Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	0	12	8	5	5

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military
Science&Technology	7	0

A N AF F

7/0

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0	0	0	

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER	A	N	AF	F
ACAT IC	0				
ACAT ID	1				
ACAT II	0				
ACAT III/IV	0				
Other	3				

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
1	1	1	1

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Calculations for scoring Ques. 13, 14
TCA

Share

Total 50,293
39,988
$ 90,281 K

STN

.89 x 50,293 = 44,761 K
.88 x 39,988 = 35,189
$ 79,950 K

AVIS.

.61 x 50,293 = 30,679
.59 x 39,988 = 23,592
54,271

FELA SS

.56 x 50,293 = 28164
.53 x 39,988 = 21193.6
49357.6

Prop.

.97 x 50,293 = 48784

Adv. Mat

.97 x 50,293 = 48784

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M. 90.3 M

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
.	.
.	.
.	.

TOTAL VALUE 79.9 M

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

A N AF F

(15) ENTER: YES/NO (YES = 1, NO = 0)

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

ASC Eglin AFB
WEAPONS / BOMBS

Appendix D

Evaluation Criteria Scoring Sheets

F / 10 13
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas
Air Force LtCBinion / MR Mleziva / Mr. Frysinger
Navy Mr. Trick / CMDR Evans

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
3	3	3	3

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

	A	N	AF	F
(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)	Ø		0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

	A	N	AF	F
(5) ENTER: YES/NO (YES = 1, NO = 0)	Ø		0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	1	0	

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
1	0	0	

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	35	7	0	27
Mngmt(Supv)	11	6	0	0
Other	69	28	0	24

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	3	5
Associates	1	2
Bachelor	17	4
Masters	6	20
Doctorate	1	0

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	2	12	3	4	12

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	0	0	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0	0	0	0

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER	
ACAT IC	0	0
ACAT ID	1	1
ACAT II	0	0
ACAT III/IV	5	5
Other	0	0

A	N	AF	F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M. 0

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE 0

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

ASC Eglin AFB

WEAPONS / CONVENTIONAL MISSILES - ROCKETS

Appendix D

Evaluation Criteria Scoring Sheets

F / 10 / 10
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas

Air Force Mr. Mleziva / LtCol Nion / Mr. Frysinger

Navy Mr. Trick / CMDR Evans

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
3	5	3	3

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0		0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
	1	0	

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
	0	0	

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	70	46	0	166
Mngmt(Supv)	60	28	0	0
Other	176	124	0	225

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	4	8
Associates	1	1
Bachelor	60	27
Masters	56	69
Doctorate	2	5

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	8	19	20	14	29

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	0	0	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0	0	0	0

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER	
ACAT IC	0	0
ACAT ID	2	2
ACAT II	1	1
ACAT III/IV	9	9
Other	0	0

A	N	AF	F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE ____

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

ASC Eglm AFB

WEAPONS / GUIDED PROJECTILES

Appendix D

Evaluation Criteria Scoring Sheets

F / 10 / 12
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas

Air Force LTC BINION / MR. MEZIVA / MR. FRYSINGER

Navy MR. TRICK / CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
3	3	3	3

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0		0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
1	0		

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	10	10	0	14
Mngmt(Supv)	2	8	0	0
Other	24	19	0	16

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	0	0
Associates	0	0
Bachelor	10	2
Masters	9	12
Doctorate	1	0

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	2	3	5	4	6

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	0	0	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0	0	0	

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER	A	N	AF	F
ACAT IC	0	0			
ACAT ID	2	2			
ACAT II	1	1			
ACAT III/IV	1	1			
Other	0	0			

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M. 0

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE 0

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

A N AF F

(15) ENTER: YES/NO (YES = 1, NO = 0) 1 1 1 1

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

ASC Eglin AFB

WEAPONS / GUNS & AMMUNITION

Appendix D

Evaluation Criteria Scoring Sheets

F / 10 / 14
SVC/Activity/CSF#

EVALUATORS: Army LTC THOMAS

Air Force LTC BINION / MR. MEZIVA / MR. FRYSINGER

Navy MR. TRICK / CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
3	3	3	3

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

	A	N	AF	F
(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)	0		6	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

	A	N	AF	F
(5) ENTER: YES/NO (YES = 1, NO = 0)	0		0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A N AF F

Cultural

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	0	2	0	5
Mngmt(Supv)	2	1	0	0
Other	2	3	0	5

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	0	0
Associates	0	0
Bachelor	1	0
Masters	1	1
Doctorate	0	0

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	0	2	0	0	0

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	0	0	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0		0	0

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	5
Other	0

A	N	AF	F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		0	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A N AF F

Count the number of papers published ~~in peer reviewed~~ journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER			A	N	AF	F
ACAT IC							
ACAT ID							
ACAT II							
ACAT III/IV							
Other							

Note several of these programs show under CONV MSL/RKTS at same workyears & funding level

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Appears we are double counting

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

To receive a YES for this question the CSF ~~must~~ show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M. 0

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE 0

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

A N AF F

(15) ENTER: YES/NO (YES = 1, NO = 0) 1 1 1

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

Oklahoma City ALC

OK CITY ALC TINKER AFB

A/V FIXED STRUCTURE

Appendix D

Evaluation Criteria Scoring Sheets

F/111/1
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas

Air Force LTC BINION/MR MIEZIVA/MR. FRYSINGER

Navy MR. TRICK/CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
4	4	4	4

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

	A	N	AF	F
(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)	0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

	A	N	AF	F
(5) ENTER: YES/NO (YES = 1, NO = 0)	0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	7	1	0	0
Mngmt(Supv)	1	0	0	0
Other	0	0	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	0	0
Associates	0	0
Bachelor	6	0
Masters	2	1
Doctorate	0	0

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	1	0	1	2	4

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	0	0	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A N AF F
0 0 0

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A N AF F
0

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F
1

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

0

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE 0

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F
1 1 1 1

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

OK CITY ALC TINKER AFB

WEAPONS / CRUISE MISSILE

Appendix D

Evaluation Criteria Scoring Sheets

F / 11 / 11
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas

Air Force MR. MCELIVA / LTC BINION / MR. FRYSINGER

Navy MR. TRICK / CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
4	4	4	4

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	1	0	0	0
Mngmt(Supv)	0	0	0	0
Other	0	0	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	0	0
Associates	0	0
Bachelor	1	0
Masters	0	0
Doctorate	0	0

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	0	1	0	0	0

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	0	0	

N - 0/0,

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0	0	0	0

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER	A	N	AF	F
ACAT IC	0				
ACAT ID	0				
ACAT II	0				
ACAT III/IV	0				
Other	0				

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	N	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE ____

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

OK CITY ALC TINKER AFB
A/V FIXED AVIONICS

Appendix D

Evaluation Criteria Scoring Sheets

F / 11 / 3
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas
Air Force LTC Bunion / Mr. Mleziva / Mr. Frysinger
Navy Mr. Trick / CMDR Evans

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
4	4	4	4

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N A F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	2	1	0	0
Mngmt(Supv)	1	0	0	0
Other	0	0	0	0

Transfer of values from the matrix submitted for this CSF.

Should be:

CIV	MIL
2	1
1	0
0	0

based on difference from Total & individual pieces

Question 3.2.2 Education

This is consistent w/ 3.2.2

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N A F

	Technical	Management (Supv)
HS or less	0	0
Associates	0	0
Bachelor	2	1
Masters	1	0
Doctorate	0	0

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	1	0	1	0	1

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	0	0	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
	0		0

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A	N	AF	F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
	0		0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE_____

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

OK CITY ALC TINKER AFB

A/V FIXED FLIGHT SUBSYSTEMS

Appendix D

Evaluation Criteria Scoring Sheets

F / 11 / 4
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas

Air Force MR. MLEZIVA / LTC BINION / MR. FRYSINGER

Navy MR. TRICK / CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
4	4	4	4

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

A	N	AF	F
0	0	0	0

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

A	N	AF	F
0	0	0	0

(5) ENTER: YES/NO (YES = 1, NO = 0)

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	2	1	0	0
Mngmt(Supv)	1	0	0	0
Other	0	0	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	0	0
Associates	0	0
Bachelor	3	1
Masters	0	0
Doctorate	0	0

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	0	3	0	0	0

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military
Science&Technology	0	0

N AF F

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0			0

Count the number of papers published ~~in peer~~ reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A	N	AF	F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
	0		0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE_____

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

A N AF F

(15) ENTER: YES/NO (YES = 1, NO = 0)

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

OK CITY ALC TINKER AFB
A/V FIXED PROPULSION

Appendix D

Evaluation Criteria Scoring Sheets

F1117
SVC/Activity/CSF#

EVALUATORS: Army LTC THOMAS

Air Force MR. MLEZIVA / LTC BINION / MR. FRYSINGER

Navy MR. TRICK / CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
4	4	4	4

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	1	0	0	0
Mngmt(Supv)	0	0	0	0
Other	0	0	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	0	0
Associates	0	0
Bachelor	1	0
Masters	0	0
Doctorate	0	0

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	0	0	1	0	0

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	0	0	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0	0	0	0

Count the number of papers published in **peer reviewed** journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A	N	AF	F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
	0	1	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 <u>TO BE GREATER THAN 5 WORKYEARS</u>.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

0

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE 0

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

OGDEN ALC

AIR VEHICLES FIXED WING AVIONICS

Appendix D

Evaluation Criteria Scoring Sheets

F / 12 /
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas

Air Force LTC BINION / MR. M / OLIVA / MR. FRYSINGER

Navy MR. TRICK / CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
3	3	3	3

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	2	0	0	0
Mngmt(Supv)	0	1	0	0
Other	1	0	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	0	0
Associates	0	0
Bachelor	2	2
Masters	8	0
Doctorate	0	0

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	~~0~~ 2	~~X~~ 0	~~0~~	~~0~~
Mngmt(Supv)	~~0~~	1	~~0~~	~~0~~
Other	1	~~0~~	~~0~~	~~0~~

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	0	0
Associates	0	0
Bachelor	~~X~~ 2	~~X~~ 2
Masters	~~X~~ 8	0
Doctorate	0	0

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel

A	N	AF	F
~~0~~		1	

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	0	5	1	1	3

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
~~0~~ ~~10~~		0 1	0

Count the number of patents listed as <u>awarded</u> for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A	N	AF	F
Science&Technology	0	0	~~0~~		1	

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical					

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

ISE ONLY

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

ISE ONLY

	Civilian	Military	A N AF F
Science&Technology			

A - ?

N -

F -

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0	0	0	0

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A	N	AF	F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M. 0

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE 0

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

OGDEN ALC
Air Vehicle Fixed Wing -
Flight Subsystem

Appendix D

Evaluation Criteria Scoring Sheets

F / /
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas

Air Force Mr. McEliva/LTC Binion/Mr. Frysinger

Navy Mr. Trick/ CMDR Evans

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
3		3	3

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		0	0

If the description of this question lists one or more geographic feature(s) that have been justified as <u>required</u> to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		0	0

If the description of this question lists one or more climatological feature(s) that have been justified as <u>required</u> to perform this CSF, answer Yes.

OGDEN ALC
AIR VEH FIXED WING
FLIGHT SUBSYSTEM

Appendix D

Evaluation Criteria Scoring Sheets

_____/_____/_____
SVC/Activity/CSF#

EVALUATORS: Army_____

Air Force_____

Navy_____

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
3	3	3	3

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	2	1	0	0
Mngmt(Supv)	0	0	0	0
Other	1	0	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	0	0
Associates	0	0
Bachelor	2	2
Masters	8	0
Doctorate	0	0

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	2	~~2~~ 1	~~0~~	~~0~~
Mngmt(Supv)	~~1~~ 0	~~0~~	~~0~~	~~0~~
Other	1	~~0~~	~~0~~	~~0~~

judgement

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	0	0
Associates	0	0
Bachelor	~~1~~ 2	~~1~~ 2
Masters	~~3~~ 8	~~0~~ 0
Doctorate	0	~~0~~ 0

use total for correct distribution

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	0	5	1	1	3

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	0	0	

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

use total for correct distribution

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	0	5	1	1	3

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0

ISE only

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

ISE only

	Civilian	Military	A N AF F
Science&Technology	0	0	0

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0	0	0	0

Count the number of papers published in **peer reviewed** journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A	N	AF	F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

0

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE 0

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

Ogden ALC
WEAPONS - ICBM/SLBM

Appendix D

Evaluation Criteria Scoring Sheets

____/____/____
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas

Air Force MR. MLEZIVA/ LTC BINION/ MR. FRYSINGER

Navy MR. TRICK / CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
3		3	3
8		12	

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		0	0
0		12	

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		0	0
0		12	

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

OGDEN ALC
WEAPONS ICBM

Appendix D

Evaluation Criteria Scoring Sheets

_____/_____/_____
SVC/Activity/CSF#

EVALUATORS: Army_____

Air Force_____

Navy_____

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
3	3	3	3

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	1	1	0	0
Mngmt(Supv)	0	0	0	0
Other	0	0	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	0	0
Associates	0	0
Bachelor	2	2
Masters	8	0
Doctorate	0	0

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	1	1	∅	∅
Mngmt(Supv)	∅	∅	∅	∅
Other	∅	∅	∅	∅

Judgement

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	∅	∅
Associates	∅	∅
Bachelor	~~1~~ 2	~~1~~ 2
Masters	~~7~~ 8	∅
Doctorate	∅	∅

total used to get correct distribution

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel

A	N	AF	F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	0	5	1	1	3

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0		0	0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A	N	AF	F
Science&Technology	0	0				

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

use total for correct distribution

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	0	5	1	1	3

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

ISE only

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

ISE only

	Civilian	Military	A N AF F
Science&Technology	0	0	0

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0	0	0	0

Count the number of papers published in **peer reviewed** journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A	N	AF	F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

0

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE 0

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

A N AF F

(15) ENTER: YES/NO (YES = 1, NO = 0)

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

OGDEN ALC
AIR VEHICLES, FIXED WING
STRUCTURES

Appendix D

Evaluation Criteria Scoring Sheets

____/____/____
SVC/Activity/CSF#

EVALUATORS: Army LTC THOMAS

Air Force LTC BINION/MR. MLEZIVA/MR. FRYSINGER

Navy MR. TRICK/CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
3	3	3	3

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		0	

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	1	2	0	0
Mngmt(Supv)	1	0	0	0
Other	0	0	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	0	0
Associates	0	0
Bachelor	2	2
Masters	8	0
Doctorate	0	0

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	0	5	1	1	3

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	0	0	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0	0	0	0

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A	N	AF	F
0			

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

	A	N	AF	F
Ø	Ø		0	

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A	N	AF	F
Ø		0	

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE Ø

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
1		1	

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

M

San Antonio ALC

A/V FIXED STRUCTURE

Appendix D

Evaluation Criteria Scoring Sheets

F / 13 / 1
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas

Air Force LTC BINION/MR M/EZIV a/MR. FRYSINGER

Navy MR. TRICK/ CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
0	0	0	0

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	5	3	0	0
Mngmt(Supv)	0	0	0	0
Other	0	0	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	0	0
Associates	0	0
Bachelor	5	0
Masters	3	0
Doctorate	0	0

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel

	A	N	AF	F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	3	2	3	0	0

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
	0		0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military
Science&Technology	0	0

A	N	AF	F

N - 0/0

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0	0	0	0

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A	N	AF	F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
1	1	1	1

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 <u>TO BE GREATER THAN 5 WORKYEARS</u>.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

A	N	AF	F
0			

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A	N	AF	F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
.	.
.	.
.	.

TOTAL VALUE 0

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

SM-ALC

Air Vehicles
Fixed Wing
Avionics

Appendix D

Evaluation Criteria Scoring Sheets

____/____/____
SVC/Activity/CSF#

EVALUATORS: Army LTC THOMAS

Air Force LTC BINION/MR. MIEZIVA/MR. FRYSINGER

Navy MR. TRICK/CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
3	3	3	3

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
1	1	1	1

Cultural

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	81	0	0	0
Mngmt(Supv)	11	0	0	0
Other	16	0	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	4	1
Associates	0	0
Bachelor	61	9
Masters	16	0
Doctorate	0	1

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	81	Ø	Ø	Ø
Mngmt(Supv)	~~9~~ 11	~~1~~ 0	Ø	Ø
Other	~~9~~ 16	Ø	Ø	Ø

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

	TECH (New 27 Sep)	Technical	Management (Supv)	MGT
HS or less	4 0	~~1~~ 0	~~1~~ 0	1
Associates	0 0	1	Ø 0	0
Bachelor	61 61	64	6 9	9
Masters	16 16	17	1 0	0
Doctorate	0 0	Ø	2 1	1

We put some college under HS

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel

	A	N	AF	F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	5	47	18	2	9

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
		0	0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A	N	AF	F
Science&Technology	0	0				

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	5	47	18	2	9

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	Ø	Ø	Ø

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0	0	0	0

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A	N	AF	F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

80 M

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE 0

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

Sacramento
SM-ALC
C4I FIXED GND

Appendix D

Evaluation Criteria Scoring Sheets

____/____/____
SVC/Activity/CSF#

EVALUATORS: Army LTC THOMAS

Air Force MR. MCELIVA / LTC BINION / MR. FRYSINGER

Navy MR. TRICK /

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
3	3	3	3

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	2	0	0	0
Mngmt(Supv)	0	0	0	0
Other	0	0	0	6

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	4	0
Associates	1	0
Bachelor	6	0
Masters	4	1
Doctorate	0	0

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	2	0	0	~~0~~ 0
Mngmt(Supv)	0	0	0	0
Other	0	0	0	~~0~~ 6

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

	Technical	Management (Supv)
HS or less	4 ~~0~~	0
Associates	1	0
Bachelor	6	0
Masters	4	1
Doctorate	0	0

Put "Some college" under HS

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	0	7	4	2	2

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	0	0	0

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0	0	0	0

Count the number of papers published in **peer reviewed** journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER	A	N	AF	F
ACAT IC	0				
ACAT ID	0				
ACAT II	0				
ACAT III/IV	0				
Other	0				

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
1	1	1	1

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 <u>TO BE GREATER THAN 5 WORKYEARS</u>.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

0

A	N	AF	F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A	N	AF	F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
.	.
.	.
.	.

TOTAL VALUE 0

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

SM-ALC

C4I
Ground Mobile

Appendix D

Evaluation Criteria Scoring Sheets

____/____/____
SVC/Activity/CSF#

EVALUATORS: Army LTC THOMAS

Air Force LtC BRANION/MR. MELIVA/MR. FRYSINGER

Navy MR. TRICK / CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
3	3	3	3

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
1	1	1	1

CULTURAL

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	12	1	0	0
Mngmt(Supv)	1	0	0	0
Other	2	0	0	14

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	0	0
Associates	0	0
Bachelor	2	0
Masters	0	0
Doctorate	0	0

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	~~10~~ 12	~~0~~ 1	0	~~0~~ ~~14~~ 0
Mngmt(Supv)	1	~~1~~ 0	0	0
Other	~~3~~ 2	0	0	~~0~~ 14

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

Recd 27 Sep

	Technical		Management (Supv)	
HS or less	0	~~1~~ 0	0	0
Associates	0	1	0	0
Bachelor	2	7	1	0
Masters	0	2	0	0
Doctorate	0	0	0	0

A N AF F

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel

A	N	AF	F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	0	2	0	0	0

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
		0	0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A	N	AF	F
Science&Technology	0	0				

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	0	2	0	0	0

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	0	0	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A N AF F

0 0

Count the number of papers published in **peer reviewed** journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A N AF F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 <u>TO BE GREATER THAN 5 WORKYEARS</u>.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

0

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE ____

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

A N AF F

(15) ENTER: YES/NO (YES = 1, NO = 0)

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

Sacramento-ALC
(SM-ALC)
Space-Satellites

Appendix D

Evaluation Criteria Scoring Sheets

____/____/____
SVC/Activity/CSF#

EVALUATORS: Army LTC Dan Thomas

Air Force Mr. Mleziva / LTC Binion / Mr. Frysinger

Navy Mr. Trick / CMDR Evans

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
3		3	3

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		0	0

If the description of this question lists one or more geographic feature(s) that have been justified as <u>required</u> to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		0	0

If the description of this question lists one or more climatological feature(s) that have been justified as <u>required</u> to perform this CSF, answer Yes.

Sacramento
SM-ALC
SPACE SATELLITE

Appendix D

Evaluation Criteria Scoring Sheets

____/____/____
SVC/Activity/CSF#

EVALUATORS: Army_____

Air Force_____

Navy_____

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
3	3	3	

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	18	0	0	0
Mngmt(Supv)	1	0	0	0
Other	0	0	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	0	0
Associates	0	0
Bachelor	13	1
Masters	6	0
Doctorate	0	0

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	2	10	0	1	3

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	0	0	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0	0	0	0

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A	N	AF	F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
1	1	1	1

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
.	.
.	.
.	.

TOTAL VALUE

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

A N AF F

(15) ENTER: YES/NO (YES = 1, NO = 0)

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

M

WARNER ROBINS ALC
A/N
Fixed Structure.

Appendix D

Evaluation Criteria Scoring Sheets

F / 15 / 1
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas
Air Force LTC Binion / MR Mleziva / Mr. Freysinger
Navy Mr. Trick / CMDR Evans

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
0	0	0	0

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	23	4	0	0
Mngmt(Supv)	7	1	0	0
Other	0	0	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	0	0
Associates	0	0
Bachelor	18	3
Masters	9	4
Doctorate	0	1

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	4	6	7	1	9

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	0	0	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0		0	0

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A	N	AF	F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
		1	1

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A N AF F

NO S&T workyears

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER	
ACAT IC	Ø	Ø
ACAT ID	Ø	Ø
ACAT II	Ø	Ø
ACAT III/IV	Ø	Ø
Other	Ø	Ø

NAVY

A N AF F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

0

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE 0

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

A N AF F

(15) ENTER: YES/NO (YES = 1, NO = 0)

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

N

PHILLIPS LAB - KIRTLAND AFB
SPACE - SATELLITES

Appendix D

Evaluation Criteria Scoring Sheets

____/____/____
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas
Air Force Mr. Mleum/Lt Colonel/Mr. Frysinger
Navy Mr. Trick/ CMDR Evans

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
1	1	1	1

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	N	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	N	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0		0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Contaminated Ground Water

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	1	0	

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	45	105	14	130
Mngmt(Supv)	44	32	2	14
Other	151	49	3	26

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	0	10
Associates	0	2
Bachelor	89	13
Masters	51	44
Doctorate	10	7

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	45	105	14	130
Mngmt(Supv)	44 AA	32	2	14
Other	151	49	3	26

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

N AF F

	Technical	Management (Supv)
HS or less	Ø	10
Associates	Ø	2
Bachelor	89	13
Masters	51	44
Doctorate	10	7

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	36	94	10	4	6

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	202	171	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
53		53	53

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A	N	AF	F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
		0	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A N AF F

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A N AF F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

86.2

A	N	AF	F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A	N	AF	F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
.	.
.	.
.	.

