

AD-A182 702

HISTORICAL RESEARCH AND DEVELOPMENT INFLATION INDICES
FOR US ARMY TROOP S (U) ARMY TROOP SUPPORT COMMAND ST
LOUIS MO W H GILLE ET AL APR 87
TROSCOM-COST-MEMO-87-2

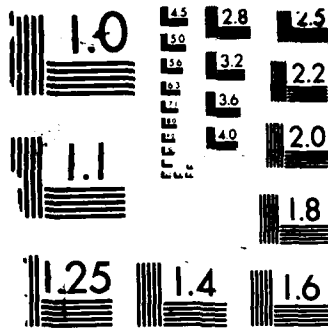
1/1

UNCLASSIFIED

F/G 5/1

NL

								END					
								8-87					
								DTIC					



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963-A

AD-A182 702

1

DTIC FILE COPY

AD

COST MEMORANDUM

87-2

HISTORICAL RESEARCH AND DEVELOPMENT
INFLATION INDICES FOR U.S. ARMY
TROOP SUPPORT ITEMS

DTIC
ELECTE
JUL 10 1987
S D D

WARREN H. GILLE, JR.
CYNTHIA R. PHILLIPS

APRIL 1987

DISTRIBUTION STATEMENT A
Approved for public release
Distribution Unlimited

**U.S. ARMY TROOP SUPPORT
COMMAND (TROSCOM)
DIRECTORATE FOR
RESOURCE MANAGEMENT
COST ANALYSIS DIVISION
4300 GOODFELLOW BLVD.
ST. LOUIS, MISSOURI 63120**



DISPOSITION

Destroy this study when no longer needed. Do not return it to the originator.

DISCLAIMER

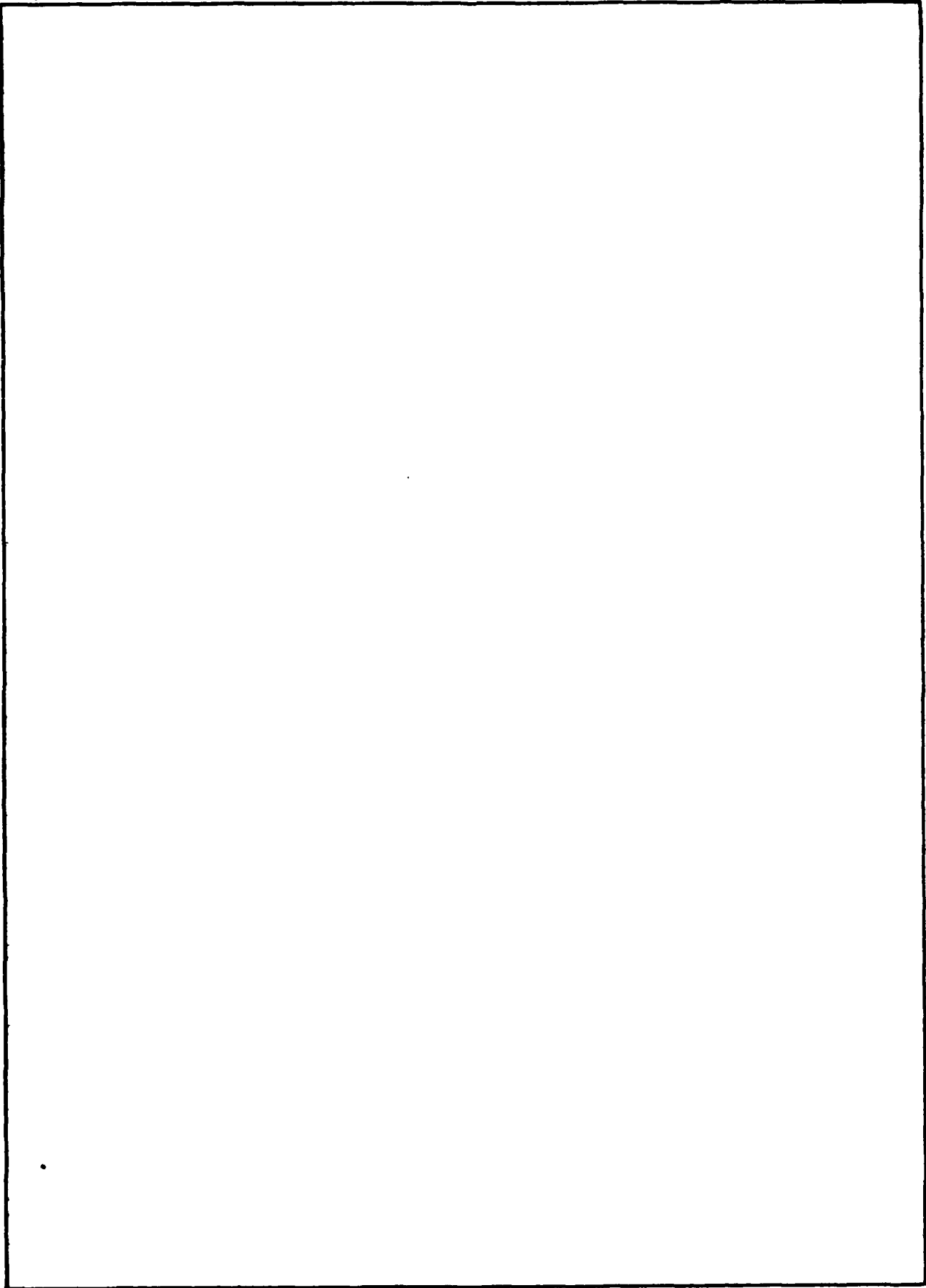
The views, opinions, and/or findings contained in this memorandum are those of the author(s) and should not be construed as an official Department of the Army position, policy, or decision unless so designated by other documentation.

