2 provides the revised weighting system the AV school used for all students enrolled as of Julian data 91178. The table includes course #60 test module numbers in parentheses because the school continued to use the revised weighting scheme after changing the course number to 60 in December, 1991.

In December 1991, the AV school re-numbered and modified nearly all labs and tests and changed the AV course number form 61 to 60. Because of the extensive changes, we separated the layout into two sections: Students in course #61 and those in course #60. In table C-3 we present tests or labs with identical content across course #61 and course #60. We listed the tests and labs in the order they appear in the course. The list reads down the left side and then continues down the right side. Table C-4 presents tests with minor differences (1 or 2 content changes) across course #61 and course #60. The AV school split some of the labs in course #61 into two or more course #60. Table C-5 presents the labs numbers in course #61 and their corresponding labs numbers in course #60 after the split.

Table C-1

Test Weights for Final School Grade (For Students Enrolled Before June 28, 1991)

Test or Lab Number	School Assigned Weight	Contribution to FSG
PART 1:		
Knowledge Test 111	100% = Section 1 Grade	2.0280%
Knowledge Tests 121 & 122	44.4% (22.2% each)	1.9971% each
Mean Score of Labs 109, 119, 129, 139	11.1%	.9986%
Performance Test 124	44.5% = Section 2 Grade	4.0032%
Knowledge Tests 131 & 132	44.4% (22.2% each)	1.9971% each
Mean Score of Labs 149, 159, 169, 179 (If registered after Julian date 91157, this average includes Lab 189)	11.1%	.9986%
Performance Test 133	44.5% = Section 3 Grade	4.0030%
Section 1 Grade	07.8%	
Section 2 & 3 Grades	69.2% (34.6% each)	
Comprehensive Tests 123 & 100	23.0% (11.5% each) = PART 1 GRADE	2.9900% each
PART 2:		
Knowledge Tests 211, 221, 241	85.8% (28.6% each)	2.0002% each
Mean Score of Labs 219, 229, 239, 249	14.2% = Section 1-4 Grade	.9940%
Knowledge Tests 251, 252, & 254	39.9% (13.3% ea.)	1.9950% each
Mean Score of Labs 259, 269, 279, 289, 299, 209	06.7%	1.0005%
Performance Tests 253 & 255	53.4% (26.7% ea.) = Section 5 Grade	4.0050% each
Section 1-4 Grade	28.0%	
Section 5 Grade	60.0%	
Comprehensive Test 200	12.0% = PART 2 GRADE	3.0000%
PART 3:		
Knowledge Tests 321, 331, & 341	85.8% (28.6% ea.)	2.0020% each
Mean Score of Labs 309, 319, 329, 339, 349, 369	14.2% = PART 3 GRADE	.9940%

Table C-1 (Cont'd)

Test or Lab Number	School Assigned Weight	Contribution to FSG
PART 4:		
If enrolled before 91105 and not in class number 90820, 90821, 91010, 91011, 91140, 91141, 91280, or 91281:		
Knowledge Tests 431, 441, 442, & 443	61.6% (15.4% each)	2.0008% each
OR		
If enrolled after 91104 or in class number 90820, 90821, 91010, 91011, 91140, 91141, 91280, or 91281:		
Knowledge Tests 431, 441, 442, 443, & 445	61.6%* (12.32* each)	1.6006% each
Mean Score of Labs 409, 419, 429, 439, 449, 459	07.7%	1.0004%
Performance Test 444	30.7%	3.9885%
	= Section 1-4 Grade	
Section 1-4 Grade	81.2%	
Comprehensive Test 400	18.8%	3.0008%
	= PART 4 GRADE	
PART 5:		
If enrolled before 90183:		
Knowledge Tests 511 & 521	30.8% (15.4% each)	2.0008% each
Mean Score of Labs 509, 519, 529, 539	07.8%	1.0134%
Performance Tests 512 & 522	61.4% (30.7% each)	3.9885% each
	= Section 1-3 Grade	
Sections 1-3 Grade	81.2%	
Comprehensive Test 500	18.8%*	3.0080%
	= PART 5 GRADE	
OR		
If enrolled after 90182:		
Knowledge Tests 511 & 521	43.8%* (21.9%* each)	3.5040% each
Mean Score of Labs 509, 519, 529, 539	06.2%	.9920%
Performance Tests 512 & 522	50.0% (25.0% each)	4.0000% each
	= PART 5 GRADE	
PART 6:		
Knowledge Test 601	20.0%	2.0000%
Knowledge Tests 600 & 700	30.0%* (15.0%* each)	3.0000% each
Mean Score of Labs 609 & 619	10.0%	1.0000%
Performance Test 611	40.0%	4.0000%
	= PART 6 GRADE	