TOTAL VALUE Ø

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = $TOTAL VALUE]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
1		1	1

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

~~86.2M~~ 86.2 A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE ____0____

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

A N AF F

(15) ENTER: YES/NO (YES = 1, NO = 0)

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

PHILLIPS LAB - KIRTLAND AFB
DIRECTED ENERGY

Appendix D

Evaluation Criteria Scoring Sheets

____/____/____
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas

Air Force LTC Bimon / MR Mlezuva / Mr. Frysinger

Navy Mr. Trick / CMDR Evans

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
1	1	1	1

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
1	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
1	1	1	1

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0		0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

- Air Quality
- Contaminated Potable Water

Question 3.1.3 Environmental Constraints

A	N	AF	F
0	2	0	

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

A	N	AF	F
0	0	0	

(5) ENTER: YES/NO (YES = 1, NO = 0)

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	168	124	22	195
Mngmt(Supv)	81	63	2	22
Other	303	103	4	40

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	3	8
Associates	∅	∅
Bachelor	112	13
Masters	104	87
Doctorate	73	36

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	55	159	20	20	38

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

12 12 12 12

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military
Science&Technology	565	302

A N AF F

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
113		113	113

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A	N	AF	F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		0	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F

NO JOURNAL LISTED

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A	N	AF	F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
	0		

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

306.1

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE 0

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

PHILLIPS LAB - HANSCOM

ENVIRONMENTAL SCIENCE

Appendix D

Evaluation Criteria Scoring Sheets

____/____/____
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas

Air Force MR. MLEUVA / LTC B, NION / MR. FRYSINGER

Navy MR. TRICK / CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
0	0	0	0

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
~~0~~		6	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
~~0~~		0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.1.3 Environmental Constraints

A	N	AF	F
0	1	6	

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

A	N	AF	F
	0	0	

(5) ENTER: YES/NO (YES = 1, NO = 0)

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AP F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	209	51	0	85
Mngmt(Supv)	48	6	0	9
Other	107	18	0	23

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AP F

	Technical	Management (Supv)
HS or less	24	8
Associates	12	2
Bachelor	72	10
Masters	67	16
Doctorate	85	18

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	16	76	30	19	119

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

4 4 4 4

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	364	75	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
328		328	328

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A	N	AF	F
0		0	

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		0	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Many repeats also not scored

Journals not listed

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A N AF F

Count the number of papers published in peer reviewed journals for this CSF.

328

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A N AF F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

1503M

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE 0

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

P

PHILLIPS LAB - EDWARDS HFB
SPACE - SATELLITES

Appendix D

Evaluation Criteria Scoring Sheets

____/____/____
SVC/Activity/CSF#

EVALUATORS: Army LTC THOMAS

Air Force MR. MIEZIVA / LT COLONEL / MR. FRYSINGER

Navy MR. TRICK / CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
1	1	1	1

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

	A	N	AF	F
(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)	1	1	1	1

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

	A	N	AF	F
(5) ENTER: YES/NO (YES = 1, NO = 0)	0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	18	4	∅	40
Mngmt(Supv)	11	4	∅	5
Other	23	19	∅	4

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	∅	4
Associates	∅	1
Bachelor	12	7
Masters	9	3
Doctorate	1	∅

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	7	9	1	2	3

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military
Science&Technology	42	19

A N AF F

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0	0	0	0

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A	N	AF	F
0			

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	N	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M. 61.7

A	N	AF	F
✓		✓	

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A	N	AF	F
✓		✓	

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
.	.
.	.
.	.

TOTAL VALUE Ø

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = $TOTAL VALUE]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
1		1	1

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M. 61.7M 61.7

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE 0

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

A N AF F

(15) ENTER: YES/NO (YES = 1, NO = 0) 1 1 1

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

PHILLIPS LAB-EDWARDS AFB
SPACE-LAUNCH VEHICLES

Appendix D

Evaluation Criteria Scoring Sheets

/ / EVALUATORS: Army LTC THOMAS
SVC/Activity/CSF#

Air Force MR. MLEZIVA / LTC BINION / MR. FRYSINGER

Navy MR. TRICK / CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
1		1	1
0		12	

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
1		1	1
0		12	

If the description of this question lists one or more geographic feature(s) that have been justified as <u>required</u> to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		6	0
0		12	

If the description of this question lists one or more climatological feature(s) that have been justified as <u>required</u> to perform this CSF, answer Yes.

PHILLIPS LAB – EDWARDS AFB
SPACE – LAUNCH VEHICLES

Appendix D

Evaluation Criteria Scoring Sheets

____/____/____
SVC/Activity/CSF#

EVALUATORS: Army_____

Air Force [illegible] / LTC BINION

Navy_____

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
1	1	1	

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
1	0	1	

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
1	1	1	1

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	106	16	∅	201
Mngmt(Supv)	40	18	∅	22
Other	70	44	∅	20

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	∅	16
Associates	∅	5
Bachelor	64	15
Masters	38	16
Doctorate	20	6

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	22	63	14	5	18

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

3 3 3 3

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military
Science&Technology	220	82

A N AF F

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
43		43	43

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER	A	N	AF	F
ACAT IC	0				
ACAT ID	0				
ACAT II	0				
ACAT III/IV	0				
Other	0				

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
NO		0	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A	N	AF	F
	0		

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
	0		

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

8/2 M

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE ____

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

A N AF F

(15) ENTER: YES/NO (YES = 1, NO = 0)

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

Q

SPACE MISSILE SYSTEM LOS ANGELES
SPACE - GND CONTROL SYSTEMS

Appendix D

Evaluation Criteria Scoring Sheets

F / 19 / 19 (SPACE - GND CONTROL SYS)
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas

Air Force LTC BINION/MR. MLEZIVA/MR. FRYSINGER

Navy MR. TRICK/CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
2	2	2	2

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	223	257	96	27
Mngmt(Supv)	4	7	0	0
Other	0	0	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	112	0
Associates	22	0
Bachelor	219	1
Masters	121	9
Doctorate	6	1

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	223	257	96	27
Mngmt(Supv)	4	7	0	0
Other	0	0	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

		Technical	Management (Supv)
HS or less	112	~~44~~	0
Associates		22	0
Bachelor		219	1
Masters		121	9
Doctorate		6	1

Includes OTHERS in HS or less

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Based on a 5 Aug 94 change to a 10 Aug 94 document

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	87	157	83	65	88

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	0	0	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0	0	0	0

Count the number of papers published in ~~peer~~ reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	1
ACAT III/IV	0
Other	0

A	N	AF	F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

0

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE ____

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

SPACE MISSILE SYSTEM LOS ANGELES
SPACE - LAUNCH VEHICLES

Appendix D

Evaluation Criteria Scoring Sheets

F / 19 / 17 (SPACE-LAUNCH)
SVC/Activity/CSF#

EVALUATORS: Army CTC Thomas
Air Force LTC BINION / MR MIEZIVA / MR. FRYSINGER
Navy MR. TRICK / CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
2	2	2	2

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	168	271	308	53
Mngmt(Supv)	4	10	0	0
Other	0	0	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	106	0
Associates	17	0
Bachelor	197	2
Masters	123	12
Doctorate	4	0

Based on a 5 Aug 94 change that replaces a 10 AUG 94 document

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Based on a 5 Aug 94 change to a 10 Aug 94 document

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	105	139	81	49	73

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	0	0	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0		0	0

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	1
ACAT ID	1
ACAT II	3
ACAT III/IV	0
Other	1

A	N	AF	F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		0	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0	0		

Count the number of papers published ~~in peer reviewed~~ journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER	A	N	AF	F
ACAT IC	1	1	1		
ACAT ID	1	1	1		
ACAT II	3 ~~5~~	4+3	UNKNOWN ~~X~~		
ACAT III/IV	0	0	0		
Other	1 AF	1 A	1 NAVY		

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0		

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 <u>TO BE GREATER THAN 5 WORKYEARS</u>.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

38.4

A	N	AF	F
[illegible]	[illegible]	[illegible]	

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A	N	AF	F
[illegible]	[illegible]	[illegible]	

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE ∅

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
∅	0	0	0

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

SPACE MISSILE SYSTEM LOS ANGELES
SPACE - SATELLITES

Appendix D

Evaluation Criteria Scoring Sheets

F / 19 / 18 (SPACE-SATELLITES)
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas

Air Force Mr. Mileiva / LTC Bimon / Mr. Frysinger

Navy Mr. Trick / CMDR Evans

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
2	2	2	2

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	764	1131	583	233
Mngmt(Supv)	16	38	0	0
Other	0	0	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	492	0
Associates	100	0
Bachelor	744	2
Masters	536	47
Doctorate	23	5

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	764	1131	583	233
Mngmt(Supv)	16	38	0	0
Other	0	0	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	492 ~~488~~	0
Associates	100	0
Bachelor	744	2
Masters	536	47
Doctorate	23	5

Includes "OTHER" in HS or less

Based on a 5 Aug 94 change that replaced a 10 Aug 94 document.

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Based on a 5 Aug 94 change that replaces a 10 Aug 94 document

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	319	687	355	234	300

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	0	0	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0	0	0	0

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	3
ACAT ID	2
ACAT II	1
ACAT III/IV	4
Other	4

A	N	AF	F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

149.8 M

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE ____

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

0 0 0 0

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

R

SPACE & MISSILE SYSTEMS DET 10 NORTON
WEAPONS - ICBMs/SLBMs

Appendix D

Evaluation Criteria Scoring Sheets

F / 20 / 9 (WPN) - ICBMs/SLBMs)
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas
Air Force LTC Binion / Mr. Mleziva / Mr. Frysinger
Navy Mr. Trick / CMDR Evans

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
0	0	0	0

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	0	0	0

Numerically count the number of environmental ~~and~~/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	271	194	0	377
Mngmt(Supv)	3	4	0	0
Other	0	0	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	176	0
Associates	27	0
Bachelor	126	2
Masters	131	5
Doctorate	5	0

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	271	194	0	377
Mngmt(Supv)	3	4	0	0
Other	0	0	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

		Technical	Management (Supv)
HS or less	176	~~173~~	0
Associates		27	0
Bachelor		126	2
Masters		131	5
Doctorate		5	0

includes OTHERS in HS or less

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	28	102	93	79	163

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	0	0	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0		6	0

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	1
ACAT ID	0
ACAT II	1
ACAT III/IV	1
Other	3

A	N	AF	F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
		0	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0	0	0	

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER			A	N	AF	F
ACAT IC	1	1	1				
ACAT ID	0	0	0				
ACAT II	1	1	1				
ACAT III/IV	1	1	1				
Other	3		3				
	AF	A	NAVY				

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		N	

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

0

A	N	AF	F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A	N	AF	F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
.	.
.	.
.	.

TOTAL VALUE 0

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

S

SM-ALC DET 25 PETERSON AFB
C4I FIXED GROUND BASE

Appendix D

Evaluation Criteria Scoring Sheets

(C4I - FIXED GROUND-BASED)

F / 21 / 21
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas

Air Force Ltc Binion/Mr. Mleziva/Mr. Frysinger

Navy Mr. Trick/ CMDR Evans

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
3	3	3	3

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	7	2	0	0
Mngmt(Supv)	2	0	0	0
Other	3	0	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	3	0
Associates	0	0
Bachelor	10	1
Masters	1	1
Doctorate	0	0

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	7	2	∅	∅
Mngmt(Supv)	2	∅	∅	∅
Other	3	∅	∅	∅

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

	Technical (TECH)	Management (Supv) (MGT)
HS or less	3 / ~~0~~ 3	1 / 0
Associates	0 / ∅	0 / ∅
Bachelor	10 / 8	10 / 1
Masters	1 / ∅	1 / ∅
Doctorate	0 / ∅	0 / ∅

A N AF F

not split out by Tech / Mgt therefore used 3, 2, 3 as tech indicator WB

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

TDT	less other
3	0
0	0
11	11
2	2
0	0

TECH	MGT	OTHER
7	2	3

assume 3 OTHER are high school or less.
TECH/MGT not likely to be HS or less.

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	0	6	6	4	1

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	0	0	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
	0		0

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A	N	AF	F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
	1	1	1

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M. 652

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE 326

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F
0 0 0 0

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

SM-ALC DET 25 PETERSON AFB
C41 GND MOBILE

Appendix D

Evaluation Criteria Scoring Sheets

____/____/____
SVC/Activity/CSF#

EVALUATORS: Army LTC THOMAS

Air Force LtC BINION/MR. MLEZIVA/MR. FRYSINGER

Navy MR. TRICK/CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
3	3	3	3

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	5	ϕ	ϕ	ϕ
Mngmt(Supv)	ϕ	ϕ	ϕ	ϕ
Other	ϕ	ϕ	ϕ	ϕ

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	ϕ	ϕ
Associates	ϕ	ϕ
Bachelor	4	ϕ
Masters	1	ϕ
Doctorate	ϕ	ϕ

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	Ø	1	Ø	Ø	1

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

Ø 0 Ø 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	0	0	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A N AF F
0 0 0

Count the number of papers published in **peer reviewed** journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A N AF F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F
0 0 0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 <u>TO BE GREATER THAN 5 WORKYEARS</u>.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M. 65.2M

A	N	AF	F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A	N	AF	F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
.	.
.	.
.	.

TOTAL VALUE 32.6M

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = $TOTAL VALUE]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
		0	0

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

65.2M

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE 32.6M

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

0 0 0

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

SM-ALC DET 25 PETERSON AFB
SPACE - GROUND CONTROL

Appendix D

Evaluation Criteria Scoring Sheets

F / 21 / 19 (SPACE - GND CONTROL)
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas

Air Force LtC BINION / Mr. MLEZIVA / Mr. FRYSINGER

Navy Mr. TRICK / CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
3	3	3	3

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	14	1	∅	∅
Mngmt(Supv)	2	∅	∅	∅
Other	1	∅	∅	∅

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	∅	∅
Associates	∅	∅
Bachelor	12	1
Masters	2	∅
Doctorate	∅	∅

Total - 15

not split out by Tech / Mgt, therefore used 3.2.3 as tech indicator

Correct

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	0	3	5	4	2

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	0	0	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0	0	0	0

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER	A	N	AF	F
ACAT IC	0				
ACAT ID	0				
ACAT II	0				
ACAT III/IV	0				
Other	0				

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
1	1	1	1

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

24.7M

A	N	AF	F
A		V	

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A	N	AF	F
A		V	

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE 12.4M

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = $TOTAL VALUE]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		0	0

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M. 24.7M

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE 12.4 M

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F
0 0 0

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

SM-ALC DET 25 PETERSON AFB
SPACE - SATELLITE

Appendix D

Evaluation Criteria Scoring Sheets

____/____/____
SVC/Activity/CSF#

EVALUATORS: Army LTC THOMAS

Air Force LTC BINION/MR MLEZIVA/MR. FRYSINGER

Navy MR. TRICK/CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
3	3	3	3

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	9	1	∅	∅
Mngmt(Supv)	∅	∅	∅	∅
Other	∅	∅	∅	∅

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	1	∅
Associates	1	∅
Bachelor	6	∅
Masters	3	∅
Doctorate	∅	∅

not split out by Tech/Mgt, therefore used 3.2.3.00 Tech indicator

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	0	7	4	2	1

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military
Science&Technology	0	0

A N AF F

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0	0	0	0

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER	A	N	AF	F
ACAT IC	0	0			
ACAT ID	0				
ACAT II	0				
ACAT III/IV	0				
Other	0				

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
1	1	1	1

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

24.7 M

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE 12.4

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

T

Rome Lab - Griffiss
C4I - Airborne

Appendix D

Evaluation Criteria Scoring Sheets

F / 22 / 20
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas

Air Force Mr. Mleziva / LTC Binion / Mr. Frysinger

Navy Mr. Trick / CMDR Evans

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
0		0	0

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

ROME LAB GRIFFISS
C4I - AIRBORNE

Appendix D

Evaluation Criteria Scoring Sheets

F / 22 / 20 (C4I - Air)
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas / Kathy Skidmore

Air Force_____

Navy_____

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
0	0	0	

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	1	0	

Main site only

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	429	60	9	11
Mngmt(Supv)	90	10	1	0
Other	230	33	2	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	18	10
Associates	12	3
Bachelor	249	34
Masters	188	46
Doctorate	22	7

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	18	206	10	43	152

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

10 10 10 10

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	749	103	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
61		61	61

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER	A	N	AF	F
ACAT IC	0				
ACAT ID	0				
ACAT II	0				
ACAT III/IV	0				
Other	0				

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		0	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A N AF F

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	Ø
ACAT ID	Ø
ACAT II	Ø
ACAT III/IV	Ø
Other	Ø

A N AF F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

222.9M

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE Ø

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = $TOTAL VALUE]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M. $ ~~222.9~~ 222.9

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE ___0___

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = $TOTAL VALUE]

Question 3.5.2 Land Use

A N AF F

(15) ENTER: YES/NO (YES = 1, NO = 0) ___1___

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

Rome Lab - Hanscom AFB
CHI Airborne

Appendix D

Evaluation Criteria Scoring Sheets

F / 23 / 20
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas

Air Force Mr. Mlezuva / LTC Binion / Mr. Frysinger

Navy Mr. Trick / CMDR Evans

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
0		0	0

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		0	0

If the description of this question lists one or more geographic feature(s) that have been justified as required to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		0	0

If the description of this question lists one or more climatological feature(s) that have been justified as required to perform this CSF, answer Yes.

ROME LABORATORY – HANSCOM AFB
C4I AIRBORNE

Appendix D

Evaluation Criteria Scoring Sheets

F / 23 / 20 (C4I-AIR)
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas/Kathy Skidmore

Air Force Lt C Bi Nion/MR Mkziva

Navy_____

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A N AF F

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

MAIN SITE ONLY

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	89	17	0	3
Mngmt(Supv)	18	2	0	0
Other	21	2	0	1

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	10	0
Associates	5	0
Bachelor	22	4
Masters	36	5
Doctorate	33	11

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	10	29	27	5	35

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

38 38 38 38

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	126	22	

N - 126/22

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
120		120	120

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER	A	N	AF	F
ACAT IC	0	0		0	
ACAT ID	0				
ACAT II	0				
ACAT III/IV	0				
Other	0				

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		0	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	Ø
ACAT ID	Ø
ACAT II	Ø
ACAT III/IV	Ø
Other	Ø

A	N	AF	F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
Ø	O	N	

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

0

A	N	AF	F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A	N	AF	F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE 0

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
1	1	1	1

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

ELECTRONIC SYSTEMS CENTER - HANSCOM
C4I - FIXED GROUND

Appendix D

Evaluation Criteria Scoring Sheets

F / 24 / 21 (C4I - FIXED)
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas

Air Force LtC Binion / Mr. Mileiva / Mr. Frysinger

Navy Mr. Trick / CMDR Evans

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
2	2	2	2

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	7	6	0	113
Mngmt(Supv)	3	6	0	0
Other	17	17	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	0	1
Associates	0	0
Bachelor	6	3
Masters	8	8
Doctorate	0	0

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	2	7	3	2	1

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	0	0	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0	0	0	0

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER	A	N	AF	F
ACAT IC	0				
ACAT ID	0				
ACAT II	0				
ACAT III/IV	6				
Other	0				

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
	0		0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

11.7 m

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE 11.4 M

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

ELECTRONIC SYSTEMS CENTER – HANSCOM
C4I – AIRBORNE

Appendix D

Evaluation Criteria Scoring Sheets

F / 24 / 20 (C4I - A.R)
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas

Air Force LTC BINION / MR. MLEZIVA / MR. FRYSINGER

Navy MR. TRICK / CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
2	2	2	2

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	179	268	224	462
Mngmt(Supv)	186	203	53	0
Other	673	318	91	6

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	0	27
Associates	2	8
Bachelor	198	104
Masters	243	240
Doctorate	3	5

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	67	115	94	74	99

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	0	0	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
0		0	0

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	5
ACAT ID	6
ACAT II	7
ACAT III/IV	60
Other	31

A	N	AF	F
0			

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		0	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A N AF F

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

		NAME/ NUMBER		
ACAT IC	5	5	✓	5
ACAT ID	6	7	✓	7
ACAT II	7	7	✓	7
ACAT III/IV	60	60	✓	60
Other	31	47	✓	47

A N AF F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M.

38.1 M

A	N	AF	F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A	N	AF	F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
.	.
.	.
.	.