WARNING

Information and data contained in this document are based on the input available at the time of preparation. Because the results may be subject to change, this document should not be construed to represent the official position of the U.S. Army Materiel Command unless so stated.

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER TROSCOM COST MEMORANDUM 87-02	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) HISTORICAL RESEARCH AND DEVELOPMENT INFLATION INDICES FOR U.S. ARMY TROOP SUPPORT ITEMS	5. TYPE OF REPORT & PERIOD COVERED APR 87 - APR 89	
	6. PERFORMING ORG. REPORT NUMBER	
7. AUTHOR(s) WARREN H. GILLE, JR. CYNTHIA R. PHILLIPS	8. CONTRACT OR GRANT NUMBER(s)	
9. PERFORMING ORGANIZATION NAME AND ADDRESS USATROSCOM, DIRECTORATE FOR RESOURCE MANAGEMENT, COST ANALYSIS DIVISION, ATTN: AMSTR-CCP, 4300 GOODFELLOW BLVD. ST. LOUIS, MO 63120-1798	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS	
11. CONTROLLING OFFICE NAME AND ADDRESS	12. REPORT DATE APRIL 1987	
	13. NUMBER OF PAGES 30	
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)	15. SECURITY CLASS. (of this report) UNCLASSIFIED	
	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE	
16. DISTRIBUTION STATEMENT (of this Report) APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) RESEARCH AND DEVELOPMENT HISTORICAL INFLATION FACTORS PPI CODES R&D COMMANDS		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) THE INDICES CONTAINED IN THIS PAPER HAVE BEEN DEVELOPED FOR PM-MOBILE ELECTRICAL POWER, FT. BELVOIR, AND NATICK R&D CENTER TO PROVIDE HISTORICAL RESEARCH AND DEVELOPMENT INFLATION INDICES. THESE INDICES ARE USED IN THE ADJUSTMENT OF HISTORICAL R&D PROJECT COSTS FOR U.S. ARMY TROOP SUPPORT ITEMS. THE INDICES ARE BROKEN OUT BY PRODUCER PRICE INDEX (PPI) CODE USED AT EACH COMMAND, AN AGGREGATE COMMAND INDEX, AND AN OVERALL <u>TROSCOM</u> INDEX.		

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)



SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

HISTORICAL RESEARCH AND DEVELOPMENT
 INFLATION INDICES FOR U.S. ARMY
 TROOP SUPPORT ITEMS

WARREN H. GILLE, JR.
 CYNTHIA R. PHILLIPS

COST ANALYSIS DIVISION
 DIRECTORATE FOR RESOURCE MANAGEMENT
 US ARMY TROOP SUPPORT COMMAND
 (TROSCOM)

APRIL 1987

Accession For	
NTIS CRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	

VALIDATION TROSCOM RESOURCE MANAGEMENT DIRECTORATE COST ANALYSIS DIVISION	
CECDC	REVIEW NO. <u>4028</u>
VALIDATED	
VALIDATION LEVEL	: I, II, III
DATE	<u>14 Apr 87</u> EXPIRES: <u>13 Apr 88</u>
ANALYST	<u>K. Brown</u> PHONE NO. <u>693-2357</u>
SUPERVISOR SIGNATURE	<u>MS</u>
REMARK BELOW:	YES _____ NO <input checked="" type="checkbox"/>



William E. Becher
 WILLIAM E. BECHER
 Chief, Program/Validation Branch
 Directorate for Resource Management

Clarence H. Goetsch
 CLARENCE H. GOETSCH
 Chief, Cost Analysis Division
 Directorate for Resource Management

ACKNOWLEDGEMENTS

The authors wish to thank Mr. David Katz of the TROSCOM Financial Resources and Operations Branch, Program and Budget Division, Directorate for Resource Management for his assistance in the preparation of this research paper.