For the weighting scheme above, the contribution of parts 1-6 to the FSG is as follows.

PART 1	26%
PART 2	25%
PART 3	07%
PART 4	16%
PART 5	16%
PART 6	10%

Table C-2

Test Weights for Final School Grade (For Students Enrolled Since June 28, 1991)

Test Number	School Assigned Weight	Contribution to FSG
PART 1:		
Knowledge Tests 111 (100), 121 (106), 122 (115), 131 (139), 132 (148)	11.10 (2.22 each)	.5772% each
Performance Tests 124 (127) & 133 (160)	08.46 (4.23 each)	1.0998% each
Comprehensive Tests 123 (130) & 100 (163)	06.44 (3.22 each)	.8372% each
	= 26.0	
PART 2:		
Knowledge Tests 211 (206), 221 (212), 241 (221), 251 (227), 252 (252), 254 (269)	13.32 (2.22 each)	.5550% each
Performance Tests 253 (251) & 255 (275)	08.46 (4.23 each)	1.0575% each
Comprehensive Test 200 (281)	03.22	.8050%
	= 25.00	
PART 3:		
Knowledge Test 321 (306)	02.22	.1551%
Knowledge Test 331 (315)	02.33	.1629%
Knowledge Test 341 (324)	02.44	.1706%
	= 06.99	
PART 4:		
Knowledge Tests 431 (412), 441 (424), 442 (433), 443 (439), 445 (448)	08.65 (1.73 each)	.2770% each
Performance Test 444 (451)	04.18	.6692%
Comprehensive Test 400 (454)	03.18	.5091%
	= 16.01	
PART 5:		
Knowledge Tests 511 (521) & 521 (545)	07.50 (3.75 each)	.6000% each
Performance Tests 512 (518) & 522 (539)	08.50 (4.25 each)	.6800% each
	= 16.00	
PART 6:		
Knowledge Test 601 (600)	02.25	.2250%
Knowledge Tests 600 (605) & 700 (606)	03.50 (1.75 each)	.1750% each
Performance Test 611 (604)	04.25	.4250%
	= 10.00	

For this weighting scheme, the contribution of parts 1-6 to the FSG is as follows.

PART 1	26.00%
PART 2	25.00%
PART 3	06.99%
PART 4	16.01%
PART 5	16.00%
PART 6	10.00%

Table C-3

Tests and Labs with Identical Content

Test/Lab	Course #61	Course #60	Test/Lab	Course #61	Course #60
Lab	119	112	Lab	339	312
Knowledge	122	115	Knowledge	331	315
Lab	139	121	Lab	349	318
Performance	124	127	Lab	369	321
Comprehensive	123	130	Knowledge	341	324
Lab	149	133	Knowledge	431[b]	412
Lab	159	136	Lab	439	421
Knowledge	131	139	Knowledge	441[b]	424
Knowledge	132	148	Knowledge	442[b]	433
Lab	189[a]	157	Knowledge	443[b]	439
Performance	133	160	Knowledge	445[c]	448
Comprehensive	100	163	Performance	444	451
Lab	229	209	Comprehensive	400[b]	454
Knowledge	241	221	Performance	512	518
Lab	249	224	Knowledge	511	521
Knowledge	251	227	Performance	522	539
Lab	279	248	Lab	539	542
Performance	253	251	Comprehensive	521	545
Knowledge	252	252	Knowledge	601	600
Performance	255	275	Lab	609	601
Lab	309	300	Performance	611	604
Lab	319	303	Knowledge	600	605
Knowledge	321	306	Comprehensive	700	606
Lab	329	309			