TOTAL VALUE 0.4M

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = $TOTAL VALUE]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
1		1	1

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M. $ 38.1 M

A	N	AF	F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A	N	AF	F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE 0.4 M

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
	1	1	

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

CORRECTIONS THAT NEED TO BE MADE TO THE SCORE SHEETS

AIR FORCE

1. Armstrong Lab-Tyndall AFB

A. Environmental Quality

- Replace first page of score sheet
- Navy initials needed on Question 9
- Replace fifth page of score sheet

2. Armstrong Lab-WPAFB

A. Human Systems

- Ink or erase notations next to Question 1
- Navy initials needed on Question 9
- Replace fifth page of score sheet
- Air Force initials needed on Question 13

3. Armstrong Lab-Williams AFB

A. Training Systems

- Ink or erase notations next to Question 1
- Replace fifth page of score sheet

4. Human Systems Center-Brooks AFB

A. Air Vehicles-Fixed-Flight Subsystems

- Replace fifth page of score sheet

5. Wright Lab-WPAFB

A. Electronic Devices

- Army initials and score needed on Questions 2 and 3
- Replace second page of score sheet
- Replace third page of score sheet
- Replace fourth page of score sheet
- Replace fifth page of score sheet

B. Advanced Materials

- Replace second page of score sheet
- Replace third page of score sheet
- Replace fourth page of score sheet
- Replace fifth page of score sheet

C. Air Vehicle-Fixed-Avionics

- Navy initials and score on Question 2 and 3
- Replace second page of score sheet
- Replace third page of score sheet
- Air Force score on Question 9
- Replace fifth page of score sheet

D. Air Vehicle-Fixed-Flight Subsystems

- Replace second page of score sheet
- Replace third page of score sheet
- Replace fourth page of score sheet
- Replace fifth page of score sheet
- Air Force initials on Question 13

E. Air Vehicle-Fixed-Propulsion

- Navy initials and score on Questions 2 and 3
- Replace second page of score sheet
- Replace third page of score sheet
- Replace fourth page of score sheet

F. Air Vehicle-Fixed-Structures

- Replace third page of score sheet
- Replace fourth page of score sheet
- Replace fifth page of score sheet

6. Armstrong Lab-Brooks AFB

A. Human Systems

- Ink or erase notations next to Question 1
- Navy initials needed on Questions 6, 7 and 9
- Replace fifth page of score sheet
- Air Force score needed on Question 10 and 15

B. Manpower and Personnel

- Navy score needed on Question 4
- Air Force score needed on Question 10

C. Training Systems

- Ink or erase notation next to Question 1
- Navy initials and score needed on Question 5
- Air Force initials and score needed on Question 5
- Air Force score needed on Question 10

7. Wright Lab-Eglin AFB

A. Bombs

- Replace fifth page of score sheet

B. Conventional Missiles and Rockets

- Ink or erase notations next to Question 1
- Army initials and score needed on Question 4
- Replace fifth page of score sheet
- Ink or erase notation next to Question 14

C. Guns and Ammunition

- Replace second page of score sheet
- Replace fifth page of score sheet

8. ASC-WPAFB

A. Air Vehicle-Fixed-Avionics

- Replace fifth page of score sheet
- Replace last page of score sheet

B. Air Vehicles-Fixed-Flight Subsystems

- Army initials and score needed on Question 4
- Replace fifth page of score sheet
- Replace last page of score sheet

C. Air Vehicles-Fixed-Propulsion

- Replace fifth page of score sheet
- Replace last page of score sheet

D. Air Vehicles-Fixed-Structures

- Replace fifth page of score sheet
- Replace last page of score sheet

E. Weapons/Cruise Missiles

- Replace fifth page of score sheet
- Replace last page of score sheet

9. ASC Mod Center-WPAFB

A. Advanced Materials

- Ink or erase notations next to Question 11

B. Air Vehicle-Fixed-Avionics

- Navy initials and score needed for Question 1
- Replace fifth page of the score sheet

C. Air Vehicle-Fixed-Flight Subsystems

- Replace fifth page of score sheet

D. Air Vehicle-Fixed-Propulsion

- Navy initials and score needed for Question 10
- Ink or erase notations next to Question 11

E. Air Vehicle-Fixed-Structures

- No problems

10. ASC-Eglin AFB

A. Bombs

- Replace second page of score sheet

B. Conventional Missiles and Rockets

- Ink or erase notations next to Question 1
- Replace second page of score sheet

C. Guided Projectiles

- Replace second page of score sheet

D. Guns and Ammunition

- Replace second page of score sheet
- Navy initials and score needed on Question 9
- Replace fifth page of the score sheet

11. Oklahoma City ALC-Tinker AFB

A. Air Vehicles-Fixed-Structures

- No problems

B. Cruise Missiles

- Navy initials and score needed on Question 9

C. Air Vehicles-Fixed-Avionics

- Ink or erase notations next to Question 6
- Navy initials needed on Question 9

D. Air Vehicles-Fixed-Flight Subsystems

- No problems

E. Air Vehicles-Fixed-Propulsion

- Navy initials needed on Question 9
- Army initials needed on Question 13

12. Ogden ALC-Hill AFB

A. Air Vehicles-Fixed-Avionics

- Replace third page of score sheet
- Replace fourth page of score sheet
- Air Force initials and score needed on Question 10
- Air Force score needed on Question 12

B. Air Vehicles-Fixed-Flight Subsystems

- Replace first page of score sheet
- Replace third page of score sheet
- Replace fourth page of score sheet

C. ICBM/SLBM

- Replace first page of score sheet
- Replace third page of score sheet
- Replace fourth page of score sheet
- Air Force initials needed on Question 13

D. Air Vehicles-Fixed-Structures

- Navy and Air Force initials and score needed on Question s5, 13, 14 and 15
- Ink final scores on Questions 13 and 14

13. San Antonio ALC-Kelly AFB

A. Air Vehicles-Fixed-Structures

- Navy initials needed on Question 9

14. Sacramento ALC-McClellan AFB

A. Air Vehicles-Fixed-Avionics

- Replace third page of score sheet
- Replace fourth page of score sheet

B. C4I Fixed Ground

- Replace third page of score sheet

C. C4I Ground Mobile

- Replace third page of score sheet
- Replace fourth page of score sheet

D. Satellites

- Replace first page of score sheet

15. Warner Robins ALC-Robins AFB

A. Air Vehicles-Fixed-Structures

- Replace fifth page of score sheet

16. Phillips Lab-Kirtland AFB

A. Directed Energy

- Replace second page of score sheet
- Replace fifth page of score sheet

B. Satellites

- Army initials and score needed on Questions 2 and 3
- Replace second page of score sheet
- Replace third page of score sheet
- Replace fifth page of score sheet
- Replace last page of score sheet

17. Phillips Lab-Hanscom AFB

A. Environmental Science

- Replace second page of score sheet
- Replace fifth page of score sheet
- Army initials needed on Question 13

18. Phillips Lab-Edwards AFB

A. Space Launch Vehicles

- Replace first page of score sheet
- Replace fifth page of score sheet

B. Satellites

- Replace last page of score sheet

19. Space and Missile Systems-Los Angeles AFB

A. Space Ground Control Systems

- Replace third page of score sheet
- Ink or erase notations that are next to Question 8

B. Space Launch Vehicles

erased

- Ink or erase notations next to Questions 4, 7 and 8
- Replace fifth page of score sheet

C. Satellites

- Replace third page of score sheet
- Ink or erase notations next to Question 8
- Navy score needed on Question 9

20. Space and Missile Systems, Detachment 10-Norton AFB

A. ICBM/SLBM

- Replace third page of score sheet
- Replace fifth page of score sheet
- Air Force initials needed on Question 13

21. Sacramento ALC, Detachment 25-Peterson AFB

A. C4I Fixed Ground

- Replace third page of score sheet

B. C4I Ground Mobile

- Air Force initials needed on Question 1
- Replace last page of score sheet

C. Space Ground Control Systems

- Army initials needed on Questions 6 and 7
- Ink or erase notations next to Question 7
- Replace last page of score sheet

D. Satellites

- Ink or erase notations next to Question 7

22. Rome Lab-Griffiss AFB

A. C4I Airborne

- Replace first page of score sheet
- Replace fifth page of score sheet
- Replace last page of score sheet

23. Rome Lab-Hanscom AFB

A. C4I Airborne

- Replace first page of score sheet
- Navy initials needed on Question 9
- Replace fifth page of score sheet

24. Electronic Systems Center-Hanscom AFB

A. C4I Ground Mobile

- Army initials and score needed on Questions 2 and 3

B. C4I Fixed Ground

- No problems

C. C4I Airborne

- Replace fifth page of score sheet
- Replace last page of score sheet

Document Separator

HUMAN SYSTEMS/MANPOWER AND PERSONNEL SCORE SHEETS

1. USARIEM

2. AARL

3. Armstrong Lab-Brooks AFB

4. NPRDC-San Diego

5. NMRI-Bethesda

6. NAMRL-Pensacola

HUM/PER—USA RIEM

Appendix D

Evaluation Criteria Scoring Sheets

____/____/____
SVC/Activity/CSF#

EVALUATORS: Army /LTC Thomas

Air Force (w) MR. MCELIVA/LTC BINION/MR. FRYSINGER

Navy MR. TRICK/CMDR EVANS

-CHEM/BIO
-CLOTH/TEXT
-COMBAT CAS CARE
-GRO VEH

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
4	4	4	4

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

A	N	AF	F
0	0	0	0

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

A	N	AF	F
0	0	0	0

(5) ENTER: YES/NO (YES = 1, NO = 0)

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	34	53	0	17
Mngmt(Supv)	9	9	3	0
Other	12	11	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	15	1
Associates	2	0
Bachelor	22	4
Masters	20	0
Doctorate	28	14

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	21	28	13	11	13

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
1	1	1	1

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	70	65.8	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
105	105	105	105

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A	N	AF	F

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0		N	

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M. $50m

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE 25M

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

A N AF F

(15) ENTER: YES/NO (YES = 1, NO = 0) 1 1

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

AARL
HUM / PER

Appendix D

Evaluation Criteria Scoring Sheets

____/____/____
SVC/Activity/CSF#

EVALUATORS: Army Steve Balint / LTC Thomas
Air Force Mr. McEuva / Mr. Freysinger / LTC Binion
Navy Mr. Trick / CMDR Evans

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
4	4	4	4

- GRD VEH
- CLOTH / TEX
- CHEM / BIO
- C&C

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	43	48	0	24
Mngmt(Supv)	5	8	0	0
Other	25	6	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	28	2
Associates	2	0
Bachelor	29	2
Masters	11	3
Doctorate	21	6

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	9	40	18	14	10

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

0 0 0 0

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	78.5	72.8	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
26	26	26	26

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER
ACAT IC	0
ACAT ID	0
ACAT II	0
ACAT III/IV	0
Other	0

A	N	AF	F
	0		

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
	0	0	

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M. $45M

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE Ø

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

A N AF F

(15) ENTER: YES/NO (YES = 1, NO = 0) 1 1 1 1

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

HUM/PER – BROOKS
ARMSTRONG LAB

Appendix D

Evaluation Criteria Scoring Sheets

____/____/____
SVC/Activity/CSF#

EVALUATORS: Army LTC Thomas

Air Force MR. MLEZIVA / MR. FRYSINGER / LTC BINION

Navy MR. TRICK / CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
5	5	5	5

– TNG
– CHEM/BIO
– AEROMED FMAC
– NUC WEAPONS EFFECTS
– COMBAT DENTISTRY

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as **required** to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)

A	N	AF	F
0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

(5) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	112	230	0	128
Mngmt(Supv)	22	26	0	0
Other	170	102	0	20

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	123	1
Associates	35	0
Bachelor	56	2
Masters	51	14
Doctorate	91	34

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	51	160	60	52	34

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

7 7 7 7

Count the number of patents listed as **awarded** for this CSF, **do not** count patents which have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	306	359	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
153	153	153	153

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER	A	N	AF	F
ACAT IC	0				
ACAT ID	0				
ACAT II	0				
ACAT III/IV	0				
Other	0				

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M. $63.2M

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE ___Ø___

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = **$TOTAL VALUE**]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A N AF F
1 1 1 1

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

HUM/PER

NAVAL MEDICAL RESEARCH INSTITUTE
Bethesda

Appendix D

Evaluation Criteria Scoring Sheets

___/___/___
SVC/Activity/CSF#

EVALUATORS: Army LTC THOMAS

Air Force MR. MLEZIVA / MR. FRYSINGER / LTC BINION

Navy MR. TRICK / CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
2	2	2	2

Infectious Disease
Combat Casualty Care

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as <u>required</u> to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as <u>required</u> to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

	A	N	AF	F
(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)	0	0	0	0

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

	A	N	AF	F
(5) ENTER: YES/NO (YES = 1, NO = 0)	0	0	0	0

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	73	147	0	0
Mngmt(Supv)	3	3	0	0
Other	9	7	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	130	0
Associates	0	0
Bachelor	34	1
Masters	21	1
Doctorate	44	4

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	39	66	45	47	20

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

4 4 4 4

Count the number of patents listed as **awarded** for this CSF, **do not count patents which have been disclosed.**

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	85	157	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
122	122	122	122

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER	A	N	AF	F
ACAT IC	0				
ACAT ID	0				
ACAT II	0				
ACAT III/IV	0				
Other	0				

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M. $30M

A N AF F

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A N AF F

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
____	____
____	____
.	.
.	.
.	.

TOTAL VALUE 0

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = $TOTAL VALUE]

Question 3.5.2 Land Use

A N AF F

(15) ENTER: YES/NO (YES = 1, NO = 0) 0 0 0

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

K

HUM/PER

NAVAL AEROSPACE MEDICAL RESEARCH LAB
PENSACOLA, FL

Appendix D

Evaluation Criteria Scoring Sheets

/ /
SVC/Activity/CSF#

EVALUATORS: Army LTC THOMAS

Air Force MR. MCELIVA / MR. FRYSINGER / LTC BINION

Navy MR. TRICK / CMDR EVANS

Question 3.0 Mission.

(1) ENTER: NUMERIC COUNT (1, 2, 3,...)

A	N	AF	F
1	1	1	1

Training Systems

Numerically count the number of other common Support Functions (CSF) for the Activity. Add to it the number of interconnectivities stated in the data response (Question 3.0 Mission) subject to the following constraints:

a. Must be technical functions
b. Must be within the Laboratory Activity
c. Function is not part of another JCSG functional category, e.g., T&E

Question 3.1.1 Geographical/Climatological.

(2) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more geographic feature(s) that have been justified as <u>required</u> to perform this CSF, answer Yes.

Question 3.1.1 Geographical/Climatological.

(3) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	0

If the description of this question lists one or more climatological feature(s) that have been justified as <u>required</u> to perform this CSF, answer Yes.

Question 3.1.3 Environmental Constraints

	A	N	AF	F
(4) ENTER: NUMERIC COUNT (1, 2, 3, ...)				

Numerically count the number of environmental and/or land use constraints listed **which limit or restrict** the performance of the CSF in the narrative of this question. A constraint imposed by more than one level of government should be counted only once.

Question 3.1.4 Special Support Infrastructure

	A	N	AF	F
(5) ENTER: YES/NO (YES = 1, NO = 0)				

If this narrative contains one or more responses/listings of **special support infrastructure** (e.g. water, power, rairoads, roads, telephone/data lines, etc.) that is **required over and above** that typically available for general activity operations, respond with a YES. Hilite those responses/listings that meet this criteria for use by the response (13) scoring team. [This question is to be scored prior to (13)]

Question 3.2.1 Total Personnel

(6) ENTER: VALUES CONTAINED IN THE MATRIX

A N AF F

	Government Civilian	Government Military	On-Site FFRDC	On-Site SETA
Technical	9	10	19	0
Mngmt(Supv)	6	10	16	0
Other	0	0	0	0

Transfer of values from the matrix submitted for this CSF.

Question 3.2.2 Education

(7) ENTER: VALUES CONTAINED IN THE MATRIX FOR THE COLUMNS ENTITLED "TECHNICAL" AND "MANAGEMENT"

A N AF F

	Technical	Management (Supv)
HS or less	0	1
Associates	0	0
Bachelor	5	2
Masters	3	2
Doctorate	8	8

Transfer of values from the matrix submitted for this CSF only for the first two columns of the data submitted, entitled "Technical" and "Management".

Question 3.2.3 Experience of Government Personnel A N AF F

(8) ENTER: VALUES IN THE DATA CALL MATRIX FOR THE LINE ENTITLED "TECHNICAL" PERSONNEL ONLY

	<3	3-10yrs	11-15yrs	16-20yrs	>20
Technical	2	7	2	5	4

Transfer the values from the experience matrix for this CSF only for the row entitled "Technical" personnel.

Question 3.2.4.1 Patents for Government Personnel

(9) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0. A N AF F

3 3 3 3

Count the number of patents listed as **awarded** for this CSF, **do not count patents which** have been disclosed.

THE FOLLOWING VALUES ARE USED TO NORMALIZE (9) AND (10): FROM TABLE 3.3.1.1 ENTER THE VALUES AT THE INTERSECTION OF THE COLUMNS ENTITLED "CIVILIAN" AND "MILITARY" WITH THE ROW LABELED "SCIENCE & TECHNOLOGY"

	Civilian	Military	A N AF F
Science&Technology	20	15	

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
		53	53

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER	A	N	AF	F
ACAT IC	0				
ACAT ID	0				
ACAT II	0				
ACAT III/IV	0				
Other	0				

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
		0	0

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.2.4.2 Papers Published in Peer Journals by Government Personnel

(10) ENTER: NUMERIC COUNT (1, 2, 3,...) OR 0 IF S&T WORKYEARS IN QUESTION 3.3.1.1 ARE = TO 0.

A	N	AF	F
53	54	57	53
5	5353		

Count the number of papers published in peer reviewed journals for this CSF.

Question 3.3.1.2 Engineering Development by ACAT Category

(11) ENTER: VALUES CONTAINED IN THE MATRIX IN THE COLUMN ENTITLED "NAME OR NUMBER"

	NAME/ NUMBER	A	N	AF	F
ACAT IC	0				
ACAT ID	0				
ACAT II	0				
ACAT III/IV	0				
Other	0				

If the entry in this column for one of the categories listed along the left side of the matrix is a number, enter this value. If a number of systems is not listed but are instead listed by a system name and/or acronym, count the names/acronyms to determine a number which may be entered on each of the appropriate ACAT category lines.

Question 3.3.1.3 In-Service Engineering

(12) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
0	0	0	

To receive a YES for this question the CSF must show ISE workyears being performed in Question 3.3.1.1 TO BE GREATER THAN 5 WORKYEARS.

Question 3.4.1 Major Facilities/Equipment at Activity

(13) ENTER: THE TOTAL $ VALUE FOR ALL ENTRIES IN THE MATRIX UNDER THE COLUMN ENTITLED "REPLACEMENT COST" IF THEY ARE GREATER THAN $10M. $20M

A	N	AF	F
X		1	

Only facilities or equipment which have a replacement cost in excess of $10 million will be counted for this question. The entry for the CSF will be a total of all the facilities or equipment listed meeting this dollar threshhold requirement. Do not include any special support infrastructure that was hilited during scoring of question 3.1.4.

Question 3.4.1 Major Facilities/Equipment at Activity

A	N	AF	F
X		1	

(14) ENTER: TOTAL VALUE FROM (13) AND SUM OF %S FOR SHARED FACILITIES/EQUIPMENT (% Total NOT used by this CSF)

For Each Facility/Piece of Equipment:

Total % Shared	Replacement Cost ($M)
.	.
.	.
.	.

TOTAL VALUE 0

For the facilities/equipment listed in (13) which have a replacement value of greater than $10M and are shared by other product or pervasive support functions. Enter for each facility or piece of equipment the total % which is shared by other support functions and the replacement cost for it which was used in the calculation for (13) above. The % listed for any single facility or piece of equipment must be less than 100%. The replacement cost is multiplied by the % shared and then summed to arrive at the "TOTAL VALUE" to be entered in D-Pads [eg .40 (40%) x $20M + .20 (20%) x $120M + ... = $TOTAL VALUE]

Question 3.5.2 Land Use

(15) ENTER: YES/NO (YES = 1, NO = 0)

A	N	AF	F
X	0	0	0

If the response to this question lists the number of buildable acres at an installation as greater than 10 for any CSF except those in the Product CSF of "Weapons", enter YES. For a "Weapons" CSF, the value listed must be greater than 50 acres to enter YES.

CORRECTIONS THAT NEED TO BE MADE TO THE SCORE SHEETS

HUMAN SYSTEMS/MANPOWER AND PERSONNEL

1. USARIEM

- Ink or erase notations next to Question 1
- Navy score needed on Question 15

2. AARL

- Ink or erase notations next to Question 1

3. Armstrong Lab-Brooks AFB

- Ink or erase notations next to Question 1

4. NPRDC-San Diego

- Army initials needed on Question 1
- Navy initials needed on every question

5. NMRI-Bethesda

- Ink or erase notation next to Question 1
- Navy initials needed on every question

6. NAMRL-Pensacola

- Navy initials needed on every question
- Replace fifth page of score sheet

U. S. AIR FORCE LABORATORIES

BOOK NUMBER 3 OF 3

Mc. Aeronautical Systems Center (SPO), Wright-Patterson AFB
N. Aeronautical Systems Center (Mod Center), Wright-Patterson AFB
O. Oklahoma City Air Logistics Center, Tinker AFB
P. Ogden Air Logistics Center, Hill AFB
Q. Sacramento Air Logistics Center, McClellan AFB
R. Phillips Laboratory, Kirtland AFB
S. Phillips Laboratory, Hanscom AFB
T. Phillips Laboratory, Edwards AFB
U. Detachment 10 (SMC), Norton AFB
V. Detachment 25 (SM-ALC), Peterson AFB
W. Rome Laboratory, Griffiss AFB

"LAB" JOINT CROSS-SERVICE GROUP GUIDANCE PACKAGE

Section I: Taskings
1.1 Guidelines
1.2 Standards
1.3 Assumptions
1.4 Measures of Merit
1.5 Activities
1.6 Common Support Functions

Section II: Capacity of DOD Components
2.1 Workload
2.2 Excess Capacity

Section III: Capability of Activities to Perform Common Support Functions
3.0 Mission
3.1 Location
3.2 Personnel
3.3 Workload
3.4 Facilities & Equipment
3.5 Expansion Potential

Section IV: Appendices
A. Macro Process/Schedule
B. List of Activities
C. Common Support Functions

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.0 for ASC-Wright Patterson. The Laboratory JCSG guidance package requested the description of relationships and interconnectivities with other functions (common or unique) in support of the overall activity mission. This question was intended to solicit a list of functions which a particular common support function (CSF) (listed in appendix C of the questionnaire) is interconnected. The term "interconnected" is defined as any relationships, connections, and/or synergies that exist among CSFs either common (i.e. listed in appendix C) or unique (i.e. not included in appendix C) by virtue of shared /common scientific or engineering disciplines, shared/common equipment or facilities, joint or common requirements, or any other factors which link or relate the CSFs and/or unique functions to each other. Clearly identify these interconnectivities for each CSF reported by your activity.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

Thomas L. Koepnick

MAJCOM REVIEWER: THOMAS L. KOEPNICK AFMC/XPX 787-2622
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

See attached (Revised Ques 3.0 & Atch 3.0A & Atch 3.0B)

BASE REVIEWER: Robert Manikk
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing . . ality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

PURPOSE: To provide SAF/AQX staff corrected answer to question 3.2.2 Education of the ASC -- Wright Patterson response to the LJCSG guidance package. The 10 Aug 1994 response did not provide data at the lowest level CEF per the instructions.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

Thomas L. Koepmck

MAJCOM REVIEWER: THOMAS L. KOEPMCK AFMC/XPX 787-2622
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

See attached (Revised Ques 3.2.2)

BASE REVIEWER: Robert Marischak
(print name, organization, DSN) ROBERT MARISCHAK ASC/CYN 785-0304

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and g Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.2.3 Experience of the ASC – Wright Patterson response to the LJCSG guidance package. The 10 Aug 1994 response did not provide data at the lowest level CEF per the instructions.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8250

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package Instructions

MAJCOM: Concurs Does not concur (explain:)

Thomas L. Koepnick

MAJCOM REVIEWER: THOMAS KOEPNICK AFMC/XPX 787-2622
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

See attached (Revised Ques 3.2.3)

BASE REVIEWER: Robert Marcischak
(~~print name, organization, DSN~~) ROBERT MARCISCHAK ASC/CYN 7850304

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.3.1.1. of the ASC-Wright Patterson response. The 10 Aug 1994 version did not provide data at the lowest level of CSP per the instruction.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: (Concurs) Does not concur (explain:)

Thomas L. Koepnick

MAJCOM REVIEWER: THOMAS L. KOEPNICK AFMC/XPX 787-2621
(print name, organization, DSN)

BASE: (Concurs) Does not concur (explain:)

See attached (Revised Ques 3.3.1.1)

BASE REVIEWER: Robert Marcischak
(print name, organization, DSN) ROBERT MARCISCHAK ASC/CYN 785-0304

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Intg)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.4.1 of the ASC-Wright Patterson response to the LJCSG guidance package. The 10 Aug 1994 version did not break out equipment or facilities either by facility/equipment nor by CSF. The replacement costs must be broken out by CSF by equipment/facility. The sharing by percentage must also be shown.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: (Concurs) Does not concur (explain:)

Thomas L. Koepnick

MAJCOM REVIEWER: THOMAS L. KOEPNICK AFMC/XPK 787-2622
(print name, organization, DSN)

BASE: (Concurs) Does not concur (explain:)

See attached (Revised ques 3.4.1)

BASE REVIEWER: Robert Marlischak
(print name, organization, DSN) ROBERT MARLISCHAK ASC/CYN 785-0304

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Intig)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

** TOTAL PAGE.888 **

[illegible]

[illegible] Lt Col [illegible], SAF/AQDL, DSN 227-[illegible]

[illegible] Collection of statistics

[illegible] Answer must be: Complete

[illegible] Response must be in accordance with LCSW Outside Tasking Instructions

[illegible] Comment: [illegible] Does not contain (explain)

SEE ATTACHED

[illegible] REVIEWER: Thomas L. Koepke

(print name, organization, DSN)

THOMAS L. KOEPKE, HQ AFMC/XP, 787-2[illegible]

[illegible] Comment: [illegible] Does not contain (explain)

13 Aug 94 submittal answers the question and [illegible] is attached.

[illegible] REVIEWER: Robert J Marcischak

(print name, organization, DSN)

ROBERT J MARCISCHAK, ASC/CYN, DSN 785-0304

[illegible] information above is accurate and complete to the best of my knowledge and [illegible]

[illegible] Lt Col, USAF

[illegible] Assessment Division

[illegible] Date

SECTION I: TASKING

In accordance with the Deputy Secretary of Defense memorandum dated 7 Jan 94, the Laboratory Joint Cross-Service Group (LJCSG) with DOD components should, where operationally and cost effective, strive to: retain in only one Service militarily unique capabilities used by two or more Services; consolidate workload across the Service to reduce capacity; and assign operational units from more than one Service to a single base. Specifically, the purpose of the LJCSG is:

- Determine common support functions and bases to be addressed by LJCSG
- Establish guidelines, standards, assumptions, measures of merit, data elements and milestone schedules for DOD Component conduct of cross-service analysis of common support functions
- Review excess capacity analysis
- Develop closure or realignment alternatives
- Analyze cross-service trade-offs

The following information identifies to the Services common support functions and data element requirements necessary to support the cross-service analysis of these common support functions.