HISTORICAL RESEARCH AND DEVELOPMENT

INFLATION INDICES FOR U.S. ARMY

TROOP SUPPORT ITEMS

TABLE OF CONTENTS

	<u>PAGE</u>
I. STATEMENT OF APPLICABILITY	1
II. INFLATION INDICES FOR RESEARCH AND DEVELOPMENT - AN OVERVIEW	2
A. INTRODUCTION	2
B. METHODOLOGY	2
C. SOURCES OF DATA	2
D. RESULTS	3
III. DATA AND ANALYSIS	3-4
IV. CALCULATION OF INDEX NUMBERS	5-20
V. HISTORICAL INFLATION INDICES FOR RESEARCH AND DEVELOPMENT	21-26
A. HISTORICAL R&D INFLATION INDICES	22-24
A.1 P.M. FOR MOBILE ELECTRIC POWER (MEP)	22
A.2 NATICK RESEARCH AND DEVELOPMENT CENTER	23
A.3 BELVOIR RESEARCH AND DEVELOPMENT CENTER	24
B. HISTORICAL R&D INFLATION INDEX SUMMARY FOR TROSCOM	25
C. HISTORICAL INFLATION INDICES FOR R&D BY MAJOR ITEM CATEGORY	26
IV. REFERENCES	27

I. APPLICABILITY.

The inflation indices and factors in this report have been developed for use in the adjustment of historical research and development costs for U.S. Army troop support items, whose procurement is covered under the Other Procurement, Army (OPA) appropriation. Due to the wide variety of troop support items, the indices in this paper must be general in nature. It is the user's responsibility to obtain additional assistance from the TROSCOM Inflation Focal Point, Cost Analysis Division, Directorate for Resource Management, in those instances in which the application of these indices is not well defined.

II. INFLATION INDICES FOR RESEARCH AND DEVELOPMENT - AN OVERVIEW.

A. INTRODUCTION.

The term "Troop Support Item" is a very broad term and applies to thousands of heterogeneous commodities procured by this command. More than 100 Producer Price Indices have been used in their procurement over the past fifteen years. Items in troop support range from fire retardant clothing to flat car mounted mobile electric power conditioners. Due to the variety of items in troop support and their varying levels of complexity, the development of historical research and development inflation indices has been regarded as an ominous task.

In March 1984, AMC Cost Analysis tasked this office with developing historical research and development inflation indices for TROSCOM. With the assistance of the TROSCOM Budget Division, a questionnaire was developed and used to survey the R&D Centers. The Kansas City Bureau of Labor Statistics (BLS) Regional Office and the Office of Personnel Management (OPM) were contacted for the additional data needed to complete the study. This is the third edition of that study.

B. METHODOLOGY.

The computation of the historical indices for Research and Development is accomplished in five steps:

1. A weighted average cost index for labor skills is calculated for contract workers using BLS data.
2. The weighted average cost index for contract workers is combined with the cost index for government workers to get the total labor index.
3. The total labor index is combined with the most appropriate Producer Price Index from the Troop Support Inflation Program to get the historical inflation index for each R&D project group.
4. The project group indices are combined to obtain an index for each R&D center.
5. The indices for the R&D centers are combined to obtain the TROSCOM historical R&D index.

C. SOURCES OF DATA.

The sources of data are as follows:

1. Specific data concerning R&D activities was provided by the R&D centers.
2. Labor wage data and material cost data were supplied by the Kansas City Regional Office, Bureau of Labor Statistics, U.S. Department of Labor.
3. Information concerning government wage cost escalation came from Public Law as administered by the Office of Personnel Management.

4. Budget data for R&D Activities was provided by the TROSCOM Procurement/R&D/Stock Fund Branch, Program and Budget Division, Directorate for Resource Management.

D. RESULTS.

The results are displayed below in Section V.

III. DATA AND ANALYSIS.

The data was provided by four sources listed in section II c above. A list of the data supplied by each and some analysis follows:

The data provided by the R&D Centers were gathered by questionnaire in the month of May 1985 and are highlighted below:

<u>QUESTION</u>	<u>REPLY</u>		
	<u>NATICK</u>	<u>BELVOIR</u>	<u>MEP</u>
1. Percent of RDT&E contracted out as a percent of total program dollars.	17.5%	65.5%	68.0%
2. Percent of RDT&E labor cost which may be classified as engineering labor cost.	12.5%	55.0%	64.0%
3. Percent of RDT&E labor cost which may be classified as engineering technician labor cost.	82.5%	37.0%	29.0%
4. Percent of RDT&E labor cost which may be classified as clerical and administrative labor cost.	5.0%	8.0%	7.0%
5. Percentage split labor/raw material for all projects in-house and contract. (figure excludes overhead, travel, and nonmaterial variable costs).	82% labor 18% mat'l	53% labor 47% mat'l	40% labor 60% mat'l