a The school introduced Lab 189 on June 6, 1991 (Julian: 91156). Students enrolled before that date had no such lab.

b These tests are identical for students enrolled since April 15, 1991 (Julian: 91105) and for students in the pilot classes indicated within the layout. For all other AV students, these tests contain major differences between courses #61 and #60.

c Students enrolled prior to April 15, 1991 (Julian: 91105) and not in the pilot classes indicated within the layout did not take Knowledge Test 445 or any such test.

Table C-4

Tests with Minor Differences: (1 or 2 Content Changes)

Course #61 Test Number		Corresponding Test Number in Course #60
Knowledge	111	100
Knowledge	121	106
Knowledge	211	206
Knowledge	221	212
Knowledge	254	269
Comprehensive	200	281

Table C-5

AV Course #61 Labs Split into Course #60 Labs

Course #61 Lab Number		Corresponding Lab Numbers in Course #60
Lab	109	103 & 109
Lab	129	118 & 124
Lab	169	142 & 145
Lab	179	151 & 154
Lab	219	200 & 203
Lab	259	230 & 233
Lab	269	236 & 239 & 242
Lab	289	254 & 257
Lab	299	260 & 263 & 266
Lab	409	400 & 403
Lab	419	406 & 409
Lab	429	415 & 418
Lab	449	427 & 430
Lab	459	436 & 442 & 445
Lab	509	500 & 503 & 506
Lab	519	509 & 512 & 515
Lab	529	524, 527, 530, 533, & 536
Lab	619	602 & 603

APPENDIX F

MACHINIST'S MATE (MM) CHANGES AND TEST WEIGHTS

Machinist's Mate (MM) Changes and Test Weights

For each knowledge and comprehensive test, the school determines the minimum number of items an examinee must answer correctly to pass the exam. The school then assigns each of these minimum raw scores a value of 63 (on a scale of 0-100).

As an example of this procedure, Knowledge Test 1 (ISS module number 305) is a 50-item exam. The school decided examinees should correctly answer at least 30 of the items to pass this test. Therefore, students answering 30 items correctly receive a score of 63 (the minimum passing score for all tests).

The school established the item weight for the first 30 items answered correctly by dividing the minimum passing score (63) by the minimum raw score needed to pass Knowledge Test 1 (30). Thus, for the first 30 items answered correctly by the examinee, each item is worth 2.1 points (63/30 = 2.1).

To determine the weight of each item answered correctly beyond the required 30, the school divided 37 (100% minus the minimum passing score, 63) by 20 (50 items minus the minimum items required to pass). Thus, the weight for each of these additional items answered correctly is 1.85 (37/20 = 1.85). The school then multiplied 1.85 by the number of items answered correctly above the 30-item minimum. So if 40 items are correct, 30 are weighted as 2.1 and 10 are weighted 1.85, and the score would be 63 + (1.85 X 10) = 81.5.

Since the school applied this procedure to every knowledge and comprehensive test, we entered both the school's converted score and the number correct score for these tests.

On the following pages, Table C-1 presents item weights for each knowledge and comprehensive test and the raw scores required to pass each of these tests. Table C-2 presents test weights for the Final School Grade.