1.1 Guidelines

Because the DOD components are organized differently, "Lab" activities are considered to be those involved in the following life cycle efforts: Science and technology, and/or engineering development, and/or in-service engineering.

Service missions and force structure will be as stipulated in the FY1995-2000 Defense Planning Guidance and Interim Force Structure Plan.

The Military Departments will use the projected funding in the FY95 President's Budget Submission (Future Years Defense Plan -- FYDP) and an estimate of funds that will be received from outside the military department for execution.

If "lab" excess capacity exists, the Military Departments will start to reduce it where operationally and cost effective through a combination of downsizing in place within the departments, internal service consolidation, and cross service alternatives.

The Military Departments will gather, exchange, and analyze data collected per this guidance call for Common Support Functions (Appendix C) at "lab" activities (Appendix B) in accordance with the milestones and schedule dates identified in Appendix A.

Cross-service alternatives will result in an aggregate reduction in the overall "lab" infrastructure across the Military Departments -- personnel/funding/facilities and equipment.

Common cross-service Measures of Merit will be consistently applied for all cross-service alternatives.

Integration of weapon systems/components into operational forces will remain with the individual Military Departments responsible for those forces.

1.2 Standards

Evaluation of cross-service alternatives will be consistent with PL 101-510 (as amended) and the eight BRAC criteria. Only certified data will be used.

The COBRA cost model will be used to calculate estimated costs, estimated savings, and Return on Investment (ROI) of alternatives leading to proposed closures and realignments. Common inputs will be used for Military COBRA runs incorporating cross-service alternatives.

Military value analysis will be conducted by the Military Departments IAW Title 10, USC responsibilities.

1.3 Assumptions

"Lab" Common Support Functions and activities identified herein represent the major opportunities for developing cross-service alternatives. The Military Departments are not precluded from proposing other cross-service alternatives to reduce excess capacity as they assess the full complement of "lab" functions.

Previous BRAC decisions will be factored into cross-service alternatives.

"Lab" capacity will be based on budgeted workyears. A workyear is considered to be 2080 hours adjusted for time not on the job (e.g. sick leave, annual leave, etc.)

1.4 Measures of Merit

The following Measures of Merit represent the outcome from the DOD component final realignment and closure recommendations that are supported by the capabilities data which will be gathered by activity and common support function in Section III of this guidance.

- Reduction of "lab" infrastructure
- Return on investment (COBRA)

- Military value (BRAC criteria 1-4) -- the composite assessment of the quality of the remaining "lab" infrastructure

1.5 Activities

The Military Departments will collect capacity data for each "lab" activity identified in Appendix B. The "lab" activities were selected by considering all individual aggregates of personnel and facilities located at one base, under the same commander, performing predominantly science and technology (S&T), engineering development, and/or in-service engineering work. Small subelements of these "lab" activities were included with the activity. Larger subelements were broken out and defined as separate activities. The list of activities was then narrowed down to the list in Appendix B based on a joint Military Department assessment of common support functions with cross-service potential.

1.6 Common Support Functions

The common support functions (CSFs) were selected as shown in Appendix C based on a joint Military Department assessment of commonalty and cross-servicing potential. Common support functions which were already consolidated and being cross serviced were not included.

Common Support Functions are divided into two categories: product and pervasive. Product functions include all S&T, engineering development, and in-service engineering efforts associated with a product from all funding sources. Pervasive functions only include those efforts that are S&T funded, i.e. Technology Base (6.1)/Exploratory Development (6.2)/Advanced Development (6.3).

SECTION II: CAPACITY OF DOD COMPONENTS

2.1 **Workload.** Use the following table to describe historic and projected workload at each activity in terms of funding and workyears. Assume previous BRAC closures and realignments are implemented on schedule. Projected funding will be derived from FY95 President's Budget Submission (Then year dollars). Past fiscal year data shall begin with FY86 or at the inception of the activity as it existed on 1 Oct 93. (BRAC Criteria I & IV)

CONCLUSION:

Information Required	Fiscal Years											
	86	87	88	89	90	91	92	93	94	95	96	97
Total Funds Programmed ($M)	16,368.8	11,150.8	10,038.5	16,028.8	14,806.8	12,861.5	12,204.7	10,875.5	8,923.9	9,389.9	10,437.6	9,016.7
Total Actual Funds ($M)	16,368.8	11,150.8	10,038.5	16,028.8	14,806.8	12,861.5	12,204.7	10,875.5				
Programmed Workyears	6,641*	6,726*	6,877*	6,695*	6,728*	6,699*	5,166*	5,807*	5,966	5,657	5,431	5,063
Actual Workyears **								6770				

* Programmed workyears shown prior to FY94 are only showing organic (government-only) manyears (no SETA included). Based on FY93 actual data, 93% of ASC work is accomplished organically. This could mean reported Programmed workyears prior to FY94 are 7% lower than the actuals. (See Question 2.2.)

** Actual workyears for government were not available for years prior to FY93.

2.2 **Excess "Lab" Capacity -- Measured at the DOD Component Level**

- Excess "Lab" Capacity = Sum of the Peak Workyears - Sum of the Projected Workyears
  - -- Peak at each activity = Highest value between FY86 (or since inception of organization) and FY93
  - -- Projected at each activity = Estimated at FY97

CONCLUSION: Since we did not have accurate numbers for actual workyears prior to FY93, we calculated this number two ways. There is an "excess capacity" between 1707 and 1814 Workyears in the ASC acquisition community at WPAFB.

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.0 for ASC-Wright Patterson. The Laboratory JCSG guidance package requested the description of relationships and interconnectivities with other functions (common or unique) in support of the overall activity mission. This question was intended to solicit a list of functions which a particular common support function (CSF) (listed in appendix C of the questionnaire) is interconnected. The term "interconnected" is defined as any relationships, connections, and/or synergies that exist among CSFs either common (i.e. listed in appendix C) or unique (i.e. not included in appendix C) by virtue of shared /common scientific or engineering disciplines, shared/common equipment or facilities, joint or common requirements, or any other factors which link or relate the CSFs and/or unique functions to each other. Clearly identify these interconnectivities for each CSF reported by your activity.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

MAJCOM REVIEWER: _____
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF Date:
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

SECTION III: CAPABILITY OF ACTIVITIES TO PERFORM COMMON SUPPORT FUNCTIONS (CSFs):

PURPOSE: To document answer to Lab Questionnaire Question 3.0 -- **Provide information on the ASC acquisition mission.**

SOURCE: AFMC Pamphlet 800-60, Integrated Weapon System Management (IWSM), 1 Oct 93
AFMC Program Master List (PML), Revision 2, 7 Jan 94
Capt Laurel Hunt, ASC/CY, 785-1427, ASC Mission Statement.
Capt Sam Batman and Capt Maria Murphy, ASC/CYN, 785-0304, ASC Program List and program data sheets (2/28/94).
Robert Marcischak, ASC/CYN, 785-0304, Review of Common Support Functions for ASC programs (Program information provided from ASC Program Offices (Aug 94)).
AFMC Leading Edge article, July 1994, page 20: ASC facts

METHOD: Review AFMC goals, objectives, and organizational charts. Review the ASC mission statement as shown in ASC official documentation. Describe the ASC mission and how the BRAC Common Support Functions (CSFs) are supported as part of the mission. Map programs and program CSFs into the discussion.

CONCLUSION: **See Discussion and Notes**

Under the Air Force Materiel Command (AFMC) organizational charters, ASC, as a Product Center, is defined as the AFMC Center of Excellence for all Air Force aircraft development activities. Aircraft development includes the acquisition and evolution of weapon systems. ASC works with AFMC Air Logistic Centers to plan the sustainment of these systems.

The ASC mission is as follows: *The ASC team, together with our partners in government and industry, develops, acquires and sustains the world's best aeronautical systems, and supports our customers with superior products and services*

- Since inception in 1947, ASC (formerly Aeronautical Systems Division - ASD) has developed an organic capability headquartered at Wright-Patterson AFB that is acknowledged as the leading aerospace technology and acquisition center of

the free world. The infrastructure has emerged to include an excellent laboratory structure for Major Force Programs as 6.1, 6.2, and 6.3 activities. (See the ASC Laboratory questionnaire.) For Major Force programs 6.4 and for Weapon System Production efforts, a System Program Office (SPO) team concept has been employed for planning and executing acquisition activities. ASC program offices work with other AFMC centers of excellence, including the three Test Centers and five Air Logistic Centers (ALCs). ALCs are charged with sustaining systems bought by AFMC, including those developed, acquired and deployed by ASC. ASC program offices are responsible for properly planning for sustainment with the ALCs.

- Numerous joint development efforts have been and are currently supported and/or lead at ASC.

- ASC uses a detailed process to transfer technology from the laboratory environment to the program offices through ASC/XR. XR, along with our Total Quality office, are also tasked to provide corporate strategic planning of the Center.

- Program Offices rely on highly trained "matrixed" technical and management experts in five major acquisition career fields: Engineering management, Program management, Financial management, Contracting management, and Logistics management. Recent organic expertise has been developed in environmental management that also supports program offices.

- The work effort to accomplish the acquisition and evolution mission is completed in Program Offices using organic support (military and civilian) matrixed from the home offices. Program Offices also receive non-organic (SETA) support. As of FY93, the mix was 93 % organic and 7 % non-organic at WPAFB. See supporting data in 2.1 and 3.2.1.

- ASC activities constitute a major portion of all activities at Wright-Patterson AFB (WPAFB). ASC's total budget in FY93 was $4.5 Billion. ASC controls 20% of the entire Air Force budget annually.

- The development work efforts managed by Program Offices are contracted out to prime contractors. These contractors represent all portions of the Defense Industrial Base. ASC manages about 40% of the AFMC budget for weapons systems development efforts, with 95% going for contracted efforts.

- The ASC acquisition programs covered by this questionnaire are listed in Question 3.3.1.2. with ACAT and FY 93 funding information. They represent programs from Milestone I through IV, R&D and Production funding, ACAT I through non-ACAT priority, PEO versus DAC, and joint programs. These programs are subdivided into their respective Common Support Functions in Attachment 3.0B. The length and breadth of that program list indicates the diversity of the customers and activities being accomplished and the required interconnectivities facing the major programs:

  - Major Users: Air Combat Command (ACC), Air Education and Training Command (AETC), US Special Operations Command (USSOCOM), USAFE, PACAF, Army, Navy. (See Atch 3.0U)

  - FMS Cases: Numerous Foreign government requirements with various needs and budget restraints (U.S. State Department). Programs like F-16 have shaped new methods of dealing with Security Assistance Programs for the DOD. Approximately 40% of the FMS funding coming to the Air Force is managed through Program Offices from ASC. The discussion in this questionnaire does not provide any insight to the amount of involvement in FMS programs (other than overall funding shown in Ques 3.3.2.2). (See Atch 3.0U)

  - Development Activities: Includes projects involving all major U.S. laboratories and DOD test center. Cooperative and Joint programs and initiatives (Joint Logistics Commander requirements) are part of the workload. Special technology is being developed, some managed in Special Access Programs. The National Aerospace Plane (NASP) is a prime example of NASA, DOD and other national and international agencies cooperatively working aerospace technology issues led by ASC. (See Laboratory questionnaire for other developments). (See Atch 3.0U)

• Product Management: Program Executive Officers; HQ USAF, HQ AFMC, other AFMC Product, Logistics and Test Centers. Integrated Weapons Systems Management (IWSM) has recently focused Product Centers and Air Logistics Centers into Integrated Product Teams, making reliance on sound expertise and open communication with all program partners a must.

• ASC at Wright-Patterson designs, develops, and acquires the following types of aeronautical systems:

• Air Vehicles – Fixed: (See Atch 3.0B) These include entire aircraft systems of fighters, bombers, fighter/bombers, tankers, cargo planes, and trainers. All those system developments require integration and overall special planning to ensure all the various systems, subsystems and components of aerospace systems are properly managed to meet Air Force, DOD and national mission objectives.

– ASC maintains an organic staff (Engineering, Program Management, including Test Management, Finance Management, Contract Management and Logistics Management) that ensures lessons learned and latest acquisition and technical requirements are integrated into program strategies (over 6000 manyears). Organic staff is "matrixed" to Program Offices. ASC's functional home offices provide overall support to programs both at WPAFB and Eglin AFB. Non-organic support (approximately 430 manyears per year) supports program offices in accomplishing their missions.

– The CSFs we have used to further breakout ASC major activities are the following:

•• Air Vehicles – Fixed (Structures) ASC provides overall Air Force expertise in airframe development, acquisition and deployment for the Customer. ASC's overhead management structure is also included in this area for purposes of this questionnaire, since it represents AFMC's corporate airframe knowledge, integration expertise and Center of Excellence capability. The airframe (structure) must be capable of carrying out the mission, with all the critical, integrated systems (e.g., engines and avionics) and subsystems

functioning properly. The following major aircraft and integrated support systems represent current work activities in this area:

B-2 AIRCRAFT (SPO)
B-1 AIRCRAFT (SPO)
C-17 AIRCRAFT (SPO)
CV-22 AIRCRAFT (SPO)
F-15 AIRCRAFT (SPO)
F-16 AIRCRAFT (SPO)
F-22 AIRCRAFT (SPO)
JPATS AIRCRAFT (SPO)
JSTARS AIRCRAFT (ENGINEERING SUPPORT)
NON-DEVELOPMENTAL AIRLIFT AIRCRAFT (NDAA) AIRCRAFT
F-117 AIRCRAFT (DEVELOPMENT SYSTEM MANAGER)
C-130 AIRCRAFT (DEVELOPMENT SYSTEM MANAGER)
COMBAT TALON II AIRCRAFT (DEVELOPMENT SYSTEM MANAGER)
GUNSHIP (DEVELOPMENT SYSTEM MANAGER)
BIG SAFARI AIRCRAFT (SPO)
C/KC-135 AIRCRAFT (DEVELOPMENT SYSTEM MANAGER)
COMMERCIAL AIRCRAFT: KC-10 AIRCRAFT (DEVELOPMENT SYSTEM MANAGER)
VC-X AIRCRAFT (DEVELOPMENT SYSTEM MANAGER)
COMMERCIAL AIRCRAFT:C-20H SPECIAL AIRLIFT MISSION AIRCRAFT (DEVELOPMENT SYSTEM MANAGER)
SENIOR YEAR AIRCRAFT (SPO)
T-3 ENHANCEMENT FLIGHT SCREENER AIRCRAFT (SPO)
AWACS AIRCRAFT ENGINEERING SUPPORT
AIRCRAFT SYSTEM (AIRFRAME) DEVELOPMENT/INTEGRATION ACTIVITIES:
PROPULSION INTEGRATION (Product Group Partnership)
AVIONICS INTEGRATION (Product Group Partnership)
TRAINING SYSTEMS DEVELOPMENT (Product Group Partnership)
SUPPORT SYSTEMS DEVELOPMENT (Product Group Partnership)
TEST SYSTEMS (ATE) (Product Group Partnership)
MUNITIONS DEVELOPMENT (Product Group Partnership)
HAZ-MAT ELIMINATION (Staff)
NATIONAL AEROSPACE PLANE (NASP) AIRCRAFT
STANDARD FLIGHT DATA RECORDER
JOINT MODELING AND SIMULATION SYSTEM (J-MASS)
IMPROVED DATA MODEM
COOPERATIVE AIRCRAFT IDENTIFICATION
COMMON TANKER/TRANSPORT RADAR
ADVANCED X-RAY SYSTEM (AXES)
INTEROPERABLE VISUAL/SENSORS FOR ACC
AIR FORCE ACQUISITION MODEL (Lead Center)
PRAM/RAMTIP (Lead Center)
MARK XV (TERMINATION)
TECHNOLOGY TRANSFER (Lead Center)
TECHNOLOGY INFORMATION (Lead Center)
INDUSTRIAL FACILITIES
ENVIRONMENTAL SYSTEMS SUPPORT (Staff)
FASTENERS, ACTUATORS, CONNECTORS, TOOLS AND SUBSYSTEMS (FACTS)
LEAD CENTER FOR ACQUISITION LOGISTICS (Lead Center)

•• Air Vehicles -- Fixed (Propulsion) ASC is responsible for supporting engine and propulsion technology insertion into airframe and weapon systems. In addition, as part of AFMC product management focus, ASC is partnered with OC-ALC and SM-ALC in the overall planning and development of all engine products as part of the AFMC Propulsion Product Group. Any AFMC weapon or aircraft program needing updates or improvements to propulsion systems will use that Group to foster a realistic and thorough solution. Management of propulsion systems can be accomplished through the Product Group (for common applications or sustainment only) or integrated into the Weapon System Program (e.g., F-22, F-16, C-17). Engine Accessories (e.g., hydraulics, flight control systems) will also be managed separately (with the weapon system in a Materiel Group for common applications). Examples of the current major propulsion systems being developed or acquired are as follows:

B-2 AIRCRAFT PROPULSION SYSTEMS (F118-GE-100)
C-17 AIRCRAFT PROPULSION SYSTEMS (F117-PW-100)
F-15 AIRCRAFT PROPULSION SYSTEMS
F-16 AIRCRAFT PROPULSION SYSTEMS (F100-PW-229, F110-GE-129)
F-22 AIRCRAFT PROPULSION SYSTEMS (F119-PW-100)
C-135 AIRCRAFT PROPULSION SYSTEMS (Re-engining JT3D ,etc)
F-117 AIRCRAFT PROPULSION SYSTEMS
BIG SAFARI AIRCRAFT PROPULSION SYSTEMS (F118-GE-101, J75-PW-13B)
PROPULSION PRODUCT GROUP: (F100, F101, F-103, F107, F108, F110, F112, IC360, J33, J47, J57, J60, J65, J69, J85, J75, J79, JT3D, O300, T53, T56, T58, T64, T400, T700, TF30, TF33, TF34, TF39, TF41)
COMPONENT IMPROVEMENT PROGRAM
WEAPON PROPULSION SYSTEMS
LEAD CENTER FOR ACQUISITION LOGISTICS
NATIONAL AEROSPACE PLANE (NASP) AIRCRAFT PROPULSION SYSTEMS

•• Air Vehicles -- Fixed (Avionics) ASC is responsible for supporting avionics technology insertion into airframe and weapon systems. Major weapons systems (e.g., F-22) develop and integrate Avionics systems into their development strategies and acquisition programs to meet mission needs. As part of AFMC product management focus, ASC is partnered with WRALC in the overall planning and development of all common avionics products as part of the AFMC Common Avionics Product Group. ASC has also been identified as the lead for DOD avionics standardization. Past experience and leadership on the Joint Integrated Avionics Working Group (JIAWG) in support of the Advanced Tactical Fighter (ATF) program demonstrated ASC's technical and management expertise as the leader for DOD on the subject. Any AFMC weapon or aircraft program needing updates or improvements to avionics systems will use that Group to foster a realistic and thorough solution. Management of avionics systems can be accomplished through the Product Group (for common applications or sustainment only) or is normally integrated into the Weapon System Program (e.g., F-22, F-16, C-17). Examples of the current major avionics systems activities being developed or acquired are as follows:

B-2 AIRCRAFT
B-1 AIRCRAFT
C-17 AIRCRAFT
F-15 AIRCRAFT
F-16 AIRCRAFT
F-22 AIRCRAFT
F-117 AIRCRAFT
JPATS AIRCRAFT
NON-DEVELOPMENTAL AIRLIFT AIRCRAFT (NDAA) AIRCRAFT
C-130 AIRCRAFT
COMBAT TALON II AIRCRAFT
COOPERATIVE AIRCRAFT IDENTIFICATION
COMMERCIAL AIRCRAFT:C-20H SPECIAL AIRLIFT MISSION AIRCRAFT
LANTIRN
QUIET IONIGHT
THEATER MISSILE DEFENSE (TMD)
AVIONICS ARCHITECTURE IMPLEMENTATION AND SUPPORT
DOD LEAD FOR AVIONICS STANDARDIZATION
T-38 AVIONICS UPGRADE MODULAR AVIONICS SYSTEM ARCHITECTURE (MASA)
STANDARD AVIONICS AND JOINT SERVICES REVIEW COMMITTEE INITIATIVES
STANDARD FLIGHT DATA RECORDER

IMPROVED DATA MODEM
COMMON TANKER/TRANSPORT RADAR
EF-111A SYSTEM IMPROVEMENT PROGRAM (SIP)
F-111 DIGITAL FLIGHT CONTROL SYSTEM (DFCS)
COMPASS/ATTITUDE AND HEADING REFERENCE SYSTEMS (C/AHRS)
EMBEDDED GPS/INS
GPS SIGNAL DATA CONVERTER
AMC ELECTRONIC COCKPIT
CONTROL DISPLAY NAVIGATION UNIT
RFMETS (Eglin)
FIBER OPTIC RATE GYRO
INTEGRATED MANPOWER AND COMPREHENSIVE TRAINING AND SAFETY (IMPACTS)
LEAD CENTER FOR ACQUISITION LOGISTICS

•• Air Vehicles -- Fixed (Flight Subsystems) ASC is responsible for supporting airframe development with technology insertion and acquisition and deployment of various Flight Subsystems. As part of AFMC product management focus, ASC is partnered with all five ALCs in the overall planning and development of numerous subsystems products as part of the AFMC Materiel and Product Groups (e.g., Communications systems, Power and Power Conditioning systems, Generators, Intelligence and Security systems, Training Equipment, Electronic Combat systems). Any AFMC weapon or aircraft program needing updates or improvements to flight subsystems will use the AFMC Groups to foster a realistic and thorough solution. ASC maintains technical expertise to ensure all major weapon systems include all the necessary subsystems to accomplish the mission. Examples of the current major systems requiring integrated flight subsystems, or flight subsystem development activities are listed as follows:

B-2 AIRCRAFT
C-17 AIRCRAFT
B-1 AIRCRAFT
F-15 AIRCRAFT
F-16 AIRCRAFT
F-22 AIRCRAFT
F-117 AIRCRAFT
JPATS AIRCRAFT
JSTARS AIRCRAFT ENGINEERING SUPPORT
NON-DEVELOPMENTAL AIRLIFT AIRCRAFT (NDAA) AIRCRAFT
C-130 AIRCRAFT
COMBAT TALON II AIRCRAFT
GUNSHIP