The data provided by the Bureau of Labor Statistics were the following:

<u>DESCRIPTION</u>	<u>CODE</u>	<u>TITLE</u>
1. Historical Material Data (From <u>Producer Prices and Price Indexes</u>).	PPI 10-7	Fab. Structural Metal Products
	PPI 11	Machinery and Equipment
	PPI 11-2	Construction Mach. & Equipment
	PPI 11-6	Special Ind. Mach. & Equipment
	PPI 11-7	Electrical Mach. & Equipment
	PPI 03-15	Industrial Commodities

2. Historical Data for Salaries	TYP1ST II	Annual Calendar Year Wage Data
(From <u>National Survey of</u>	ENG. TECH III	Annual Calendar Year Wage Data
<u>Professional, Administrative,</u>	ENGINEER V	Annual Calendar Year Wage Data
<u>and Clerical Pay</u>)		

Other data used in this study came from the sources listed under IV. References on pp. 27 of this document. When required, this office normalized data to the standard fiscal year format used by the Federal government.

IV. CALCULATION OF INDEX NUMBERS

CONTRACT LABOR
Eng./Tech./Admin.
Index

COMMAND: Mobile Electric Power

FY	(.64) ENGINEER*	(.29) ENG. TECH*	(.07) CLERICAL*	WEIGHTED AVG. CONTRACT INDEX
--	-----	-----	-----	-----
67	100.0	100.0	100.0	100.0
68	105.1	104.3	105.7	104.9
69	110.7	110.0	110.7	110.5
70	117.0	116.6	117.1	116.9
71	123.6	124.4	124.1	123.8
72	129.3	131.2	131.0	130.0
73	135.1	137.2	137.0	135.8
74	142.2	144.1	144.2	142.9
75	152.2	153.9	156.5	153.0
76	164.3	166.4	170.0	165.3
77	175.6	178.7	182.4	176.9
78	189.4	191.4	196.8	190.5
79	206.5	205.0	213.7	206.6
80	224.7	224.0	232.8	225.1
81	246.8	246.7	257.4	247.5
82	273.4	271.1	287.3	273.7
83	298.1	293.1	317.4	298.0
84	318.1	308.1	333.1	316.3
85	334.6	320.2	341.5	330.9
86	350.2	331.1	360.3	345.3

* National Survey of Professional, Administrative, Technical, and Clerical Pay.

COMMAND: Mobile Electric Power

COMMAND LABOR INDEX

FY	(.32)	(.68)	MEP TOTAL LABOR INDEX
	GOV'T INDEX**	CONTRACT INDEX	
67	100.0	100.0	100.0
68	103.4	104.9	104.4
69	109.6	110.5	110.2
70	123.2	116.9	118.9
71	130.6	123.8	126.0
72	138.1	130.0	132.6
73	147.3	135.8	139.5
74	154.4	142.9	146.6
75	162.5	153.0	156.0
76	171.0	165.3	167.1
77	181.9	176.9	178.5
78	194.6	190.5	191.8
79	205.3	206.6	206.2
80	219.7	225.1	223.3
81	239.7	247.5	245.0
82	251.2	273.7	266.5
83	261.2	298.0	286.2
84	271.6	316.3	302.0
85	281.1	330.9	314.9
86	289.4	345.3	327.4

** Office of Personnel Management (OPM), under Public Law

COMMAND INDEX CALCULATION

Projects with PPI Code 11-7

COMMAND: Mobile Electric Power

FY	40% LABOR	60% MAT'L	INDEX
67	100.0	99.04	99.4
68	104.4	100.43	102.0
69	110.2	101.95	105.2
70	118.9	104.43	110.2
71	126.0	108.39	115.4
72	132.6	109.85	118.9
73	139.5	111.12	122.5
74	146.6	115.72	128.1
75	156.0	135.45	143.7
76	167.1	144.00	153.2
77	178.5	152.07	162.7
78	191.8	162.00	173.9
79	206.2	174.84	187.4
80	223.3	196.02	207.0
81	245.0	215.60	227.4
82	266.5	229.70	244.4
83	286.2	237.70	257.1
84	302.0	246.65	268.8
85	314.9	253.04	277.8
86	327.4	256.49	284.9

CONTRACT LABOR
Eng./Tech./Admin.
Index

COMMAND: Natick R&D Center

FY	(.125) ENGINEER*	(.825) ENG. TECH*	(.05) CLERICAL*	WEIGHTED AVG. CONTRACT INDEX
---	-----	-----	-----	-----
67	100.0	100.0	100.0	100.0
68	105.1	104.3	105.7	104.5
69	110.7	110.0	110.7	110.1
70	117.0	116.6	117.1	116.7
71	123.6	124.4	124.1	124.3
72	129.3	131.2	131.0	130.9
73	135.1	137.2	137.0	136.9
74	142.2	144.1	144.2	143.9
75	152.2	153.9	156.5	153.8
76	164.3	166.4	170.0	166.3
77	175.6	178.7	182.4	178.5
78	189.4	191.4	196.8	191.4
79	206.5	205.0	213.7	205.7
80	224.7	224.0	232.8	224.5
81	246.8	246.7	257.4	247.3
82	273.4	271.1	287.3	272.2
83	298.1	293.1	317.4	295.0
84	318.1	308.1	333.1	310.6
85	334.6	320.2	341.5	323.1
86	350.2	331.1	360.3	334.9