Table C-1

Summary of Item Weights for Knowledge and Comprehensive Tests (MM2)

Test Number	Weight Below Passing Score	Weight Above Passing Score	Raw Score to Pass/ # of Items Possible
Knowledge Test 1 module #305	2.10	1.85	30/50
Knowledge Test 2 module #309	2.52	2.46	25/40
Knowledge Test 3 module #313	2.33	2.84	27/40
Knowledge Test 4 module #317	2.33	2.84	27/40
Comprehensive Test 1 module #319	2.10	1.85	35/50
Knowledge Test 5 module #325	2.52	3.08	25/37
Knowledge Test 6 module #328	2.86	3.70	22/32
Knowledge Test 7 module #331	2.42	2.64	26/40
Knowledge Test 8 module #334	3.15	3.70	20/30
Knowledge Test 9 module #338	2.33	2.84	27/40
Knowledge Test 10 module #341	2.86	3.36	22/33
Knowledge Test 11 module #344	2.86	3.36	22/33
Comprehensive Test 2 module #349	1.26	1.23	50/80

Table C-2

Table of Test Weights for Final School Grade (MM2)

Test or Quiz	Weight
Knowledge Test 1 (module #305)	90%
Quiz 1 (module #204)	10%
	= Unit 1 Grade
Knowledge Test 2 (module #309)	90%
Quiz 2 (module #206)	05%
Quiz 3 (module #208)	05%
	= Unit 2 Grade
Knowledge Test 3 (module #313)	90%
Quiz 4 (module #212)	10%
	= Unit 3 Grade
Knowledge Test 4 (module #317)	90%
Quiz 5 (module #214)	10%
	= Unit 4 Grade
Average of Unit Grades 1-4	80%
Comprehensive Test 1 (module #319)	20%
	= Phase 1 Grade
Knowledge Test 5 (module #325)	90%
Quiz 6 (module #223)	05%
Quiz 7 (module #224)	05%
	= Unit 5 Grade
Knowledge Test 6 (module #328)	90%
Quiz 8 (module #227)	10%
	= Unit 6 Grade
Knowledge Test 7 (module #331)	90%
Quiz 9 (module #230)	10%
	= Unit 7 Grade

Table C-2 (Cont'd)

Test or Quiz	Weight
Knowledge Test 8 (module #334)	100% = Unit 8 Grade
Knowledge Test 9 (module #338) Quiz 10 (module #235) Quiz 11 (module #237)	90% 05% 05% = Unit 9 Grade
Knowledge Test 10 (module #341) Quiz 12 (module #239)	90% 10% = Unit 10 Grade
Knowledge Test 11 (module #344) Quiz 13 (module #242)	90% 10% = Unit 11 Grade
Average of Unit Grades 5-11 Comprehensive Test 2 (module #349) Performance Test (module #144)	75% 20% 05% = Phase 2 Grade
Phase 1 Grade Phase 2 Grade	50% 50% = Final School Grade (FSG)

APPENDIX G

19K SUMMARY OF PERFORMANCE TASKS AND VERSION PLACEMENT

19K Summary of Performance Tasks and Version Placement

Task Name	Version A	Version B	Version C	Version D	Version E
Put on, wear, remove, and store your M25, M25A1 protective mask with hood	Station 5 Task 1	Station 1 Task 1	Station 1 Task 1	Station 1 Task 1	Station 1 Task 1
Recognize and react to chemical or biological hazard	Station 5 Task 2	Station 1 Task 2	Station 1 Task 2	Station 1 Task 2	Station 1 Task 2
React to a nuclear hazard	Station 5 Task 3	Station 1 Task 3	Station 1 Task 3	Station 1 Task 3	N/A
Decontaminate your skin and personal equpment	Station 5 Task 4	Station 1 Task 4	Station 1 Task 4	Station 1 Task 4	Station 1 Task 3
Administer nerve agent antidote to self (self-aid)	Station 5 Task 5	Station 1 Task 5	Station 1 Task 6	Station 1 Task 5	Station 1 Task 4
Use M8 detector paper to identify chemical agent	Station 5 Task 6	Station 1 Task 6	Station 1 Task 5	Station 1 Task 6	Station 1 Task 5
Administer first aid to a nerve agent casualty (buddy-aid)	Station 5 Task 7	Station 1 Task 7	Station 1 Task 7	Station 1 Task 7	Station 1 Task 6
Use M9 detector paper to identify chemical agent	Station 5 Task 8	Station 1 Task 8	Station 1 Task 8	Station 1 Task 8	Station 1 Task 7
Extinguish a fire on an M1/M1A1 tank	Station 2 Task 1	Station 2 Task 1	Station 2 Task 1	Station 2 Task 1	Station 2 Task 1