ASC BRAC INFORMATION Atch 3.0B Question 3.0 AND 3.3.1.2

	Program Data	
ACAT	PROGRAM NAME	COMMON SUPPORT FUNCTION (CSF)
1D	B-1B BOMBER AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	B-2 BOMBER AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	B-2 BOMBER AIRCRAFT	Air Vehicles - Fixed (Propulsion)
1D	B-2 BOMBER AIRCRAFT	Air Vehicles - Fixed (Structures)
1D	B-2 BOMBER AIRCRAFT	Air Vehicles - Fixed (SubSystems)
1D	C-17 AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	C-17 AIRCRAFT	Air Vehicles - Fixed (Propulsion)
1D	C-17 AIRCRAFT	Air Vehicles - Fixed (Structures)
1D	C-17 AIRCRAFT	Air Vehicles - Fixed (SubSystems)
1D	COOPERATIVE AIRCRAFT IDENTIFICATION	Air Vehicles - Fixed (Avionics)
1D	F-16 AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	F-16 AIRCRAFT	Air Vehicles - Fixed (Propulsion)
1D	F-16 AIRCRAFT	Air Vehicles - Fixed (Structures)
1D	F-16 AIRCRAFT	Air Vehicles - Fixed (SubSystems)
1D	F-22 AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	F-22 AIRCRAFT	Air Vehicles - Fixed (Propulsion)
1D	F-22 AIRCRAFT	Air Vehicles - Fixed (Structures)
1D	F-22 AIRCRAFT	Air Vehicles - Fixed (SubSystems)
1D	IMPROVED DATA MODEM	Air Vehicles - Fixed (Avionics)
1D	JPATS AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	JPATS AIRCRAFT	Air Vehicles - Fixed (Structures)
1D	JPATS AIRCRAFT	Air Vehicles - Fixed (SubSystems)
1D	JSTARS AIRCRAFT ENGINEERING SUPPORT	Air Vehicles - Fixed (Structures)
1D	JSTARS FLIGHT CREW TRAING (J-FTS)	Air Vehicles - Fixed (SubSystems)
1D	NON-DEVELOPMENTAL AIRLIFT AIRCRAFT (NDAA)	Air Vehicles - Fixed (Avionics)
1D	NON-DEVELOPMENTAL AIRLIFT AIRCRAFT (NDAA)	Air Vehicles - Fixed (Propulsion)
1D	NON-DEVELOPMENTAL AIRLIFT AIRCRAFT (NDAA)	Air Vehicles - Fixed (Structures)
1D	NON-DEVELOPMENTAL AIRLIFT AIRCRAFT (NDAA)	Air Vehicles - Fixed (SubSystems)
1D	T-1A AIRCRAFT	Air Vehicles - Fixed (Structures)
1D	TSSAM	Weapons - Cruise Missile
1C	C-130 AIRCRAFT	Air Vehicles - Fixed (Avionics)
1C	C-130 AIRCRAFT	Air Vehicles - Fixed (Propulsion)
1C	C-130 AIRCRAFT	Air Vehicles - Fixed (Structures)
1C	C-130 AIRCRAFT	Air Vehicles - Fixed (SubSystems)
1C	LANTIRN	Air Vehicles - Fixed (Avionics)
II	ADVANCE MISSILE WARNING	Air Vehicles - Fixed (SubSystems)
II	ADVANCED CRUISE MISSILE	Weapons - Cruise Missile
II	COMBAT TALON II AIRCRAFT	Air Vehicles - Fixed (Avionics)
II	COMBAT TALON II AIRCRAFT	Air Vehicles - Fixed (Structures)
II	COMBAT TALON II AIRCRAFT	Air Vehicles - Fixed (SubSystems)
II	COMMON TANKER/TRANSPORT RADAR	Air Vehicles - Fixed (Avionics)
II	CV-22 AIRCRAFT	Air Vehicles - Fixed (Structures)
II	EF-111A SYSTEM IMPROVEMNT PROGRAM (SIP)	Air Vehicles - Fixed (Avionics)
II	F-15 AIRCRAFT	Air Vehicles - Fixed (Avionics)
II	F-15 AIRCRAFT	Air Vehicles - Fixed (Propulsion)
II	F-15 AIRCRAFT	Air Vehicles - Fixed (Structures)

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ASC Program List sorted by ACAT
Subdivided Into CSFs

Atch 3.0 B

ASC BRAC INFORMATION Atch 3.0B Question 3.0 AND 3.3.1.2

	Program Data	
ACAT	PROGRAM NAME	COMMON SUPPORT FUNCTION (CSF)
II	F-15 AIRCRAFT	Air Vehicles - Fixed (SubSystems)
II	GUNSHIP AIRCRAFT	Air Vehicles - Fixed (Avionics)
II	GUNSHIP AIRCRAFT	Air Vehicles - Fixed (Propulsion)
II	GUNSHIP AIRCRAFT	Air Vehicles - Fixed (Structures)
II	GUNSHIP AIRCRAFT	Air Vehicles - Fixed (SubSystems)
II	SOF AIRCREW TRAINING SYSTEM	Air Vehicles - Fixed (SubSystems)
II	T-38 AVIONICS UPGRADE (MASA) AND QUIET KNIGHT	Air Vehicles - Fixed (Avionics)
II	VC-X (REPLACEMENT) AIRCRAFT	Air Vehicles - Fixed (Structures)
III/IV	A BROAD BASED ENVIRONMENT FOR TEST	Air Vehicles - Fixed (SubSystems)
III/IV	ADVANCED X-RAY SYSTEM (AXES)	Air Vehicles - Fixed (Structures)
III/IV	AFOSEM	Air Vehicles - Fixed (Structures)
III/IV	AIR FORCE ACQUISITION MODEL	Air Vehicles - Fixed (Avionics)
III/IV	AIR FORCE ACQUISITION MODEL	Air Vehicles - Fixed (Propulsion)
III/IV	AIR FORCE ACQUISITION MODEL	Air Vehicles - Fixed (Structures)
III/IV	AIR FORCE ACQUISITION MODEL	Air Vehicles - Fixed (SubSystems)
III/IV	AIRCRAFT TECHNICAL MODIFICATIONS: CMMCA	Air Vehicles - Fixed (SubSystems)
III/IV	AIRCRAFT TECHNICAL MODIFICATIONS: TRAACE	Air Vehicles - Fixed (SubSystems)
III/IV	ALE-47	Air Vehicles - Fixed (SubSystems)
III/IV	ASTE	Air Vehicles - Fixed (SubSystems)
III/IV	BIG SAFARI AIRCRAFT	Air Vehicles - Fixed (Structures)
III/IV	C-141 AIRCREW TRAINING SYSTEM	Air Vehicles - Fixed (SubSystems)
III/IV	C-20H SPECIAL AIRLIFT MISSION AIRCRAFT	Air Vehicles - Fixed (Structures)
III/IV	C/KC-135 AIRCRAFT	Air Vehicles - Fixed (Avionics)
III/IV	C/KC-135 AIRCRAFT	Air Vehicles - Fixed (Structures)
III/IV	C/KC-135 AIRCRAFT	Air Vehicles - Fixed (SubSystems)
III/IV	KC-10 AIRCRAFT	Air Vehicles - Fixed (Structures)
III/IV	COMPASS/ATTITUDE AND HEADING REFERENCE SYSTEMS (C/AHRS)	Air Vehicles - Fixed (Avionics)
III/IV	EMBEDDED GPS/INS	Air Vehicles - Fixed (Avionics)
III/IV	F-111 DIGITAL FLIGHT CONTROL SYSTEM	Air Vehicles - Fixed (Avionics)
III/IV	F-117A AIRCRAFT	Air Vehicles - Fixed (Avionics)
III/IV	GPS SIGNAL DATA CONVERTER	Air Vehicles - Fixed (Avionics)
III/IV	GROUND POWER GENERATOR SYSTEM	Air Vehicles - Fixed (SubSystems)
III/IV	INTEROPERABLE VISUAL/SENSORS FOR ACC	Air Vehicles - Fixed (Structures)
III/IV	JSECT	Air Vehicles - Fixed (SubSystems)
III/IV	PROPULSION	Air Vehicles - Fixed (Propulsion)
III/IV	SENIOR YEAR	Air Vehicles - Fixed (Structures)
III/IV	SIMULATOR FOR ELECTRONIC UPGRADE	Air Vehicles - Fixed (SubSystems)
III/IV	STANDARD FLIGHT DATA RECORDER	Air Vehicles - Fixed (Avionics)
III/IV	T-3 ENHANCEMENT FLIGHT SCREENER AIRCRAFT	Air Vehicles - Fixed (Structures)
Other	AF SPACE COMMAND TRAINING	Air Vehicles - Fixed (Structures)
Other	AFMC TECH A/I PROGRAMS	Air Vehicles - Fixed (Structures)
Other	AMC ELECTRONIC COCKPIT	Air Vehicles - Fixed (Avionics)
Other	AMC SIMULATOR UPGRADE	Air Vehicles - Fixed (SubSystems)
Other	AVIONICS STRATEGIC PLANNING	Air Vehicles - Fixed (Avionics)
Other	AWACS AIRCRAFT ENGINEERING SUPPORT	Air Vehicles - Fixed (Structures)
Other	CONTROL DISPLAY NAVIGATION UNIT	Air Vehicles - Fixed (Avionics)

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ASC Program List sorted by ACAT
Subdivided into CSFs

	Program Data	
ACAT	PROGRAM NAME	COMMON SUPPORT FUNCTION (CSF)
Other	EM SUPPORT	Air Vehicles - Fixed (Structures)
Other	FACTS	Air Vehicles - Fixed (Structures)
Other	FIBER OPTIC RATE GYRO	Air Vehicles - Fixed (Avionics)
Other	HAZ-MAT ELIMINATION	Air Vehicles - Fixed (Structures)
Other	IMPACTS	Air Vehicles - Fixed (Avionics)
Other	IMPACTS	Air Vehicles - Fixed (Propulsion)
Other	IMPACTS	Air Vehicles - Fixed (Structures)
Other	IMPACTS	Air Vehicles - Fixed (SubSystems)
Other	INDUSTRIAL FACILITIES	Air Vehicles - Fixed (Structures)
Other	JOINT MODELING AND SIMULATION SYSTEM (J-MASS)	Air Vehicles - Fixed (Structures)
Other	LEAD CENTER FOR ACQUISTION LOGISTICS	Air Vehicles - Fixed (Avionics)
Other	LEAD CENTER FOR ACQUISTION LOGISTICS	Air Vehicles - Fixed (Propulsion)
Other	LEAD CENTER FOR ACQUISTION LOGISTICS	Air Vehicles - Fixed (Structures)
Other	LEAD CENTER FOR ACQUISTION LOGISTICS	Air Vehicles - Fixed (SubSystems)
Other	MARK XV TERMINATION	Air Vehicles - Fixed (Avionics)
Other	NATIONAL AEROSPACE PLANE (NASP) AIRCRAFT	Air Vehicles - Fixed (Avionics)
Other	NATIONAL AEROSPACE PLANE (NASP) AIRCRAFT	Air Vehicles - Fixed (Propulsion)
Other	NATIONAL AEROSPACE PLANE (NASP) AIRCRAFT	Air Vehicles - Fixed (Structures)
Other	NATIONAL AEROSPACE PLANE (NASP) AIRCRAFT	Air Vehicles - Fixed (SubSystems)
Other	PRAM/RAMTIP	Air Vehicles - Fixed (Structures)
Other	PROJECT 2851	Air Vehicles - Fixed (SubSystems)
Other	QUIET KNIGHT	Air Vehicles - Fixed (Avionics)
Other	RFMETS	Air Vehicles - Fixed (Avionics)
Other	SIMULATOR DEVELOPMENT ACTIVITIES	Air Vehicles - Fixed (SubSystems)
Other	SIMULATOR UPDATE ACTIVITIES	Air Vehicles - Fixed (SubSystems)
Other	SIMULATOR UPDATE DEVELPOMENT	Air Vehicles - Fixed (Structures)
Other	TECHNOLOGY INFORMATION	Air Vehicles - Fixed (Structures)
Other	TECHNOLOGY TRANSFER	Air Vehicles - Fixed (Structures)
Other	THEATER MISSILE DEFENSE	Air Vehicles - Fixed (Avionics)
Other	USAFA TRAINING	Air Vehicles - Fixed (Structures)

ASC BRAC INFORMATION Atch 3.0B Question 3.0 AND 3.3.1.2

	Program Data	
ACAT	PROGRAM NAME	COMMON SUPPORT FUNCTION (CSF)
1D	B-1B BOMBER AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	B-2 BOMBER AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	C-17 AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	COOPERATIVE AIRCRAFT IDENTIFICATION	Air Vehicles - Fixed (Avionics)
1D	F-16 AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	F-22 AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	IMPROVED DATA MODEM	Air Vehicles - Fixed (Avionics)
1D	JPATS AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	NON-DEVELOPMENTAL AIRLIFT AIRCRAFT (NDAA)	Air Vehicles - Fixed (Avionics)
1C	C-130 AIRCRAFT	Air Vehicles - Fixed (Avionics)
1C	LANTIRN	Air Vehicles - Fixed (Avionics)
II	COMBAT TALON II AIRCRAFT	Air Vehicles - Fixed (Avionics)
II	COMMON TANKER/TRANSPORT RADAR	Air Vehicles - Fixed (Avionics)
II	EF-111A SYSTEM IMPROVEMNT PROGRAM (SIP)	Air Vehicles - Fixed (Avionics)
II	F-15 AIRCRAFT	Air Vehicles - Fixed (Avionics)
II	GUNSHIP AIRCRAFT	Air Vehicles - Fixed (Avionics)
II	T-38 AVIONICS UPGRADE (MASA) AND QUIET KNIGHT	Air Vehicles - Fixed (Avionics)
III/IV	AIR FORCE ACQUISITION MODEL	Air Vehicles - Fixed (Avionics)
III/IV	C/KC-135 AIRCRAFT	Air Vehicles - Fixed (Avionics)
III/IV	COMPASS/ATTITUDE AND HEADING REFERENCE SYSTEMS (C/AHRS)	Air Vehicles - Fixed (Avionics)
III/IV	EMBEDDED GPS/INS	Air Vehicles - Fixed (Avionics)
III/IV	F-111 DIGITAL FLIGHT CONTROL SYSTEM	Air Vehicles - Fixed (Avionics)
III/IV	F-117A AIRCRAFT	Air Vehicles - Fixed (Avionics)
III/IV	GPS SIGNAL DATA CONVERTER	Air Vehicles - Fixed (Avionics)
III/IV	STANDARD FLIGHT DATA RECORDER	Air Vehicles - Fixed (Avionics)
Other	AMC ELECTRONIC COCKPIT	Air Vehicles - Fixed (Avionics)
Other	AVIONICS STRATEGIC PLANNING	Air Vehicles - Fixed (Avionics)
Other	CONTROL DISPLAY NAVIGATION UNIT	Air Vehicles - Fixed (Avionics)
Other	FIBER OPTIC RATE GYRO	Air Vehicles - Fixed (Avionics)
Other	IMPACTS	Air Vehicles - Fixed (Avionics)
Other	LEAD CENTER FOR ACQUISTION LOGISTICS	Air Vehicles - Fixed (Avionics)
Other	MARK XV TERMINATION	Air Vehicles - Fixed (Avionics)
Other	NATIONAL AEROSPACE PLANE (NASP) AIRCRAFT	Air Vehicles - Fixed (Avionics)
Other	QUIET KNIGHT	Air Vehicles - Fixed (Avionics)
Other	RF-METS	Air Vehicles - Fixed (Avionics)
Other	THEATER MISSILE DEFENSE	Air Vehicles - Fixed (Avionics)
1D	B-2 BOMBER AIRCRAFT	Air Vehicles - Fixed (Propulsion)
1D	C-17 AIRCRAFT	Air Vehicles - Fixed (Propulsion)
1D	F-16 AIRCRAFT	Air Vehicles - Fixed (Propulsion)
1D	F-22 AIRCRAFT	Air Vehicles - Fixed (Propulsion)
1D	NON-DEVELOPMENTAL AIRLIFT AIRCRAFT (NDAA)	Air Vehicles - Fixed (Propulsion)
1C	C-130 AIRCRAFT	Air Vehicles - Fixed (Propulsion)
II	F-15 AIRCRAFT	Air Vehicles - Fixed (Propulsion)
II	GUNSHIP AIRCRAFT	Air Vehicles - Fixed (Propulsion)
III/IV	AIR FORCE ACQUISITION MODEL	Air Vehicles - Fixed (Propulsion)
III/IV	PROPULSION	Air Vehicles - Fixed (Propulsion)

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ASC Program List sorted by ACAT
Subdivided into CSFs

ASC BRAC INFORMATION Atch 3.0B Question 3.0 AND 3.3.1.2

	Program Data	
ACAT	PROGRAM NAME	COMMON SUPPORT FUNCTION (CSF)
Other	IMPACTS	Air Vehicles - Fixed (Propulsion)
Other	LEAD CENTER FOR ACQUISTION LOGISTICS	Air Vehicles - Fixed (Propulsion)
Other	NATIONAL AEROSPACE PLANE (NASP) AIRCRAFT	Air Vehicles - Fixed (Propulsion)
1D	B-2 BOMBER AIRCRAFT	Air Vehicles - Fixed (Structures)
1D	C-17 AIRCRAFT	Air Vehicles - Fixed (Structures)
1D	F-16 AIRCRAFT	Air Vehicles - Fixed (Structures)
1D	F-22 AIRCRAFT	Air Vehicles - Fixed (Structures)
1D	JPATS AIRCRAFT	Air Vehicles - Fixed (Structures)
1D	JSTARS AIRCRAFT ENGINEERING SUPPORT	Air Vehicles - Fixed (Structures)
1D	NON-DEVELOPMENTAL AIRLIFT AIRCRAFT (NDAA)	Air Vehicles - Fixed (Structures)
1D	T-1A AIRCRAFT	Air Vehicles - Fixed (Structures)
1C	C-130 AIRCRAFT	Air Vehicles - Fixed (Structures)
II	COMBAT TALON II AIRCRAFT	Air Vehicles - Fixed (Structures)
II	CV-22 AIRCRAFT	Air Vehicles - Fixed (Structures)
II	F-15 AIRCRAFT	Air Vehicles - Fixed (Structures)
II	GUNSHIP AIRCRAFT	Air Vehicles - Fixed (Structures)
II	VC-X (REPLACEMENT) AIRCRAFT	Air Vehicles - Fixed (Structures)
III/IV	ADVANCED X-RAY SYSTEM (AXES)	Air Vehicles - Fixed (Structures)
III/IV	AFOSEM	Air Vehicles - Fixed (Structures)
III/IV	AIR FORCE ACQUISITION MODEL	Air Vehicles - Fixed (Structures)
III/IV	BIG SAFARI AIRCRAFT	Air Vehicles - Fixed (Structures)
III/IV	C-20H SPECIAL AIRLIFT MISSION AIRCRAFT	Air Vehicles - Fixed (Structures)
III/IV	C/KC-135 AIRCRAFT	Air Vehicles - Fixed (Structures)
III/IV	KC-10 AIRCRAFT	Air Vehicles - Fixed (Structures)
III/IV	INTEROPERABLE VISUAL/SENSORS FOR ACC	Air Vehicles - Fixed (Structures)
III/IV	SENIOR YEAR	Air Vehicles - Fixed (Structures)
III/IV	T-3 ENHANCEMENT FLIGHT SCREENER AIRCRAFT	Air Vehicles - Fixed (Structures)
Other	AF SPACE COMMAND TRAINING	Air Vehicles - Fixed (Structures)
Other	AFMC TECH A/I PROGRAMS	Air Vehicles - Fixed (Structures)
Other	AWACS AIRCRAFT ENGINEERING SUPPORT	Air Vehicles - Fixed (Structures)
Other	EM SUPPORT	Air Vehicles - Fixed (Structures)
Other	FACTS	Air Vehicles - Fixed (Structures)
Other	HAZ-MAT ELIMINATION	Air Vehicles - Fixed (Structures)
Other	IMPACTS	Air Vehicles - Fixed (Structures)
Other	INDUSTRIAL FACILITIES	Air Vehicles - Fixed (Structures)
Other	JOINT MODELING AND SIMULATION SYSTEM (J-MASS)	Air Vehicles - Fixed (Structures)
Other	LEAD CENTER FOR ACQUISTION LOGISTICS	Air Vehicles - Fixed (Structures)
Other	NATIONAL AEROSPACE PLANE (NASP) AIRCRAFT	Air Vehicles - Fixed (Structures)
Other	PRAM/RAMTIP	Air Vehicles - Fixed (Structures)
Other	SIMULATOR UPDATE DEVELPOMENT	Air Vehicles - Fixed (Structures)
Other	TECHNOLOGY INFORMATION	Air Vehicles - Fixed (Structures)
Other	TECHNOLOGY TRANSFER	Air Vehicles - Fixed (Structures)
Other	USAFA TRAINING	Air Vehicles - Fixed (Structures)
1D	B-2 BOMBER AIRCRAFT	Air Vehicles - Fixed (SubSystems)
1D	C-17 AIRCRAFT	Air Vehicles - Fixed (SubSystems)
1D	F-16 AIRCRAFT	Air Vehicles - Fixed (SubSystems)

Prepared by ASC/CYN

ASC Program List sorted by ACAT
Subdivided into CSFs

	Program Data	
ACAT	PROGRAM NAME	COMMON SUPPORT FUNCTION (CSF)
1D	F-22 AIRCRAFT	Air Vehicles - Fixed (SubSystems)
1D	JPATS AIRCRAFT	Air Vehicles - Fixed (SubSystems)
1D	JSTARS FLIGHT CREW TRAIING (J-FTS)	Air Vehicles - Fixed (SubSystems)
1D	NON-DEVELOPMENTAL AIRLIFT AIRCRAFT (NDAA)	Air Vehicles - Fixed (SubSystems)
1C	C-130 AIRCRAFT	Air Vehicles - Fixed (SubSystems)
II	ADVANCE MISSILE WARNING	Air Vehicles - Fixed (SubSystems)
II	COMBAT TALON II AIRCRAFT	Air Vehicles - Fixed (SubSystems)
II	F-15 AIRCRAFT	Air Vehicles - Fixed (SubSystems)
II	GUNSHIP AIRCRAFT	Air Vehicles - Fixed (SubSystems)
II	SOF AIRCREW TRAINING SYSTEM	Air Vehicles - Fixed (SubSystems)
III/IV	A BROAD BASED ENVIRONMENT FOR TEST	Air Vehicles - Fixed (SubSystems)
III/IV	AIR FORCE ACQUISITION MODEL	Air Vehicles - Fixed (SubSystems)
III/IV	AIRCRAFT TECHNICAL MODIFICATIONS: CMMCA	Air Vehicles - Fixed (SubSystems)
III/IV	AIRCRAFT TECHNICAL MODIFICATIONS TRAACE	Air Vehicles - Fixed (SubSystems)
III/IV	ALE-47	Air Vehicles - Fixed (SubSystems)
III/IV	ASTE	Air Vehicles - Fixed (SubSystems)
III/IV	C-141 AIRCREW TRAINING SYSTEM	Air Vehicles - Fixed (SubSystems)
III/IV	C/KC-135 AIRCRAFT	Air Vehicles - Fixed (SubSystems)
III/IV	GROUND POWER GENERATOR SYSTEM	Air Vehicles - Fixed (SubSystems)
III/IV	JSECT	Air Vehicles - Fixed (SubSystems)
III/IV	SIMULATOR FOR ELECTRONIC UPGRADE	Air Vehicles - Fixed (SubSystems)
Other	AMC SIMULATOR UPGRADE	Air Vehicles - Fixed (SubSystems)
Other	IMPACTS	Air Vehicles - Fixed (SubSystems)
Other	LEAD CENTER FOR ACQUISTION LOGISTICS	Air Vehicles - Fixed (SubSystems)
Other	NATIONAL AEROSPACE PLANE (NASP) AIRCRAFT	Air Vehicles - Fixed (SubSystems)
Other	PROJECT 2851	Air Vehicles - Fixed (SubSystems)
Other	SIMULATOR DEVELOPMENT ACTIVITIES	Air Vehicles - Fixed (SubSystems)
Other	SIMULATOR UPDATE ACTIVITIES	Air Vehicles - Fixed (SubSystems)
1D	TSSAM	Weapons - Cruise Missile
II	ADVANCED CRUISE MISSILE	Weapons - Cruise Missile