* National Survey of Professional, Administrative, Technical, and Clerical Pay

COMMAND: Natick R&D Center

COMMAND LABOR INDEX

FY	(.825) GOV'T INDEX**	(.175) CONTRACT INDEX	NATICK TOTAL LABOR INDEX
67	100.0	100.0	100.0
68	103.4	104.5	103.6
69	109.6	110.1	109.7
70	123.2	116.7	122.1
71	130.6	124.3	129.5
72	138.1	130.9	136.8
73	147.3	136.9	145.5
74	154.4	143.9	152.6
75	162.5	153.8	161.0
76	171.0	166.3	170.2
77	181.9	178.5	181.3
78	194.6	191.4	194.0
79	205.3	205.7	205.4
80	219.7	224.5	220.5
81	239.7	247.3	241.0
82	251.2	272.2	254.9
83	261.2	295.0	267.1
84	271.6	310.6	278.4
85	281.1	323.1	288.4
86	289.4	334.9	297.4

** Office of Personnel Management (OPM), under Public Law

COMMAND INDEX CALCULATION

Projects with PPI Code 10-7

 COMMAND: Natick R&D Center

FY	82% LABOR	18% MAT'L	INDEX
---	-----	-----	-----
67	100.0	99.44	99.9
68	103.6	100.89	103.1
69	109.7	103.79	108.6
70	122.1	108.80	119.7
71	129.5	115.10	126.9
72	136.8	120.92	134.0
73	145.5	124.18	141.7
74	152.6	136.91	149.7
75	161.0	183.18	165.0
76	170.2	191.32	174.0
77	181.3	203.15	185.2
78	194.0	221.39	199.0
79	205.4	242.75	212.1
80	220.5	265.23	228.6
81	241.0	289.28	249.7
82	254.9	304.22	263.8
83	267.1	303.50	273.7
84	278.4	308.70	283.9
85	288.4	314.13	293.1
86	297.4	315.54	300.6

COMMAND INDEX CALCULATION

Projects with PPI Code 11-7

 COMMAND: Natick R&D Center

FY	82% LABOR	18% MAT'L	INDEX
---	-----	-----	-----
67	100.0	99.04	99.8
68	103.6	100.43	103.0
69	109.7	101.95	108.3
70	122.1	104.43	118.9
71	129.5	108.39	125.7
72	136.8	109.85	132.0
73	145.5	111.12	139.3
74	152.6	115.72	145.9
75	161.0	135.45	156.4
76	170.2	144.00	165.5
77	181.3	152.07	176.0
78	194.0	162.00	188.3
79	205.4	174.84	199.9
80	220.5	196.02	216.1
81	241.0	215.60	236.4
82	254.9	229.70	250.3
83	267.1	237.70	261.8
84	278.4	246.65	272.7
85	288.4	253.04	282.1
86	297.4	256.49	290.0

COMMAND INDEX CALCULATION

Projects with PPI Code 03-15

 COMMAND: Natick R&D Center

FY	82% LABOR	18% MAT'L	INDEX
---	-----	-----	-----
67	100.0	99.36	99.9
68	103.6	101.25	103.2
69	109.7	104.11	108.7
70	122.1	107.92	119.5
71	129.5	111.94	126.3
72	136.8	115.98	133.1
73	145.5	121.01	141.1
74	152.6	136.46	149.7
75	161.0	166.20	161.9
76	170.2	177.98	171.6
77	181.3	191.89	183.2
78	194.0	205.26	196.1
79	205.4	227.72	209.4
80	220.5	266.47	228.8
81	241.0	297.74	251.2
82	254.9	310.95	265.0
83	267.1	314.83	275.7
84	278.4	321.31	286.1
85	288.4	323.50	294.8
86	297.4	315.85	300.7