19K Summary of Performance Tasks and Version Placement (Cont'd)

Task Name	Version A	Version B	Version C	Version D	Version E
Troubleshoot the M1/M1A1 tank using drivers intrument control panel warning and caution lights	Station 2 Task 2	Station 2 Task 2	Station 2 Task 2	Station 2 Task 4	N/A
Perform before, during and after-operation checks and services on an M1/M1A1 tank	N/A	N/A	N/A	Station 2 Task 2	N/A
Perform before-operations checks and services on an M1/M1A1 tank	Station 2 Task 3	Station 2 Task 3	Station 2 Task 3	N/A	Station 2 Task 2
Perform during-operations checks and services on an M1/M1A1 tank	Station 2 Task 4	Station 2 Task 4	Station 2 Task 4	N/A	Station 2 Task 3
Perform after-operations checks and services on an M1/M1A1 tank	Station 2 Task 5	Station 2 Task 5	Station 2 Task 5	N/A	Station 2 Task 4
Maintain operators part of equipment record folder	Station 2 Task 6	Station 2 Task 6	Station 2 Task 6	Station 2 Task 3	Station 2 Task 5
Identify terrain features on a map	Station 3 Task 1	Station 3 Task 1	Station 3 Task 1	Station 3 Task 1	Station 3 Task 1

19K Summary of Performance Tasks and Version Placement (Cont'd)

Task Name	Version A	Version B	Version C	Version D	Version E
Determine grid coordinates on a military map	Station 3 Task 2	Station 3 Task 2	Station 3 Task 2	Station 3 Task 2	Station 3 Task 2
Estimate range	N/A	Station 3 Task 3	N/A	N/A	N/A
Splint a suspected fracture	Station 3 Task 3	Station 3 Task 4	Station 3 Task 3	Station 3 Task 3	Station 3 Task 3
Put on a field or pressure dressing	Station 3 Task 4	Station 3 Task 5	Station 3 Task 4	Station 3 Task 4	Station 3 Task 4
Prepare loader's station for operations on an M1/M1A1 tank	Station 4 Task 1	Station 4 Task 2	Station 4 Task 1	Station 4 Task 3	Station 4 Task 3
Clear and load an M240 machine gun	Station 4 Task 3	Station 4 Task 4	Station 4 Task 3	Station 4 Task 4	Station 4 Task 4
Load/unload the 105mm main gun on an M1/M1A1 tank	Station 4 Task 4	Station 4 Task 5	Station 4 Task 4	Station 4 Task 5	Station 4 Task 5
Secure loader's station on an M1/M1A1 tank	Station 4 Task 5	Station 4 Task 6	Station 4 Task 5	Station 4 Task 6	Station 4 Task 6
Clear a .50 cal M2 HB machine gun to prevent accidental discharge	Station 4 Task 7	Station 4 Task 8	Station 4 Task 7	Station 5 Task 2	Station 5 Task 2
Inspect 120mm ammunition for serviceability	Station 4 Task 8	Station 4 Task 1	Station 4 Task 6	Station 4 Task 7	Station 4 Task 7

19K Summary of Performance Tasks and Version Placement (Cont'd)