ATCH 3C

PROGRAM NAME	Building	ASC 2 Ltr Org	COMMON SUPPORT FUNCTION (CSF)
ROAD BASED ENVIRONMENT FOR TEST (ABBET)	57	SM	AIR VEHICLES
SPACE COMMAND TRAINING	16	YT	AIR VEHICLES
MC TECHNOLOGY APPLICATION & INSERTION PROGRAMS	22	SM	AIR VEHICLES
OSEM	52	AL	AIR VEHICLES
R FORCE ACQUISITION MODEL (AFAM)	17	CY	AIR VEHICLES
AC SIMULATOR UPGRADE (4 STAR BAR)	16	YT	AIR VEHICLES
141 AIRCREW TRAINING SYSTEM	16	YT	AIR VEHICLES
LASSIFIED PROJECTS	MULT	MULT	AIR VEHICLES
ACTS	57	SM	AIR VEHICLES
AZMAT ELIMINATION	17	EM	AIR VEHICLES
IPACTS	52	AL	AIR VEHICLES
NDUSTRIAL FACILITIES	17	EM	AIR VEHICLES
NTEROPERABLE VISUALS/SENSORS FOR ACC (IVACC)	16	YT	AIR VEHICLES
OINT MODELING AND SIMULATION SYSTEM (J-MASS)	28	XR	AIR VEHICLES
STARS FLIGHT CREW TRAINING SYSTEM (J-FTS)	16	YT	AIR VEHICLES
EAD CENTER FOR ACQUISITION LOGISTICS	52	AL	AIR VEHICLES
RAM/RAM/IP	22	SM	AIR VEHICLES
PROJECT 2851 (DIGITAL DATA BASE)	16	YT	AIR VEHICLES
SIMULATOR DEVELOPMENT ACTIVITIES	16	YT	AIR VEHICLES
SIMULATOR for ELECTRONIC COMBAT TRAINING (SECT)	16	YT	AIR VEHICLES
SIMULATOR UPDATE DEVELOPMENT	16	YT	AIR VEHICLES
SOF AIRCREW TRAINING SYSTEM	16	YT	AIR VEHICLES
TECHNOLOGY INFORMATION	22	SM	AIR VEHICLES
TECHNOLOGY TRANSFER	22	SM	AIR VEHICLES
TRAINING	16	YT	AIR VEHICLES
GUNSHIP	16	SD	AIR VEHICLES - FIXED
ENHANCEMENT	16	SD	AIR VEHICLES - FIXED
B-1B AIRCRAFT	16	SD	AIR VEHICLES - FIXED
B-2 AIRCRAFT	16	YS	AIR VEHICLES - FIXED
BIG SAFARI	28	RE	AIR VEHICLES - FIXED
C-130 AIRCRAFT	16	SD	AIR VEHICLES - FIXED
C-17 AIRCRAFT	OFF BASE	YC	AIR VEHICLES - FIXED
COMMERCIAL AIRCRAFT: C-20H SPECIAL AIRLIFT MISSION	16	SD	AIR VEHICLES - FIXED
COMMERCIAL AIRCRAFT: KC-10	16	SD	AIR VEHICLES - FIXED
CV-22 OSPREY	16	SD	AIR VEHICLES - FIXED
EF-111A SYSTEM IMPROVEMENT PROGRAM (SIP)	28	RW	AIR VEHICLES - FIXED
F-117A AIRCRAFT	16	SD	AIR VEHICLES - FIXED
F-15 AIRCRAFT	56	VF	AIR VEHICLES - FIXED
F-16 AIRCRAFT	12	YP	AIR VEHICLES - FIXED
F-22 AIRCRAFT	50	YF	AIR VEHICLES - FIXED
JOINT PRIMARY AIRCRAFT TRAINING SYSTEM (JPATS) / T-1A AIRCRAFT	16	YT	AIR VEHICLES - FIXED
MC-130H COMBAT TALON II	16	SD	AIR VEHICLES - FIXED
SENIOR YEAR	28	RE	AIR VEHICLES - FIXED
T-3A ENHANCED FLIGHT SCREENER AIRCRAFT	16	YT	AIR VEHICLES - FIXED
VC-X (VIP TRANSPORT AIRCRAFT)	16	SD	AIR VEHICLES - FIXED
ADVANCED MISSILE WARNING	28	RW	AIR VEHICLES - FIXED (AVIONICS)
AMC ELECTRONIC COCKPIT	46	SM	AIR VEHICLES - FIXED (AVIONICS)
AVIONICS STRATEGIC PLANNING	46	SM	AIR VEHICLES - FIXED (AVIONICS)
COMMON TANKER/TRANSPORT RADAR	46	SM	AIR VEHICLES - FIXED (AVIONICS)
COMPASS/ATTITUDE AND HEADING REFERENCE SYSTEM (CIAHRS)	46	SM	AIR VEHICLES - FIXED (AVIONICS)

OPR: Capt Batman,
ASC/CYN, 5-0304

ATCH 3-C

PROGRAM NAME	Building	ASC 2 Ltr Org	COMMON SUPPORT FUNCTION (CSF)
CONTROL DISPLAY NAVIGATION UNIT	46	SM	AIR VEHICLES - FIXED (AVIONICS)
COOPERATIVE AIRCRAFT IDENTIFICATION	46	SM	AIR VEHICLES - FIXED (AVIONICS)
EMBEDDED GPS/INS	46	SM	AIR VEHICLES - FIXED (AVIONICS)
F-111 DIGITAL FLIGHT CONTROL SYSTEM	16	SD	AIR VEHICLES - FIXED (AVIONICS)
FIBER OPTIC RATE GYRO	46	SM	AIR VEHICLES - FIXED (AVIONICS)
GPS SIGNAL DATA CONVERTER	46	SM	AIR VEHICLES - FIXED (AVIONICS)
IMPROVED DATA MODEM	46	SM	AIR VEHICLES - FIXED (AVIONICS)
MARK XV TERMINATION	46	SM	AIR VEHICLES - FIXED (AVIONICS)
QUIET KNIGHT (SOF)	16	SD	AIR VEHICLES - FIXED (AVIONICS)
STANDARD FLIGHT DATA RECORDER	46	SM	AIR VEHICLES - FIXED (AVIONICS)
T-38 AVIONICS UPGRADE (NASA)	46	SM	AIR VEHICLES - FIXED (AVIONICS)
ADVANCED STRATEGIC and TACTICAL INFRARED EXPENDABLES (ASTE)	28	RW	AIR VEHICLES - FIXED (FLIGHT SUBSYSTEMS)
ADVANCED X-RAY SYSTEM (AXES)	57	SM	AIR VEHICLES - FIXED (FLIGHT SUBSYSTEMS)
AIRCRAFT TECH MODS: CRUISE MISSILE MISSION AND CONTROL AIRCRAFT (CMMCA)	16	SD	AIR VEHICLES - FIXED (FLIGHT SUBSYSTEMS)
AIRCRAFT TECH MODS: TRANSPORT ADVANCED AVIONICS AND COCKPIT ENHANCEMENT (TRAACE)	16	SD	AIR VEHICLES - FIXED (FLIGHT SUBSYSTEMS)
AN/ALE-47 COUNTERMEASURE DISPENSING SYSTEM (CMDS)	28	RW	AIR VEHICLES - FIXED (FLIGHT SUBSYSTEMS)
C/KC-135	16	SD	AIR VEHICLES - FIXED (FLIGHT SUBSYSTEMS)
GROUND POWER GENERATOR SYSTEM	57	SM	AIR VEHICLES - FIXED (FLIGHT SUBSYSTEMS)
JOINT SERVICE ELECTRONIC COMBAT SYSTEMS TESTER (JSECST)	28	RW	AIR VEHICLES - FIXED (FLIGHT SUBSYSTEMS)
LANTIRN	2042	VL	AIR VEHICLES - FIXED (FLIGHT SUBSYSTEMS)
COMPONENT IMPROVEMENT PROGRAM (CIP)	46	SM	AIR VEHICLES - FIXED (PROPULSION)
ENGINE MODEL DERIVATIVE PROGRAM	46	SM	AIR VEHICLES - FIXED (PROPULSION)
JSTARS AIRCRAFT ENGINEERING SUPPORT	16	SD	AIR VEHICLES - FIXED (STRUCTURES)
NATIONAL AEROSPACE PLANE (NASP)	52	NA	AIR VEHICLES - FIXED (STRUCTURES)
TER MISSILE DEFENSE (TMD) (NEW START)	16	YX	SPACE SYSTEMS
TTACK STRIKE TECHNOLOGY PROGRAM (NEW START)	2041	YX	WEAPONS
ACED CRUISE MISSILE (ACM)	193	VC	WEAPONS - CRUISE MISSILES
TRI-SERVICE STANDOFF ATTACK MISSILE (TSSAM)	14	VJ	WEAPONS - CRUISE MISSILES

OPR: Capt Batman,
ASC/CYN, 5-0304

~~Note 5: ASC used "Air Vehicles -- Fixed (Structures)" as a default for systems activities work which did not clearly fit elsewhere (directed by AFMC/XP.)~~

3.1 Location

3.1.1 **Geographic/Climatological Features:** Describe any geographic/climatological features in and around your activity that are relevant to each CSF. Indicate and justify those that are required versus those that just serve to enhance accomplishing the mission of the activity. For example, clear air at high altitude that increases quality of atmospheric, ground-based laser experiments in support of the weapons CSF. (BRAC Criteria I)

CONCLUSION: There are no special or unusual geographical/climactic features associated with or required for executing program acquisition efforts managed at Wright-Patterson AFB.

3.1.2 **Licenses & permits:** Describe and list the licenses or permits (e.g., environmental, safety, etc.) that your activity currently holds and justify why they are required to allow tests, experiments, or other special capabilities at your location for each CSF. For example, permit to store and use high explosives. (BRAC Criteria I)

CONCLUSION: There are no special licenses and/or operating permits associated with executing program acquisition Common Support Functions managed at Wright-Patterson AFB.

3.1.3 **Environmental constraints:** Describe and list the environmental or land use constraints present at your activity which limit or restrict your current scope for each CSF, i.e., would not allow increased "volume" or "spectrum" for the CSF. Example -- Volume: frequency of a type of experiment. Example -- Spectrum: Current permit to detonate high explosives will not allow detonation or storage of increased quantity of explosives without legal waiver (state law) or relocation of surrounding (non-govt) buildings. (BRAC Criteria II)

CONCLUSION: There are no environmental or land use constraints associated with executing program acquisition Common Support Functions managed at Wright-Patterson AFB
SEE PAGE 10A

3.1.4 **Special Support Infrastructure:** List and describe the importance of any mission related special support infrastructure (e.g. utilities) present at your location for your activity. (BRAC Criteria I)

AIR STAFF CORRECTION WORKSHEET

PURPOSE: To provide corrected answer to **AERONATICAL SYSTEMS CENTER (SPO), WRIGHT-PATTERSON AFB, OH**.

SOURCE: **'95 BRAC Questionnaire**

CONCLUSION: **Update needed (~~no change~~ SEE below)**

MAJCOM (CONCURS)(NONCONCURS): **CONCURS (Provided info VIA questionnaire)**

BASE (CONCURS) (DOES NOT CONCUR): -same-

I certify the above information is accurate and complete to the best of my knowledge and belief, based upon information provided by identified sources.

AIR STAFF REVIEWER R. McCann (CEVP) **DATE:** 28 JUL 1994

In Area B of Wright-Patterson AFB there is one location that restrict future facility development. Bldg 100 is a facility that is explosives sited for 70 pounds of Class 1.1 explosives. The facility has an established explosive clear zone of 200 feet. There are no other restricted locations in Area B due to explosive detonations/activities.

CONCLUSION: There is no special support infrastructure associated with executing the program acquisition Common Support Functions managed at Wright-Patterson AFB. All activities require administrative office space requirements with some Special Compartmented Information Facility (SCIF) requirements to meet security regulations.

3.1.5. **Proximity to Mission-Related organizations:** List and describe the importance and impact of not having nearby organizations which facilitate accomplishing or performing your mission -- e.g. operational units, FFRDCs, universities/colleges, other government organizations, and commercial activities. Restrict your response to the top five. Complete the following: (BRAC Criteria I)

CONCLUSION: See Table and Notes

Common Support Functions	Name	Type of Organization	Distance	Workyears Performed by Your Activity	Workyears Funded by Your Activity
AIR VEHICLES/ WEAPONS	Technical expertise/ contractors	SETA including MIS (see Notes)	within 25 mile radius	5807	6390 See Note 6

Since the ASC related organizations support all the acquisition activities at ASC, it is impossible to break them out into CSFs. See response to Question 3.0 for a description of what ASC management activities are included in the above CSFs.

Note 1: The acquisition community relies on technical expertise from local SETA contractors. In FY93 there were 483 manyears funded by programs for such support. In addition, the programs rely on computer support from several sources. The base has a Management Information Systems (MIS) major contract for interconnectivity of all WPAFB organizations. The 645th CCSG provides an enormous base-wide computing capability. (See 3.4.1 for details of special computer support.) This support is provided to all on base program offices. Much of the activity is funded via fee-for-service from on-base customers. There is over 100 Workyears of direct MIS-funded contract support to program offices at WPAFB.

Note 2: There are many other tenants at WPAFB supporting the acquisition activities.

a. ASC acquisition organizations interact on a daily basis with Wright Laboratories. Proximity to Wright Laboratory complex is critical for new technology development efforts in support of acquisition programs. (See Wright Lab questionnaire for details of their support.) That support covers Structures, Propulsion, Avionics, and Flight Subsystems Common Support Functions for our major aircraft programs.

b. ASC/AM provides support for modifications to aircraft. (See Lab Questionnaire for that organization.)

c. Using commands (Air Combat Command, Air Education and Training Command) and FMS customer countries have liaison offices at WPAFB.

d. The Joint Logistics Support Center (JLSC) is involved in evaluating technology insertion projects for new and in-service (fielded) systems. Many joint interconnectivity and interoperability activities are worked through that organization.

Note 3: HQ AFMC, the Air Force central focal point for managing acquisition, evolution, and sustainment of AF weapon systems is located at WPAFB. Span of control is to four Product Centers, five Air Logistic Centers (ALCs), and three Test Centers:

Aeronautical Systems Center (ASC) at WPAFB OH
Electronic Systems Center (ESC) at Hanscom AFB MA
Human Systems Center (HSC) at Brooks AFB TX
Space and Missile Center (SMC) at LAAFB CA
Oklahoma City ALC (OC-ALC) at Tinker AFB, OK
Ogden ALC (OO-ALC) at Hill AFB, UT
Warner-Robbins ALC (WR-ALC) at Robbins AFB GA
Sacramento ALC (SM-ALC) at McClellan AFB CA
San Antonio ALC (SA-ALC) at Kelly AFB TX
Arnold Engineering and Development Center, Arnold AFB TN
Air Force Flight Test Center, Edwards AFB CA
Air Force Development Test Center, Eglin AFB FL

Close proximity to HQ AFMC fosters a more interactive relationship on various aspects of product and program management for our assigned systems. AFMC provides direction to all programs using Integrated Weapon Systems Management (IWSM) principles that are invoked at all Centers. ASC is a key developer of policy for AFMC acquisition activities. Also ASC is Lead Center for the Command on Acquisition Logistics programs (PRAM/RAMTIP, GOCOs), and development and deployment of the Air Force Acquisition Model (AFAM) (which now has several versions being funded and developed for the Navy, the Army, and other DoD and non-DoD customers.)

Note 4: There are numerous local universities within a 25 mile radius which are easily accessible for assigned personnel to use in fulfilling professional and/or career development training needs. Some offer classes/degree programs regularly on base; they have provided specific tailored training courses for Government personnel and program offices relating to day-to-day business issues either on base or at their facilities:

University of Dayton (Private) — Wright State University (State University)
Wilberforce University (Private) — Antioch College (Private)
Sinclair Community College (2 years) — Park College (2 year -- on base)
Central Michigan Univ (2 year -- on base) — Wright-Patt Campus (on-base)

Also on base, The Air Force Institute of Technology (AFIT) provides unique military advanced degree programs and supports local Dayton Masters & Doctoral programs, provides instruction in cooperation with Air University and the Defense Acquisition University to train Air Force as well as other service personnel.

Note 5: There is a local management/technical consortium (affiliated with Carnegie Mellon University) on software development tools. This consortium oversees several key software development houses (universities as well as industry) across the country. Activities of this consortium are focused on future technological ideas and support of air vehicle requirements. ASC also has a proactive relationship with the National Security Industry Association (NSIA) which is responsible for working Industrial Base and ombudsman issues for the Center Commander.

Note 6: The number of funded workyears shown only includes government organic workyears, plus SETA and MIS contracted manyears. There is no data maintained to establish an accurate manyear number for support from universities, HQ AFMC, tenant organizations and local associations/consortiums.

3.2 Personnel:

3.2.1 **Total Personnel:** What is the total number of government (military and civilian), on-site federally funded research and development center (FFRDC), and on-site system engineering technical assistance (SETA) personnel engaged in science and technology (S&T), engineering development and in-service engineering activities as of end FY93? For individuals that predominantly work in CSFs, involved in more than one CSF, account for those individuals in the CSF that represents the preponderance of their effort. (BRAC Criteria I)

CONCLUSION:

See Table and Notes

CSF Types of personnel	Number of Personnel Assigned (FY93)			
	Government		On-Site FFRDC	On-Site SETA
Air Vehicles -- Fixed Avionics	Civilian	Military		
Technical	158	82	0	14
Management (Supv)	79	51	0	0
Other	372	208	0	79

Air Vehicles -- Fixed Propulsion	Civilian	Military		
Technical	42	20	0	3
Management (Supv)	21	13	0	0
Other	99	51	0	15

Air Vehicles -- Fixed Structures	Civilian	Military		
Technical	726	394	0	25
Management (Supv)	363	246	0	0
Other	1702	1001	0	141

Air Vehicles -- Fixed Flight Subsystems	Civilian	Military		
Technical	69	49	0	10
Management (Supv)	35	31	0	0
Other	163	124	0	56

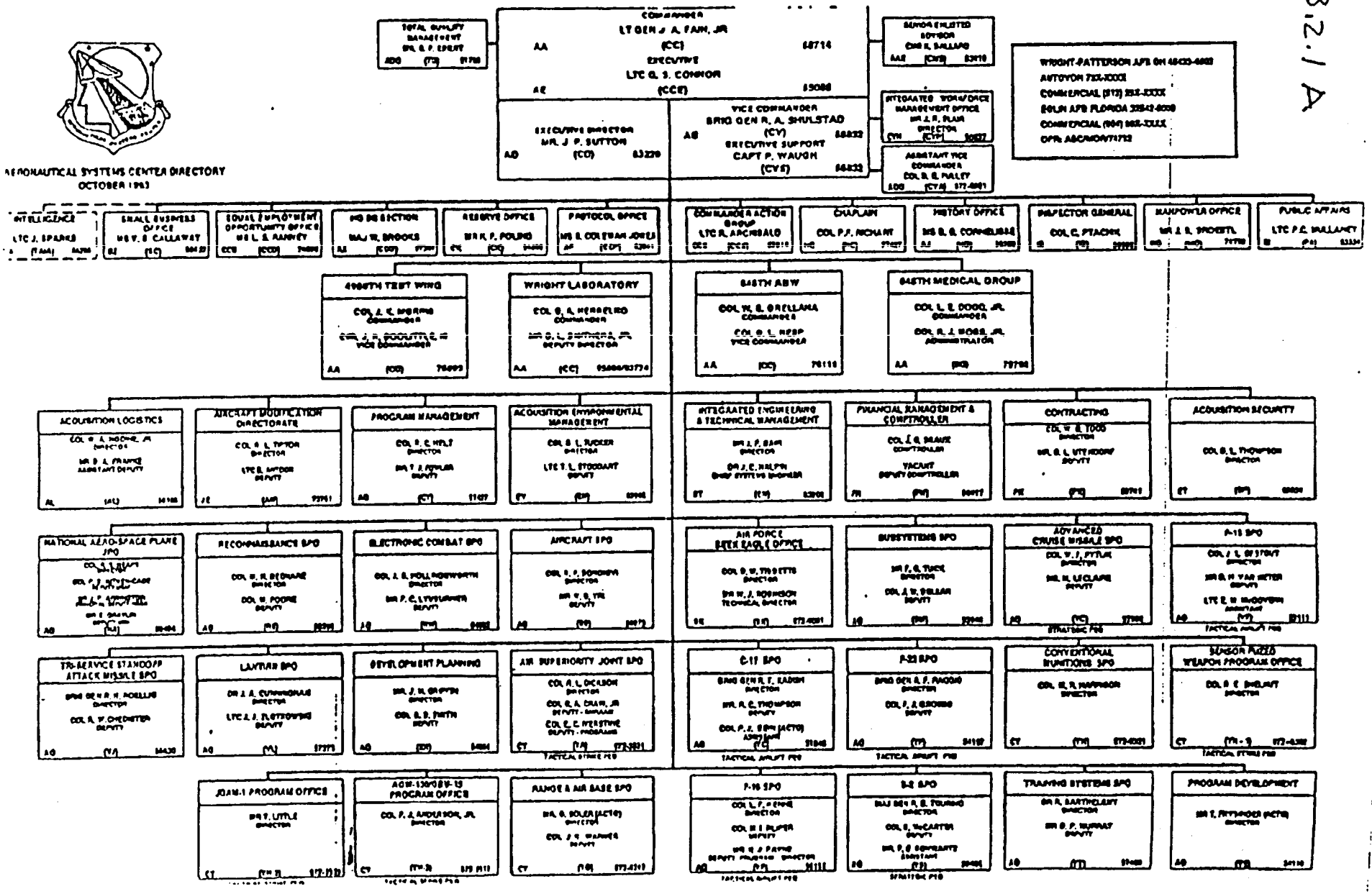
CSF	Number of Personnel Assigned (FY93)			
Types of personnel	Government		On-Site FFRDC	On-Site SETA
Weapons -- Cruise Missile	Civilian	Military		
Technical	37	23	0	14
Management (Supv)	15	10	0	0
Other	97	52	0	77

Notes:

1. *One Supervisor per 8-9 people (for Weapons CSF); everything other than ASC/VC, ASC/VJ fell into Air Vehicles CSF.*
2. *Authorized = Assigned for Functionals other than ASC/CY for Weapons CSF.*
3. *1101s included in "Other"; reference clarification question in Attachment 3.2.1B.*
4. *For military, numbers were derived from MAE authorizations since 645 MSSQ numbers were not broken out by functional offices, e.g., ASC/EN.*
5. *"On-Site" SETA average is 90 % of total SETA requirement (per SPO directors).*
6. *Management (Sup) only includes supervisory personnel. Reference clarification question in Attachment 3.2.1B.*
7. *Military authorized data is a "snapshot" as of 18 May 94.*
8. *Due to system changes, correlation between current and the required 93/4 information as of 30 Sep 93 could not be matched, per CMSgt Merriman, 645 SPTG/CCN, 76131.*

ATCH 3.2.1 A

AERONAUTICAL SYSTEMS CENTER DIRECTORY
OCTOBER 1993



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LABORATORY JOINT CROSS-SERVICE DATA CALL
REQUEST FOR CLARIFICATION

CONTROL NUMBER: Army 4122-003 (ARL - 3)

DATE: 29 April 1994

SOURCE OF INQUIRY (Name, Organization, and Telephone Number)
Mark Davis
ARL
DSN 290-4456

QUESTION: What is the definition/explanation of "Other" in Section III, items 3.2.1 and 3.2.2?