CONTRACT LABOR
Eng./Tech./Admin.
Index

COMMAND: Belvoir R&D Center

FY	(.55) ENGINEER*	(.37) ENG. TECH*	(.08) CLERICAL*	WEIGHTED AVG. CONTRACT INDEX
--	-----	-----	-----	-----
67	100.0	100.0	100.0	100.0
68	105.1	104.3	105.7	104.8
69	110.7	110.0	110.7	110.4
70	117.0	116.6	117.1	116.8
71	123.6	124.4	124.1	123.9
72	129.3	131.2	131.0	130.1
73	135.1	137.2	137.0	136.0
74	142.2	144.1	144.2	143.1
75	152.2	153.9	156.5	153.2
76	164.3	166.4	170.0	165.5
77	175.6	178.7	182.4	177.3
78	189.4	191.4	196.8	190.7
79	206.5	205.0	213.7	206.6
80	224.7	224.0	232.8	225.1
81	246.8	246.7	257.4	247.6
82	273.4	271.1	287.3	273.7
83	298.1	293.1	317.4	297.8
84	318.1	308.1	333.1	315.6
85	334.6	320.2	341.5	329.8
86	350.2	331.1	360.3	343.9

* National Survey of Professional, Administrative, Technical, and Clerical Pay

COMMAND: Belvoir R&D Center

COMMAND LABOR INDEX

FY	(.345) GOV'T INDEX**	(.655) CONTRACT INDEX	BELVOIR TOTAL LABOR INDEX
67	100.0	100.0	100.0
68	103.4	104.8	104.3
69	109.6	110.4	110.1
70	123.2	116.8	119.0
71	130.6	123.9	126.2
72	138.1	130.1	132.9
73	147.3	136.0	139.9
74	154.4	143.1	147.0
75	162.5	153.2	156.4
76	171.0	165.5	167.4
77	181.9	177.3	178.9
78	194.6	190.7	192.1
79	205.3	206.6	206.1
80	219.7	225.1	223.2
81	239.7	247.6	244.9
82	251.2	273.7	265.9
83	261.2	297.8	285.2
84	271.6	315.6	300.4
85	281.1	329.8	313.0
86	289.4	343.9	325.1

** Office of Personnel Management (OPM), under Public Law

COMMAND INDEX CALCULATION

Projects with PPI Code 10-7

 COMMAND: Belvoir R&D Center

FY	53% LABOR	47% MAT'L	INDEX
---	-----	-----	-----
67	100.0	99.44	99.7
68	104.3	100.89	102.7
69	110.1	103.79	107.1
70	119.0	108.80	114.2
71	126.2	115.10	121.0
72	132.9	120.92	127.3
73	139.9	124.18	132.5
74	147.0	136.91	142.3
75	156.4	183.18	169.0
76	167.4	191.32	178.6
77	178.9	203.15	190.3
78	192.1	221.39	205.8
79	206.1	242.75	223.3
80	223.2	265.23	243.0
81	244.9	289.28	265.7
82	265.9	304.22	283.9
83	285.2	303.50	293.8
84	300.4	308.70	304.3
85	313.0	314.13	313.5
86	325.1	315.54	320.6

COMMAND INDEX CALCULATION

Projects with PPI Code 11

COMMAND: Belvoir R&D Center

FY	53% LABOR	47% MAT'L	INDEX
67	100.0	98.73	99.4
68	104.3	101.47	103.0
69	110.1	104.70	107.6
70	119.0	108.90	114.3
71	126.2	113.70	120.3
72	132.9	116.70	125.3
73	139.9	119.34	130.2
74	147.0	126.87	137.5
75	156.4	153.52	155.0
76	167.4	167.26	167.3
77	178.9	178.69	178.8
78	192.1	192.15	192.1
79	206.1	209.05	207.5
80	223.2	233.08	227.9
81	244.9	257.70	250.9
82	265.9	275.95	270.6
83	285.2	284.82	285.0
84	300.4	291.30	296.1
85	313.0	297.67	305.8
86	325.1	302.13	314.3

COMMAND INDEX CALCULATION

Projects with PPI Code 11-2

COMMAND: Belvoir R&D Center

FY	53% LABOR	47% MAT'L	INDEX
67	100.0	98.10	99.1
68	104.3	102.80	103.6
69	110.1	107.91	109.1
70	119.0	113.00	116.2
71	126.2	119.07	122.9
72	132.9	123.62	128.5
73	139.9	127.66	134.2
74	147.0	136.55	142.1
75	156.4	172.83	164.1
76	167.4	193.50	179.7
77	178.9	209.52	193.3
78	192.1	227.43	208.7
79	206.1	250.20	226.8
80	223.2	280.85	250.3
81	244.9	313.34	277.1
82	265.9	339.41	300.5
83	285.2	350.47	315.9
84	300.4	356.02	326.6
85	313.0	361.14	335.6
86	325.1	365.50	344.1