Task Name	Version A	Version B	Version C	Version D	Version E
Install/remove the loader's machine gun on an M1/M1A1 tank	Station 4 Task 2 Task 6	Station 4 Task 3 Task 7	Station 4 Task 2	N/A	N/A
Maintain an M9 pistol	Station 1 Task 1	Station 5 Task 1	Station 5 Task 1	Station 5 Task 1	Station 5 Task 1
Load an M16A1 rifle	Station 1 Task 2	N/A	N/A	N/A	N/A
Load, reduce stoppage and clear an M16A1/A2 rifle	N/A	Station 5 Task 2	N/A	N/A	N/A
Unload an M16A1/M16A2 rifle	Station 1 Task 3	N/A	Station 5 Task 2	N/A	N/A
Clear an M16A1/A2 rifle	N/A	N/A	N/A	Station 5 Task 3	Station 5 Task 3
Correct malfunctions of an M16A1 rifle	Station 1 Task 4	N/A	N/A	N/A	N/A
Recognize friendly and threat vehicles and aircraft	Station 1 Task 5	Station 5 Task 3	Station 5 Task 3	Station 5 Task 4	Station 5 Task 4
Prepare/Operate FM radio set	Station 1 Task 6	Station 5 Task 4	N/A	Station 4 Task 1	Station 4 Task 1
Prepare radio set AN/VRC-64 or AN/GRC-160 for operation	N/A	N/A	Station 5 Task 4	N/A	N/A

19K Summary of Performance Tasks and Version Placement (Cont'd)

Task Name	Version A	Version B	Version C	Version D	Version E
Operate radio set AN/VRC-64 or AN/GRC-160	N/A	N/A	Station 5 Task 5	N/A	N/A
Operate intercommunication set AN/VRC-1 on a tracked vehicle	Station 1 Task 7	Station 5 Task 5	Station 5 Task 6	N/A	N/A
Send a radio message	Station 1 Task 8	Station 5 Task 6	Station 5 Task 7	Station 4 Task 2	Station 4 Task 2
Communicate using visual signaling techniques mounted	N/A	N/A	N/A	Station 4 Task 8	Station 4

APPENDIX H

DEMOGRAPHIC DATA: CITIZENSHIP CODES

DEMOGRAPHIC DATA: Citizenship Codes

AIR FORCE/NAVY
USA = United States
UK = United Kingdom
(Other than the above: first four characters of native country)

ARMY
AD = U.S. National (non-citizen)
AY = U.S. National (non-citizen)
CA = U.S. Citizen (native)
CB = U.S. Citizen (naturalized parents)
CC = U.S. Citizen Born Outside Continental USA
CD = Naturalized U.S. Citizen
CY = U.S. Citizen (other)
NY = Non-U.S. Citizen
ZD = Non-U.S. Citizen

APPENDIX I

DEMOGRAPHIC DATA: ETHNIC GROUP CODES

DEMOGRAPHIC DATA: Ethnic Group Codes

1 = Spanish Decent
2 = American Indian
3 = Asian American
4 = Puerto Rican
5 = Filipino
6 = Mexican American
7 = Eskimo
8 = Aleut
9 = Cuban
G = Chinese
J = Japanese
K = Korean
L = Polynesian
Q = Other Pacific islander
S = Spanish Decent from
Central America
V = Vietnamese
X = Other
Y = None
Z = Unknown

APPENDIX J

DEMOGRAPHIC DATA: PREDICTOR DATA MERGE STATUS FLAG

DEMOGRAPHIC DATA: Predictor Data Merge Status Flag

Note: Since the following codes represent data collected across different projects, there may be more than one code representing a similar action. These codes represent the status of merging the original full predictor database.