APPROVED RESPONSE:

The following applies to each CSF:

Technical includes scientists, engineers and technicians such as, but not limited to, those listed on the attached pages from the OPM classification guide.

Management is defined as those personnel who are designated as supervisors in their approved job position/description.

The category of Other will therefore include all organizational personnel not listed in either of the above categories.

CALVIN E. DOEKEN
DEPUTY CHAIR,
LABORATORY JOINT CROSS-SERVICE GROUP

BRAC.XLS 27 MAY 1994

ATCH 3.2.1C

BRAC ASSIGNED CIVILIAN DATA

SOURCE: Civilian Personnel Desire List as of 31 Oct 93
Prepared 18 May 94 and used as 3.2.3 Supporting Data
for ASC Workforce Yrs-Svc

ORG	ENGR	OTHER	1101	SUPV	TOTAL
AL		28		3	31
CY	1	42	11	11	65
EB*	1				1
EI*		1			1
EM	27	12	3	5	47
EN	3				3
EW*		7		1	8
FM		26		7	33
JE*		5			5
NA	1	9		1	11
PK		100		9	109
PP*	2	8		3	13
RE	1	12	6	6	25
RG*	2				2
RM*		5			5
RW	3	14	20	14	51
SD	1	40	14	19	74
SM	4	29	24	7	64
SP		36		5	41
STAFF		80	2	17	99
VC		10	1	3	14
VF	1	26	5	5	37
VJ	1	14		5	20
VL	1	12	8	2	23
XR	7	7	2	2	18
YC	1	23	5	6	35
YF	5	21	7	2	35
YP	19	58	39	7	123
YS		28	7	6	41
YT		28	9	8	45
YW	1	9		1	11
YX		6	5	1	12
00**	950	1570	7	348	2875
TOTAL	1032	2266	175	504	3977

*We were not familiar with these symbols so, on 19 May 94, Alyne Meyers called Alice Scafe, from the office that establishes FASs, and the response was that these s bols were not established yet.

**The assumption was made that "00" must be comprised of SPO

BRAC.XLS

ATCH 3.2.1C

colocates such as AL, EN, FM and PK as well as EN Home		
Office personel . The reason for this assumption is that the SPO		
totals are too small and seem to be comprised of CY personnel		
only. Also, the EN Home Office number of 3 is absolutely too small.		

ATCH 3.2.LD

e 1

02/25/1994

TOTAL MANPOWER COUNTS BY FUNCTIONALS FOR FY93

SPO		AL	CY	EM	EN	FM	PK	SC	SP	RE	TOTAL
AM	O	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NA	O	1.0	16.0	0.0	2.0	4.0	3.0	1.0	0.0	0.0	27.0
	E	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0
	C	1.0	10.0	0.0	17.0	4.0	7.0	0.0	2.0	0.0	41.0
	Total	2.0	31.0	0.0	19.0	8.0	10.0	1.0	2.0	0.0	73.0
RE	O	12.0	27.0	1.0	11.0	9.0	3.0	1.0	2.0	58.0	124.0
	E	1.0	3.0	0.0	0.0	0.0	0.0	0.0	1.0	85.0	90.0
	C	13.0	44.0	1.0	48.0	12.0	56.0	0.0	3.0	206.0	383.0
	Total	26.0	74.0	2.0	59.0	21.0	59.0	1.0	6.0	349.0	597.0
RW	O	5.0	37.0	0.0	18.0	5.0	1.0	0.0	0.0	0.0	66.0
	E	1.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0
	C	17.0	55.0	2.0	29.0	10.0	10.0	1.0	1.0	0.0	125.0
	Total	23.0	96.0	2.0	47.0	15.0	11.0	1.0	1.0	0.0	196.0
SD	O	23.0	91.0	3.0	32.0	13.0	8.0	1.0	1.0	0.0	172.0
	E	9.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0
	C	50.0	73.0	3.0	93.0	33.0	41.0	1.0	2.0	0.0	296.0
	Total	82.0	175.0	6.0	125.0	46.0	49.0	2.0	3.0	0.0	488.0
SK	O	0.0	9.0	0.0	1.0	3.0	0.0	0.0	0.0	0.0	13.0
	E	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
	C	0.0	4.0	0.0	6.0	3.0	0.0	0.0	0.0	0.0	13.0
	Total	0.0	15.0	0.0	7.0	6.0	0.0	0.0	0.0	0.0	28.0
SM	O	30.0	40.0	2.0	30.0	12.0	11.0	2.0	0.0	0.0	127.0
	E	14.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.0
	C	91.0	57.0	2.0	80.0	28.0	37.0	2.0	0.0	0.0	297.0
	Total	135.0	106.0	4.0	110.0	40.0	48.0	4.0	0.0	0.0	447.0
VC	O	2.0	10.0	0.0	5.0	1.0	2.0	1.0	1.0	0.0	22.0
	E	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
	C	10.0	14.0	0.0	17.0	6.0	11.0	0.0	2.0	0.0	60.0
	Total	13.0	25.0	0.0	22.0	7.0	13.0	1.0	3.0	0.0	84.0
VF	O	8.0	29.0	0.0	8.0	4.0	5.0	0.0	1.0	0.0	55.0
	E	7.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0
	C	17.0	34.0	0.0	57.0	13.0	21.0	1.0	0.0	0.0	143.0
	Total	32.0	67.0	0.0	65.0	17.0	26.0	1.0	1.0	0.0	

209.0

14E

ATCH 3.2 LD

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02/25/1994

TOTAL MANPOWER COUNTS BY FUNCTIONALS FOR FY93

.O		AL	CY	EM	EN	FM	PK	SC	SP	RE	TOTAL
		1	3		2		1				
VJ	O	3.0	22.0	1.0	20.0	3.0	4.0	1.0	2.0	0.0	56.0
	E	2.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0
	C	20.0	21.0	0.0	27.0	11.0	13.0	0.0	2.0	0.0	94.0
	Total	25.0	47.0	1.0	47.0	14.0	17.0	1.0	4.0	0.0	156.0
VL	O	5.0	22.0	0.0	7.0	4.0	1.0	0.0	0.0	0.0	39.0
	E	2.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0
	C	9.0	22.0	1.0	24.0	5.0	10.0	0.0	0.0	0.0	71.0
	Total	16.0	45.0	1.0	31.0	9.0	11.0	0.0	0.0	0.0	113.0
		1	2		2	1	1				
XR	O	0.0	16.0	0.0	12.0	5.0	0.0	0.0	0.0	0.0	33.0
	E	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
	C	0.0	15.0	0.0	121.0	6.0	0.0	0.0	2.0	0.0	144.0
	Total	0.0	33.0	0.0	133.0	11.0	0.0	0.0	2.0	0.0	179.0
YA	O	4~~5~~.0	36.0	0.0	13.0	7.0	5.0	0.0	0.0	0.0	66.0
	E	5~~8~~.0	6.0	0.0	0.0	0.0	1.0	0.0	4.0	0.0	17.0
	C	1~~45~~.0	34.0	0.0	44~~42~~.0	24.0	31.0	0.0	4.0	0.0	150.0
	Total	23~~26~~.0	76.0	0.0	57~~58~~.0	31.0	37.0	0.0	8.0	0.0	233.0
YC	O	19.0	47.0	4.0	22.0	8.0	7.0	1.0	0.0	0.0	108.0
	E	4.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0
	C	26.0	30.0	0.0	92.0	19.0	27.0	0.0	0.0	0.0	194.0
	Total	49.0	85.0	4.0	114.0	27.0	34.0	1.0	0.0	0.0	314.0
YF	O	15.0	62.0	2.0	33.0	9.0	4.0	2.0	2.0	0.0	129.0
	E	5.0	4.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	10.0
	C	16.0	35.0	3.0	107.0	13.0	14.0	0.0	2.0	0.0	190.0
	Total	36.0	101.0	5.0	141.0	22.0	18.0	2.0	4.0	0.0	329.0
YH	O	4.0	39.0	0.0	19.0	7.0	3.0	0.0	0.0	0.0	72.0
	E	7.0	9.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	18.0
	C	16.0	58.0	0.0	73.0	28.0	24.0	0.0	0.0	0.0	199.0
	Total	27.0	106.0	0.0	92.0	36.0	27.0	0.0	1.0	0.0	289.0
YO	O	3.0	19.0	0.0	7.0	4.0	2.0	0.0	0.0	0.0	35.0
	E	2.0	4.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	7.0
	C	7.0	42.0	0.0	33.0	14.0	17.0	0.0	0.0	0.0	113.0
	Total	12.0	65.0	0.0	40.0	18.0	19.0	0.0	1.0	0.0	155.
YP	O	20.0	61.0	2.0	28.0	7.0	14.0	1.0	0.0	0.0	133.
	E	3.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.
	C	48.0	92.0	1.0	113.0	35.0	51.0	0.0	1.0	0.0	341.
	Total	71.0	162.0	3.0	141.0	42.0	65.0	1.0	1.0	0.0	

486.0

 ATCH 3.2.1D

TOTAL MANPOWER COUNTS BY FUNCTIONALS FOR FY93

PO		AL	CY	EM	EN	FM	PK	SC	SP	RE	TOTAL
YS	O	11.0	41.0	3.0	33.0	6.0	7.0	1.0	2.0	0.0	104.(
	E	10.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.(
	C	28.0	41.0	1.0	71.0	17.0	20.0	0.0	2.0	0.0	180.(
	Total	49.0	89.0	4.0	104.0	23.0	27.0	1.0	4.0	0.0	301.(
YT	O	15.0	49.0	5.0	26.0	13.0	5.0	1.0	0.0	0.0	114.(
	E	2.0	5.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	8.(
	C	26.0	48.0	2.0	64.0	18.0	36.0	1.0	2.0	0.0	197.(
	Total	43.0	102.0	7.0	90.0	32.0	41.0	2.0	2.0	0.0	319.(
YX	O	2.0	18.0	0.0	4.0	4.0	0.0	1.0	0.0	0.0	29.(
	E	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.(
	C	11.0	13.0	0.0	24.0	5.0	8.0	0.0	1.0	0.0	62.(
	Total	13.0	32.0	0.0	28.0	9.0	8.0	1.0	1.0	0.0	92.(
MATRIXED TOTALS		680.0	1532.0	39.0	1470.0	434.0	520.0	20.0	44.0	349.0	5088.(
SOME OFFICE TOTALS		228.0	101.0	78.0	351.0	383.0	620.0	0.0	31.0	0.0	1792.(
GRAND TOTALS		908.0	1633.0	117.0	1821.0	817.0	1140.0	20.0	75.0	349.0	
5880.0											
Program		905	1651	117	1823	817	1140		75		
Δ		3	-18	0	-2	0	0		0		

CY O ~~25~~ 24
E 3
C 66
T 94

EM O 0
E 0
C 2
T 2

MGT O 01
RSV E 2
C 3
T 5

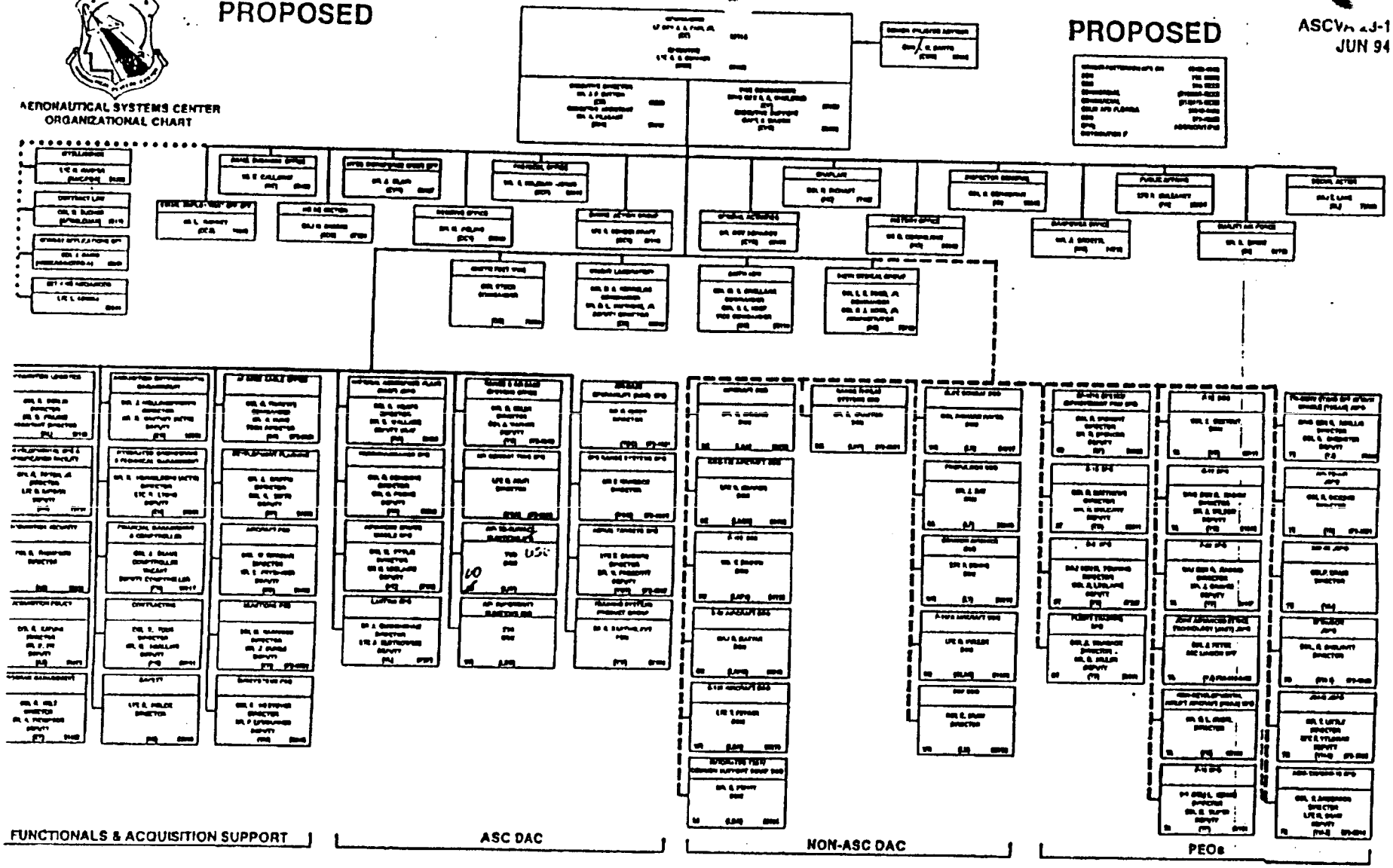
PROPOSED

AERONAUTICAL SYSTEMS CENTER
ORGANIZATIONAL CHART

PROPOSED

ASCVA 23-1
JUN 94

ATCH 32.1 E



PURPOSE: To provide SAF/AQX staff corrected answers to question 3.2.2 Education of the ASC – Wright Patterson response to the LJCSG guidance package. The 10 Aug 1994 response did not provide data at the lowest level CSF per the instructions.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

MAJCOM REVIEWER: _____
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

PURPOSE: To document answer to Lab Questionnaire Question 3.2.2 -- **Education.**

SOURCE: Military historical data files maintained at WPAFB by 645 SPTG/CCN and civilian historical data files maintained at WPAFB by 645 MSSQ/MSCPA. Gerry Stryker, 645 MSSQ/MSCC, 785-7188 (civilians assigned in ASC by technical, supervisory, and other),
CMSgt Merryman, 645 SPTG/CCN, 787-6131 and Sgt Rolling, 645 SPTG/CCN, 787-6131 (military assigned as of 18 May 94 in ASC by technical, supervisory, and other).
Kim Albert (civilians assigned) & Kathy White (military assigned) ASC/CYQ, 785-0306 (mapping information to CSFs).

METHOD: Used Civilian Personnel Desire List as of 31 Oct 93 prepared 18 May 94 for ASC Workforce Education. Personnel between High School and Two-Years College were included in High School. The military numbers were derived from subtracting 15% from the Technical and Other numbers, the same principle as used in Question 3.2.1. Then the military total was added to the civilian total. We then took these numbers and broke them out into the CSFs using the percentage of people per CSF as determined in Question 3.2.1.

CONCLUSION:

Air Vehicles -- Fixed Avionics			
Type of Degree/ Diploma	Number of Government Personnel by Type of Position		
	Technical Civ/Mil/Tot	Management (Supv) Civ/Mil/Tot	Other Civ/Mil/Tot
High School or Less	14	13	194
Associates	5	3	34
Bachelor	109	31	173
Masters	110	79	176
Doctorate (include Med/Vet/etc.)	3	2	4

Air Vehicles – Fixed Propulsion			
Type of Degree/ Diploma	Number of Government Personnel by Type of Position		
	Technical Civ/Mil/Tot	Management (Supv) Civ/Mil/Tot	Other Civ/Mil/Tot
High School or Less	4	4	52
Associates	1	1	9
Bachelor	29	8	46
Masters	29	21	47
Doctorate (include Med/Vet/etc.)	1	0	1

Air Vehicles – Fixed Structures			
Type of Degree/ Diploma	Number of Government Personnel by Type of Position		
	Technical Civ/Mil/Tot	Management (Supv) Civ/Mil/Tot	Other Civ/Mil/Tot
High School or Less	67	61	907
Associates	22	12	159
Bachelor	510	146	809
Masters	511	371	818
Doctorate (include Med/Vet/etc.)	11	8	19

Air Vehicles -- Fixed Flight Subsystems			
Type of Degree/ Diploma	Number of Government Personnel by Type of Position		
	Technical Civ/Mil/Tot	Management (Supv) Civ/Mil/Tot	Other Civ/Mil/Tot
High School or Less	7	6	91
Associates	2	1	16
Bachelor	51	15	81
Masters	51	37	82
Doctorate (include Med/Vet/etc.)	1	1	2

Weapons -- Cruise Missile			
Type of Degree/ Diploma	Number of Government Personnel by Type of Position		
	Technical Civ/Mil/Tot	Management (Supv) Civ/Mil/Tot	Other Civ/Mil/Tot
High School or Less	4	4	52
Associates	1	1	9
Bachelor	29	8	46
Masters	29	21	47
Doctorate (include Med/Vet/etc.)	1	0	1

* Assumptions:

1. Personnel with more than High School but less than Associates are included with High School or Less

2. GS/GM 1101s are included in "Other"

I certify that the above information is accurate and complete to the best of my knowledge and belief.
Original Input:

Preparer: _____ Date: _____

Preparer: _____ Date: _____

Preparer: _____ Date: _____

Preparer: _____ Date: _____

Revised Input:

Preparer: Robert Marcischak Date: 13 Aug 94
ROBERT J. MARCISCHAK, Prog Mgr, GS-13

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Thomas L. Koepnick Date: 14 Aug 94
THOMAS L. KOEPNICK AFMC/XPX 787-2622

PURPOSE: To document answer to Lab Questionnaire Question 3.2.3 – **Experience.**

SOURCE: See 3.2.2
Kim Albert (civilians assigned) & Kathy White (military assigned) ASC/CYQ, 785-0306,
Gerry Stryker, 645 MSSQ/MSCC, 785-7188 (civilians assigned in ASC by technical, supervisory, and other),
CMSgt Merryman, 645 SPTG/CCN, 787-6131,
Sgt Rolling, 645 SPTG/CCN, 787-6131 (military assigned in ASC by technical, supervisory, and other).

METHOD: Used Civilian Personnel Desire List as of 31 Oct 93 prepared 18 May 94 for ASC Workforce Years Service. The military numbers were derived from subtracting 15% from the Technical and Other numbers, the same principle as used in Question 3.2.1. Then the military total was added to the civilian total. We then took these numbers and broke them out into the CSFs using the percentage of people per CSF as determined in Question 3.2.1.

CONCLUSION: **See table**

Air Vehicles – Fixed Avionics					
Type of Position	**Years of Government and/or Military Service**				
	Less than 3 years Civ/Mil/Tot	**3-10 years Civ/Mil/Tot**	**11-15 years Civ/Mil/Tot**	**16-20 years Civ/Mil/Tot**	**More than 20 years Civ/Mil/Tot**
Technical	7	61	65	48	60
Management (Supv)	0	7	19	36	67
Other	24	200	133	114	110

Air Vehicles -- Fixed Propulsion					
Type of Position	Years of Government and/or Military Service				
	Less than 3 years Civ/Mil/Tot	3-10 years Civ/Mil/Tot	11-15 years Civ/Mil/Tot	16-20 years Civ/Mil/Tot	More than 20 years Civ/Mil/Tot
Technical	2	16	17	13	16
Management (Supv)	0	2	5	9	18
Other	6	53	36	30	29

Air Vehicles -- Fixed Structures					
Type of Position	Years of Government and/or Military Service				
	Less than 3 years Civ/Mil/Tot	3-10 years Civ/Mil/Tot	11-15 years Civ/Mil/Tot	16-20 years Civ/Mil/Tot	More than 20 years Civ/Mil/Tot
Technical	32	283	304	224	227
Management (Supv)	0	34	88	167	315
Other	114	931	622	532	512

Air Vehicles -- Fixed Flight Subsystems					
Type of Position	Years of Government and/or Military Service				
	Less than 3 years Civ/Mil/Tot	3-10 years Civ/Mil/Tot	11-15 years Civ/Mil/Tot	16-20 years Civ/Mil/Tot	More than 20 years Civ/Mil/Tot
Technical	3	28	30	23	28
Management (Supv)	0	3	9	17	31
Other	11	93	62	53	51

Weapons – Cruise Missile					
Type of Position	Years of Government and/or Military Service				
	Less than 3 years Civ/Mil/Tot	3-10 years Civ/Mil/Tot	11-15 years Civ/Mil/Tot	16-20 years Civ/Mil/Tot	More than 20 years Civ/Mil/Tot
Technical	2	16	17	13	16
Management (Supv)	0	2	5	9	18
Other	6	53	36	30	29

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: Robert Marischak Date: 13 Aug 94
ROBERT J. MARCISCHAK, Prog Mgr, GS-13
ASC/CY

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Thomas L. Koepnick Date: 14 Aug 94
THOMAS L. KOEPNICK, AFMC/XPX, 787-2622

3.2.4 **Accomplishments During FY91-93:** For government personnel answer the following questions.