COMMAND INDEX CALCULATION

Projects with PPI Code 11-6

 COMMAND: Belvoir R&D Center

FY	53% LABOR	47% MAT'L	INDEX
---	-----	-----	-----
67	100.0	98.22	99.2
68	104.3	102.45	103.5
69	110.1	107.45	108.9
70	119.0	112.92	116.2
71	126.2	118.37	122.5
72	132.9	122.52	128.0
73	139.9	125.93	133.3
74	147.0	137.57	142.6
75	156.4	165.70	160.8
76	167.4	183.45	174.9
77	178.9	198.18	187.9
78	192.1	217.50	204.0
79	206.1	241.31	222.7
80	223.2	267.50	244.0
81	244.9	301.14	271.3
82	265.9	321.73	292.1
83	285.2	334.05	308.1
84	300.4	346.06	321.9
85	313.0	357.30	333.8
86	325.1	367.92	345.2

COMMAND INDEX CALCULATION

Projects with PPI Code 03-15

COMMAND: Belvoir R&D Center

FY	53% LABOR	47% MAT'L	INDEX
67	100.0	99.36	99.7
68	104.3	101.25	102.9
69	110.1	104.11	107.3
70	119.0	107.92	113.8
71	126.2	111.94	119.5
72	132.9	115.98	124.9
73	139.9	121.01	131.0
74	147.0	136.46	142.0
75	156.4	166.20	161.0
76	167.4	177.98	172.4
77	178.9	191.89	185.0
78	192.1	205.26	198.3
79	206.1	227.72	216.3
80	223.2	266.47	243.6
81	244.9	297.74	269.7
82	265.9	310.95	287.1
83	285.2	314.83	299.1
84	300.4	321.31	310.2
85	313.0	323.50	317.9
86	325.1	315.85	320.8

V. HISTORICAL INFLATION INDICES
FOR
RESEARCH AND DEVELOPMENT

A.1.

PM for Mobile Electric Power

Historical Inflation Indices for R&D

FY	MEP INDEX
--	----
67	99.4
68	102.0
69	105.2
70	110.2
71	115.4
72	118.9
73	122.5
74	128.1
75	143.7
76	153.2
77	162.7
78	173.9
79	187.4
80	207.0
81	227.4
82	244.4
83	257.1
84	268.8
85	277.8
86	284.9

PERCENTAGE WEIGHT BY CODE: 11-7 100%

BASED ON 1985 STANDARD SURVEY RESULTS

A.2.

Natick Research and Development Center

Historical Inflation Indices for R&D

FY	CODE 10-7	CODE 11-7	CODE 03-15	Natick Index
67	99.9	99.8	99.9	99.9
68	103.1	103.0	103.2	103.2
69	108.6	108.3	108.7	108.7
70	119.7	118.9	119.5	119.5
71	126.9	125.7	126.3	126.4
72	134.0	132.0	133.1	133.2
73	141.7	139.3	141.1	141.1
74	149.7	145.9	149.7	149.6
75	165.0	156.4	161.9	162.3
76	174.0	165.5	171.6	171.8
77	185.2	176.0	183.2	183.4
78	199.0	188.3	196.1	196.4
79	212.1	199.9	209.4	209.6
80	228.6	216.1	228.8	228.7
81	249.7	236.4	251.2	250.9
82	263.8	250.3	265.0	264.7
83	273.7	261.8	275.7	275.3
84	283.9	272.7	286.1	285.7
85	293.1	282.1	294.8	294.4
86	300.6	290.0	300.7	300.6

PERCENTAGE WEIGHT BY CODE:	10-7	13%
	11-7	1%
	03-15	86%

		100%

BASED ON 1985 STANDARD SURVEY RESULTS

A.3.

Belvoir Research and Development Center

Historical Inflation Indices for R&D

FY	CODE 10-7	CODE 11	CODE 11-2	CODE 11-6	CODE 03-15	Belvoir Index
67	99.7	99.4	99.1	99.2	99.7	99.6
68	102.7	103.0	103.6	103.5	102.9	102.9
69	107.1	107.6	109.1	108.9	107.3	107.4
70	114.2	114.3	116.2	116.2	113.8	114.2
71	121.0	120.3	122.9	122.5	119.5	120.3
72	127.3	125.3	128.5	128.0	124.9	125.9
73	132.5	130.2	134.2	133.3	131.0	131.5
74	142.3	137.5	142.1	142.6	142.0	141.4
75	169.0	155.0	164.1	160.8	161.0	162.4
76	178.6	167.3	179.7	174.9	172.4	173.7
77	190.3	178.8	193.3	187.9	185.0	185.8
78	205.8	192.1	208.7	204.0	198.3	200.0
79	223.3	207.5	226.8	222.7	216.3	217.4
80	243.0	227.9	250.3	244.0	243.6	240.9
81	265.7	250.9	277.1	271.3	269.7	265.7
82	283.9	270.6	300.5	292.1	287.1	284.0
83	293.8	285.0	315.9	308.1	299.1	296.0
84	304.3	296.1	326.6	321.9	310.2	307.1
85	313.5	305.8	335.6	333.8	317.9	315.8
86	320.6	314.3	344.1	345.2	320.8	321.3

PERCENTAGE WEIGHT BY CODE:		
	10-7	29%
	11	17%
	11-2	3%
	11-6	4%
	03-15	47%

		100%

BASED ON 1985 STANDARD SURVEY RESULTS

B.