A, 0 = All Data Present
B, 2 = Personal Data Missing
C = Personal and CAT/P&P Data Missing
D = CAT/P&P Data Missing
E, 1 = ECAT Data Missing
F = ECAT and Personal Data Missing
G = ECAT and CAT/P&P DATA Missing

APPENDIX K

DEMOGRAPHIC DATA: STATE ABBREVIATIONS

DEMOGRAPHIC DATA: State Abbreviations

AK = Alaska
AL = Alabama
AR = Arkansas
AZ = Arizona
CA = California
CO = Colorado
CT = Connecticut
DE = Deleware
FL = Florida
GA = Georgia
HI = Hawaii
IA = Iowa
ID = Idaho
IL = Illinois
IN = Indiana
KS = Kansas
KY = Kentucky
LA = Louisiana
MA = Massachussetts
MD = Maryland
ME = Maine
MI = Michigan
MN = Maine
MO = Missouri
MS = Mississippi
MT = Montana
NC = North Carolina
ND = North Dakota
NE = Nebraska
NH = New Hampshire
NJ = New Jersery
NM = New Mexico
NV = Nevada
NY = New York
OH = Ohio
OK = Oklahoma
OR = Oregon
PA = Pennsylvania
RI = Rhode Island
SC = South Carolina
SD = South Dakota
TN = Tennessee
TX = Texas
UT = Utah
VA = Virginia
VT = Vermont
WA = Washington
WI = Wisconsin
WY = Wyoming
WV = West Virginia

APPENDIX L

DEMOGRAPHIC DATA: LEVEL OF EDUCATION CODES

DEMOGRAPHIC DATA: Level of Education Codes

1 = Did not graduate from High School
7 = Correspondence School Diploma
8 = Completed 1 Semester at a College or University
B = Adult Education Program
C = Occupational Program Certificate
D = Associate Degree
E = Test-based Equivalency Diploma
G = Professional Nursing Diploma
H = Home Study Diploma
J = High School Certificate of Attendance
K = Baccalaureate Degree
L = High School Graduate
M = Credential Near Completion
N = Master's Degree
R = Post Master's Degree
S = Current High School Senior
U = Doctorate
W = First Professional Degree

APPENDIX M

PRE-ENLISTMENT AND TEST SITE DATA: MOS/AFSC NEC SCHOOL CODES

PRE-ENLISTMENT AND TEST SITE DATA: MOS/AFSC/NEC School Codes

Navy

AC = Air Controlman
AE = Aviation Electrician's Mate
AMS = Aviation Structural Mechanic (Structures (AMS)
AM = Aviation Structural Mechanic (Structures) (AMS)
A8 = Aviation Structural Mechanic (Structures) (AMS)
AO = Aviation Ordnanceman
AQ = Aviation Fire Control Technician
AT = Aviation Electronics Technician
AX = Aviation Anti-Submarine Warfare Technician
EM = Electrician's Mate
ET = Electronics Technician
FC = Fire Control Technician
GM = Gunner's Mate (GMG)
GMG = Gumnner's Mate (GMG)
MM = Machinist's Mate
OS = Operations Specialist
RM = Radioman

Air Force

272 = Air Force Air Traffic Controller
732 = Air Force Personnel Specialist

Army

13F = Ft. Sill - Artillery Specialist
11H = Ft. Benning - Tow Missile Specialist
19K = Ft. Knox - M1 Tank Crewman

APPENDIX N

ECAT EXAMINEE INFORMATION DATA: ECAT SYSTEM VERSION NUMBERS

ECAT EXAMINEE INFORMATION DATA: ECAT System Version Numbers

5.0 : 97-record version first used 910307 (Final Version)
4.0 : 97-record version first used 910312 (Updated Subtest Headers, contained defective ID Subtest Item Accuracies)
3.5 : 97-record version first used 910326 (Contained incomplete Subtest Headers)
3.0 : 97-record version first used 910203 (Contained incomplete Subtest Headers, defective ID Subtest Item Accuracies)
2.0 : 93-record version first used 900817 (Numberd to differentiate from earlier 93-record version)
1.5 : 93-record version first used 900513 (Removed answer keys from SM Subtest, improved ID Subtest)
1.0 : 98-record version first used 900201 (Initial ECAT version)