U.S. Army Troop Support Command
Summary

FY	MEP Index	Natick Index	Belvoir Index	TROSCOM Avg. Index
67	99.4	99.9	99.6	99.7
68	102.0	103.2	102.9	102.9
69	105.2	108.7	107.4	107.6
70	110.2	119.5	114.2	115.6
71	115.4	126.4	120.3	121.9
72	118.9	133.2	125.9	127.6
73	122.5	141.1	131.5	133.8
74	128.1	149.6	141.4	142.7
75	143.7	162.3	162.4	160.1
76	153.2	171.8	173.7	170.6
77	162.7	183.4	185.8	182.2
78	173.9	196.4	200.0	195.6
79	187.4	209.6	217.4	211.1
80	207.0	228.7	240.9	232.6
81	227.4	250.9	265.7	256.0
82	244.4	264.7	284.0	272.5
83	257.1	275.3	296.0	284.2
84	268.8	285.7	307.1	295.1
85	277.8	294.4	315.8	303.8
86	284.9	300.6	321.3	309.7

PERCENTAGE CONTRIBUTION TO INDEX BY COMMAND

Command	Percent
MEP	11.8%
Natick	35.0%
Belvoir	53.2%
	100.0%

C.

TROSCOM Historical Inflation Indices
by PPI Code and Commodity Group

PPI Code:	(10-7) AVL Bridge/ Tanks/ Other Bridges 20.0%	(11) Pwr Plt (MUST) Firefgting Equip Forklift Trucks 9.3%	(11-2) Pumps/ Compressors 1.7%	(11-6) Theodolites Table Eqpt/ Surv Inst 2.2%	(11-7) Generators/ Light Sets/ Util Equip 12.0%	(03-15) All Other Items 54.8%	TROSCOM Wght'd Average 100.0%
67	99.8	99.4	99.1	99.2	99.4	99.8	99.7
68	102.8	103.0	103.6	103.5	102.0	103.0	102.9
69	107.5	107.6	109.1	108.9	105.3	108.1	107.6
70	115.5	114.3	116.2	116.2	110.4	117.0	115.6
71	122.3	120.3	122.9	122.5	115.6	123.3	121.9
72	128.8	125.3	128.5	128.0	119.2	129.4	127.6
73	134.6	130.2	134.2	133.3	122.8	136.6	133.8
74	144.0	137.5	142.1	142.6	128.4	146.2	142.7
75	168.1	155.0	164.1	160.8	143.9	161.5	160.1
76	177.6	167.3	179.7	174.9	153.5	171.9	170.6
77	189.1	178.8	193.3	187.9	162.9	184.0	182.3
78	204.3	192.1	208.7	204.0	174.2	197.0	195.6
79	220.8	207.5	226.8	222.7	187.6	212.5	211.2
80	239.7	227.9	250.3	244.0	207.1	235.4	232.6
81	262.1	250.9	277.1	271.3	227.5	259.5	256.0
82	279.3	270.6	300.5	292.1	244.5	274.9	272.6
83	289.2	285.0	315.9	308.1	257.2	286.2	284.2
84	299.7	296.1	326.6	321.9	268.9	297.0	295.1
85	308.9	305.8	335.6	333.8	277.9	305.1	303.8
86	316.1	314.3	344.1	345.2	285.0	309.7	309.8

IV. REFERENCES

1. Army Regulation, 37-63, Standard Army Inflation Methodology, Washington, D.C.: Headquarters, Dept. of the Army, August 1984.
2. Employment and Earnings. Washington, D.C.: U.S. Department of Labor, Bureau of Labor Statistics.
3. Historical Research and Development Inflation Indices for Army Fixed and Rotor Winged Aircraft. St. Louis, Mo.: U.S. Army Aviation Research and Development Command, Directorate for Plans and Analysis, Data Analysis and Control Division, January 1982.
4. Memorandum, subject: An Outline of Issues in the Development of Historical RDT&E Indices. St. Louis, MO: U.S. Army Troop Support and Aviation Materiel Readiness Command, Office of the Comptroller, Cost Analysis Division, January 1978.
5. National Survey of Professional, Administrative, and Clerical Pay. Washington, D.C.: U.S. Department of Labor, Bureau of Labor Statistics, March 1987
6. Producer Prices and Price Indexes. Washington, D.C.: U.S. Department of Labor, Bureau of Labor Statistics.
7. Troop Support Inflation Program. St. Louis, MO.: U.S. Army Troop Support Command, Office of the Resource Manager, Cost Analysis Division, December 1986.

END

8-87

DTIC