3.2.4.1 How many patents were awarded and patent disclosures (only count disclosures with issued disclosure numbers) were made? (BRAC Criteria I)

CONCLUSION:

CSF	Disclosures	Awarded	Patent Titles (List)
AIR VEHICLES -- Fixed Wing	0		
Structures			
Avionics			
Propulsion			
Flight Subsystems			
WEAPONS - Cruise Missiles	0		
Total	0		

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ASC/WPAFB (Acquisition & SPOs) Input -- Revised

PURPOSE: To document answer to Lab Questionnaire Question 3.2.4.2 -- **How many papers were published in peer reviewed journals?** (BRAC Criteria I)

SOURCE: Capt Robert Lee, ASC/ENAS, 785-6749, ASC/PA Public Release List of 1993 Papers, 1993.

METHOD: Review of ASC/PA public release. See attachment 3.2.4.2A.

CONCLUSION:

CSF	Number Published	Paper Titles (List)
AIR VEHICLES -- Fixed Wing		See Attachment 3.2.4.2
Structures	59	
Avionics	~~46~~ 13	
Propulsion	6	
Flight Subsystems	~~43~~ 16	
WEAPONS - Cruise Missiles	0	
TOTAL	94	

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: Robert P. Lee III **Date:** 5 Aug 94

Robert Lee, Capt, ASC/ENAS, 785-6749

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Joe Brafford **Date:** 8 Aug 94

Joe Brafford, GS-14, AFMC/XRMP, 787-5591

94-09-06 08:27 RCVD

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ASC/WPAFB (Acquisition & SPOs) Input -- Revised 13 Aug 94

Attachment 3.2.4.2A

TITLE	CATEGORY
1. An Uncertainty Analysis of Inlet Dynamic Flow ... abs	Propulsion
2. XB-70 Landing Gear	Flight Subsystems
3. FY93 Long Range Acquisition Estimates for ASC (Systems ...	Structures (Default)
4. The B-2 Bomber Fact Sheet	Structures (Default)
5. TR: Graphical Comparison of US Standard Atmospheres ...	Structures
6. Durability Life Test for Avionics/Electronics	Avionics
7. Simulation Application to Vehicle Management Design	Structures
8. Soft-dollar Cost Benefits from Folio Applications	Structures (Default)
9. Fasteners, Actuators, Connectors, Tools, and Subsystems ...	Flight Subsystems
10. Subject Matter Experts (SMES): Roles ... abs	Structures (Default)
11. Now That They Call You a Manager, What Can You Do?	Structures (Default)
12. A Systematic Process for Courseware Evaluation - abs	Structures (Default)
13. Courseware Management Indicators - abs	Structures (Default)
14. Overview of the Structural Integrity Process - abs	Structures
15. The Simulator for Electronic Combat Training - abs	Avionics
16. An Uncertainty Analysis of Inlet Dynamic Distortion ...	Propulsion
17. Acquisition for Experimental or Test Purposes (AETP)	Structures (Default)
18. The Joint Modeling & Simulation System (Article)	Structures
19. Feasibility Evaluation of Precision Guided Weapons ...	Flight Subsystems
20. Engineering Simulation as a Cockpit Development Tool ...	Avionics
21. Cost Architecture for Advanced Design (CAFAD)	Structures
22. F-22 Controls & Displays System	Avionics
23. The Joint Modeling & Simulation System (J-MASS)	Structures (Default)
24. TR: A Comparison of Head-Up and Head-Down Display ...	Avionics
25. Environmental Test Methods and Engineering Guidelines ...	Flight Subsystems
26. TR: Vibration and Acoustic Measurements on the RF-4C ...	Structures
27. Assessment of Structural Reliability Derived From ...	Structures
28. NASP Technology Transfer All Purpose Folder	Structures (Default)
29. Air Vehicle System Specification	Structures (Default)
30. SBIR TOPIC: Emerging Technologies Resulting in Lighter ...	Structures
31. A Disciplined Approach to Software Test and Evaluation	Avionics
32. Comparison of AIA Draft Hazardous Materials Management ...	Structures (Default)
33. Integrated Technical Data System	Structures (Default)
34. NR: Base Facility Slated for Support of International ...	Structures (Default)
35. Subject Matter Experts (SMEs): Roles, Responsibilities ...	Structures (Default)
36. USAF Research and Development Programs for Aging Aircraft ...	Structures

Item 4

Atch 3.2.A.2.A

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ASC/WPAFB (Acquisition & SPOs) Input -- Revised 13 Aug 94

37. A Major Weapon System Program: The F-22 Advanced ...	Flight Subsystems
38. NR, FS & Photo: Air Force, Navy (K-36D Russian Ejection)	Flight Subsystems
39. The USAF/Northrop B-2 Hydraulic System	Flight Subsystems
40. F-15 OFP Productionization and Test Process	Avionics
41. Actively Cooled Structures Development - abs	Structures
42. J-MASS, A Common Architecture for Modeling & Simulation	Structures (Default)
43. VHSIC Hardware Description Language (VHDL): The ...	Avionics
44. Mentor-Protege -- A Program Who's Time Has Come	Structures (Default)
45. A Hypertext Tool to Support Development of Flight ...	Structures
46. The Effects of Non-physical Individual Differences ... abs	Structures (Default)
47. NASP Airframer Accomplishments	Structures
48. Acquisition for Experimental or Test Purposes (AETP) ...	Structures (Default)
49. Computational Aerodynamic Analysis on the Open Skies	Structures
50. Design Activity Summary for the Simulator for ...	Structures
51. USAFE Low Altitude Training Systems Requirements ... abs	Structures
52. Transitioning Promising Ideas Into Real-World Hardware ...	Structures (Default)
53. Overview of the Structural Integrity Process	Structures
54. The Joint Modeling and Simulation, A Common ...	Structures (Default)
55. TR: Design Build-Operate	Structures
56. Commercial Aircraft Acquisition Critical Process Team ...	Structures (Default)
57. Scramjet Test Facilities	Propulsion
58. Large-Scale Scramjet Tested to Mach 16	Propulsion
59. JIAWG Commonality Approaches, Lessons Learned, and Status	Avionics
60. Incorporating Pollution Prevention Into the F-22 Weapon ...	Flight Subsystems
61. Anomolies in Estimates-At-Completion When Prior Period ...	Structures (Default)
62. Developing Process Analysis in a Functionsl Discipline	Structures (Default)
63. EW/Avionics Reprogramming: Focusing on Today's ...	Avionics
64. C-17 Weight Study	Structures
65. Initial Screening Criteria for Evaluating Replacement ...	Structures (Default)
66. TR: System Analysis Quality Metrics Algorithms	Structures (Default)
67. Evaluation of Aluminum Actively Cooled Heat Exchanger	Flight Subsystems
68. Avionics Modernization Proghram KC-135	Avionics
69. Improved Aerial Refueling System - KC-135 Improved ...	Flight Subsystems
70. Avionics Modernization Program KC-135	Avionics
71. ARSAG 29 Status (KC-135 & KC-10)	Flight Subsystems
72. Improved KC-135 Boom Envelope -- Improved Aerial Refuel ...	Flight Subsystems
73. KC-135 Cargo Roller System ARSAG 29	Flight Subsystems
74. TR: Aircraft Weight Prediction Capability Vol I: ...	Structures
75. FY94 Long Range Acquisition Estemates for ASC	Structures (Default)

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ASC/WPAFB (Acquisition & SPOs) Input -- Revised 13 Aug 94

76. Weight Prediction Capability	Structures
77. Eliminating Ozone Depleting Chemicals from the F-22	Flight Subsystems
78. J-MASS	Structures (Default)
79. The Cradle of Air Force Flight (Chapter 1)	Structures (Default)
80. Test Flying Operations, 1950-1975 (Chapter 2)	Structures (Default)
81. Test Flying Operations, 1975-1993 (Chapter 3)	Structures (Default)
82. NASP-A Maturing Technical Base	Propulsion
83. Improved Contrail Forecasting	Structures
84. Architectural Approaches to Sensor Management - abs	Avionics
85. Improving Contracting Cycle Time Through Process Analysis	Structures (Default)
86. Structural Models in Proposals	Structures
87. Doing Business with the Aeronautical Systems Div Phamplet	Structures (Default)
88. Structural Upgrade of the F-16 C/D and Results of the ...	Structures
89. Aircraft Modification (Chapter 4)	Structures (Default)
90. Functional Support Photographic Essay (Chapter 5)	Structures (Default)
91. TR: Pre-Milestone I Program Development Process Guide (Default)	Structures
92. F-22 Cockpit Design	Flight Subsystems
93. NR: NASP Engine Components Tested at Mach 16	Propulsion
94. TR: KC-135 Cockpit Modernization Study and Crew ...	Flight Subsystems

TOTALS

Structures -	23
Structures by default -	36
Flight Subsystems -	16
Propulsion -	6
Avionics -	13

Note - Those papers that could not be identified specifically to either Avionics, Flight Subsystems, or Propulsion were put int the "Structures" category and are marked (Default).

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.3.1.1. of the ASC-Wright Patterson response. The 10 Aug 1994 version did not provide data at the lowest level of CSF per the instruction.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

MAJCOM REVIEWER: _____
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

PURPOSE: To document answer to Lab Questionnaire Question 3.3.1.1 – **Work Year and Lifecycle.**

SOURCE: Military and civilian records were used to provide assigned FY93 information. ASC/CYN records were used to derive actual SETA support.

METHOD: Using records provided for Lab Questionnaire Question 3.2.1, military and civilian numbers are tallied. On-site SETA was assumed to be 90% of total SETA requirement (per SPO Directors). There is no FFRDC support for programs at WPAFB. Note: Military assigned is not correct. Data records only provide a current snapshot of assigned military. We then took these numbers and broke them out into the CSFs using the percentage of people per CSF as determined in Question 3.2.1.

CONCLUSION: See Table

"LAB"	Fiscal Year 1993 Actual			
	Civilian	Military	FFRDC	SETA
Science & Technology	0	0	0	0
Engineering Development				
AIR VEHICLES – Fixed Wing				
Structures	2790	1643	0	166
Avionics	609	341	0	93
Propulsion	162	84	0	18
Flight Subsystems	267	204	0	66
WEAPONS - Cruise Missiles	149	85		91
Total	3977	2357*	0	434
In-Service Engineering	0	0	0	0

* Reflects assigned status as of 18 May 94

Note: ASC acquisition programs are all considered Engineering Development. Technology Development and Insertion Activities that support ASC acquisition programs (Science and Technology) are conducted in the labs (see Wright Laboratory questionnaire). In-Service Engineering for all ASC acquisition programs are conducted in the AFMC Air Logistics centers. (See Air Force ALC questionnaires for program-related in-service information.)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: Robert Marcischak Date: 13 Aug 94
ROBERT J. MARCISCHAK, Prog Mgr, GS-13

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Thomas L. Koepnick Date: 14 Aug 94
THOMAS L. KOEPNICK AFMC/XRX 787-2622

ASC (SPOs and Mod Center)

CONTROL NUMBER: LJCSWG-AF 024

PURPOSE: To provide SAF/AQX staff corrected answers to Question 2.3.1.2 Engineering Development by ACAT of the (see Distribution List) response to the Laboratory Joint Data Call. When reporting ACAT systems your response should be restricted to hardware or software programs/systems which are listed as ACAT Programs in your Program Management Directives (PMDs) or in other Military Departments ACAT listing for FY 1993. In addition, pay particular attention to your responses in the "OTHER" category. These will not be on the MILDEP ACAT listings. You should list the non-ACAT programs you are working on here. Ensure that these are actual Product Programs (i.e. hardware/software systems, vaccines, etc.) Do not state "various". You must list individual programs. Review your response to Question 3.3.1.2 and make sure it complies with the above guidance or correct it to meet the guidance.

METHOD: Comparison of answers to questions PROFESSIONAL JUDGEMENT & TELECON @ SAF/AQ

CONCLUSION: DATA PREVIOUSLY SUBMITTED COMPLIED WITH ORIGINAL INSTRUCTION THERE NO CORRECTIONS ARE NECESSARY FOR ASC/AM/CYN Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

MAJCOM REVIEWER: Joe Bradford 20 SEP 1994
(print name, organization, DSN)
Joe Bradford, GM14, AFMC/XEMP, 787-5591

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: E. E. WOZNIAK 645/XPP 787-6291
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

E. E. Wozniak

3.2.4.2 How many papers were published in peer reviewed journals? (BRAC Criteria I)

CONCLUSION:

Replaced by pages 17A-17D

CSF	Number Published	Paper Titles (List)
AIR VEHICLES -- Fixed Wing		See Attachment 3.2.4.2
Structures	59	
Avionics	16	
Propulsion	6	
Flight Subsystems	13	
WEAPONS - Cruise Missiles	0	
TOTAL	94	

3.3 Workload

3.3.1 FY93 Workload

3.3.1.1 **Work Year and Lifecycle:** Identify the number of actual workyears executed for each applicable CSF in FY93 for each of the following: government civilian; military; on-site FFRDCs; and on-site SETAs. (BRAC Criteria I)

CONCLUSION: Replaced by Pages 17H & 17I

"LAB"	Fiscal Year 1993 Actual			
	Civilian	Military	FFRDC	SETA
Science & Technology	0	0	0	0
Engineering Development	3977	2357*	0	434
In-Service Engineering	0	0	0	0

* Reflects assigned status as of 18 May 94

3.3.1.2 **Engineering Development By ACAT:** For each Common Support Function (e.g. airborne C4I) at each activity engaged in engineering development, provide:
- For each ACAT IC, ID, and II program (as defined in DODI 5000.2):
  - The name of the program

ASC BRAC INFORMATION Atch 3.0B Question 3.0 AND 3.3.1.2

	Program Data	
ACAT	PROGRAM NAME	COMMON SUPPORT FUNCTION (CSF)
1D	B-1B BOMBER AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	B-2 BOMBER AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	B-2 BOMBER AIRCRAFT	Air Vehicles - Fixed (Propulsion)
1D	B-2 BOMBER AIRCRAFT	Air Vehicles - Fixed (Structures)
1D	B-2 BOMBER AIRCRAFT	Air Vehicles - Fixed (SubSystems)
1D	C-17 AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	C-17 AIRCRAFT	Air Vehicles - Fixed (Propulsion)
1D	C-17 AIRCRAFT	Air Vehicles - Fixed (Structures)
1D	C-17 AIRCRAFT	Air Vehicles - Fixed (SubSystems)
1D	COOPERATIVE AIRCRAFT IDENTIFICATION	Air Vehicles - Fixed (Avionics)
1D	F-16 AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	F-16 AIRCRAFT	Air Vehicles - Fixed (Propulsion)
1D	F-16 AIRCRAFT	Air Vehicles - Fixed (Structures)
1D	F-16 AIRCRAFT	Air Vehicles - Fixed (SubSystems)
1D	F-22 AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	F-22 AIRCRAFT	Air Vehicles - Fixed (Propulsion)
1D	F-22 AIRCRAFT	Air Vehicles - Fixed (Structures)
1D	F-22 AIRCRAFT	Air Vehicles - Fixed (SubSystems)
1D	IMPROVED DATA MODEM	Air Vehicles - Fixed (Avionics)
1D	JPATS AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	JPATS AIRCRAFT	Air Vehicles - Fixed (Structures)
1D	JPATS AIRCRAFT	Air Vehicles - Fixed (SubSystems)
1D	JSTARS AIRCRAFT ENGINEERING SUPPORT	Air Vehicles - Fixed (Structures)
1D	JSTARS FLIGHT CREW TRAIING (J-FTS)	Air Vehicles - Fixed (SubSystems)
1D	NON-DEVELOPMENTAL AIRLIFT AIRCRAFT (NDAA)	Air Vehicles - Fixed (Avionics)
1D	NON-DEVELOPMENTAL AIRLIFT AIRCRAFT (NDAA)	Air Vehicles - Fixed (Propulsion)
1D	NON-DEVELOPMENTAL AIRLIFT AIRCRAFT (NDAA)	Air Vehicles - Fixed (Structures)
1D	NON-DEVELOPMENTAL AIRLIFT AIRCRAFT (NDAA)	Air Vehicles - Fixed (SubSystems)
1D	T-1A AIRCRAFT	Air Vehicles - Fixed (Structures)
1D	TSSAM	Weapons - Cruise Missile
1C	C-130 AIRCRAFT	Air Vehicles - Fixed (Avionics)
1C	C-130 AIRCRAFT	Air Vehicles - Fixed (Propulsion)
1C	C-130 AIRCRAFT	Air Vehicles - Fixed (Structures)
1C	C-130 AIRCRAFT	Air Vehicles - Fixed (SubSystems)
1C	LANTIRN	Air Vehicles - Fixed (Avionics)
II	ADVANCE MISSILE WARNING	Air Vehicles - Fixed (SubSystems)
II	ADVANCED CRUISE MISSILE	Weapons - Cruise Missile
II	COMBAT TALON II AIRCRAFT	Air Vehicles - Fixed (Avionics)
II	COMBAT TALON II AIRCRAFT	Air Vehicles - Fixed (Structures)
II	COMBAT TALON II AIRCRAFT	Air Vehicles - Fixed (SubSystems)
II	COMMON TANKER/TRANSPORT RADAR	Air Vehicles - Fixed (Avionics)
II	CV-22 AIRCRAFT	Air Vehicles - Fixed (Structures)
II	EF-111A SYSTEM IMPROVEMNT PROGRAM (SIP)	Air Vehicles - Fixed (Avionics)
II	F-15 AIRCRAFT	Air Vehicles - Fixed (Avionics)
II	F-15 AIRCRAFT	Air Vehicles - Fixed (Propulsion)
II	F-15 AIRCRAFT	Air Vehicles - Fixed (Structures)

Prepared by ASC/CYN

ASC Program List sorted by ACAT
Subdivided Into CSFs

Atch 3.0 B

	Program Data	
ACAT	PROGRAM NAME	COMMON SUPPORT FUNCTION (CSF)
II	F-15 AIRCRAFT	Air Vehicles - Fixed (SubSystems)
II	GUNSHIP AIRCRAFT	Air Vehicles - Fixed (Avionics)
II	GUNSHIP AIRCRAFT	Air Vehicles - Fixed (Propulsion)
II	GUNSHIP AIRCRAFT	Air Vehicles - Fixed (Structures)
II	GUNSHIP AIRCRAFT	Air Vehicles - Fixed (SubSystems)
II	SOF AIRCREW TRAINING SYSTEM	Air Vehicles - Fixed (SubSystems)
II	T-38 AVIONICS UPGRADE (MASA) AND QUIET KNIGHT	Air Vehicles - Fixed (Avionics)
II	VC-X (REPLACEMENT) AIRCRAFT	Air Vehicles - Fixed (Structures)
III/IV	A BROAD BASED ENVIRONMENT FOR TEST	Air Vehicles - Fixed (SubSystems)
III/IV	ADVANCED X-RAY SYSTEM (AXES)	Air Vehicles - Fixed (Structures)
III/IV	AFOSEM	Air Vehicles - Fixed (Structures)
III/IV	AIR FORCE ACQUISITION MODEL	Air Vehicles - Fixed (Avionics)
III/IV	AIR FORCE ACQUISITION MODEL	Air Vehicles - Fixed (Propulsion)
III/IV	AIR FORCE ACQUISITION MODEL	Air Vehicles - Fixed (Structures)
III/IV	AIR FORCE ACQUISITION MODEL	Air Vehicles - Fixed (SubSystems)
III/IV	AIRCRAFT TECHNICAL MODIFICATIONS: CMMCA	Air Vehicles - Fixed (SubSystems)
III/IV	AIRCRAFT TECHNICAL MODIFICATIONS: TRAACE	Air Vehicles - Fixed (SubSystems)
III/IV	ALE-47	Air Vehicles - Fixed (SubSystems)
III/IV	ASTE	Air Vehicles - Fixed (SubSystems)
III/IV	BIG SAFARI AIRCRAFT	Air Vehicles - Fixed (Structures)
III/IV	C-141 AIRCREW TRAINING SYSTEM	Air Vehicles - Fixed (SubSystems)
III/IV	C-20H SPECIAL AIRLIFT MISSION AIRCRAFT	Air Vehicles - Fixed (Structures)
III/IV	C/KC-135 AIRCRAFT	Air Vehicles - Fixed (Avionics)
III/IV	C/KC-135 AIRCRAFT	Air Vehicles - Fixed (Structures)
III/IV	C/KC-135 AIRCRAFT	Air Vehicles - Fixed (SubSystems)
III/IV	KC-10 AIRCRAFT	Air Vehicles - Fixed (Structures)
III/IV	COMPASS/ATTITUDE AND HEADING REFERENCE SYSTEMS (C/AHRS)	Air Vehicles - Fixed (Avionics)
III/IV	EMBEDDED GPS/INS	Air Vehicles - Fixed (Avionics)
III/IV	F-111 DIGITAL FLIGHT CONTROL SYSTEM	Air Vehicles - Fixed (Avionics)
III/IV	F-117A AIRCRAFT	Air Vehicles - Fixed (Avionics)
III/IV	GPS SIGNAL DATA CONVERTER	Air Vehicles - Fixed (Avionics)
III/IV	GROUND POWER GENERATOR SYSTEM	Air Vehicles - Fixed (SubSystems)
III/IV	INTEROPERABLE VISUAL/SENSORS FOR ACC	Air Vehicles - Fixed (Structures)
III/IV	JSECT	Air Vehicles - Fixed (SubSystems)
III/IV	PROPULSION	Air Vehicles - Fixed (Propulsion)
III/IV	SENIOR YEAR	Air Vehicles - Fixed (Structures)
III/IV	SIMULATOR FOR ELECTRONIC UPGRADE	Air Vehicles - Fixed (SubSystems)
III/IV	STANDARD FLIGHT DATA RECORDER	Air Vehicles - Fixed (Avionics)
III/IV	T-3 ENHANCEMENT FLIGHT SCREENER AIRCRAFT	Air Vehicles - Fixed (Structures)
Other	AF SPACE COMMAND TRAINING	Air Vehicles - Fixed (Structures)
Other	AFMC TECH A/I PROGRAMS	Air Vehicles - Fixed (Structures)
Other	AMC ELECTRONIC COCKPIT	Air Vehicles - Fixed (Avionics)
Other	AMC SIMULATOR UPGRADE	Air Vehicles - Fixed (SubSystems)
Other	AVIONICS STRATEGIC PLANNING	Air Vehicles - Fixed (Avionics)
Other	AWACS AIRCRAFT ENGINEERING SUPPORT	Air Vehicles - Fixed (Structures)
Other	CONTROL DISPLAY NAVIGATION UNIT	Air Vehicles - Fixed (Avionics)

	Program Data	
ACAT	PROGRAM NAME	COMMON SUPPORT FUNCTION (CSF)
Other	EM SUPPORT	Air Vehicles - Fixed (Structures)
Other	FACTS	Air Vehicles - Fixed (Structures)
Other	FIBER OPTIC RATE GYRO	Air Vehicles - Fixed (Avionics)
Other	HAZ-MAT ELIMINATION	Air Vehicles - Fixed (Structures)
Other	IMPACTS	Air Vehicles - Fixed (Avionics)
Other	IMPACTS	Air Vehicles - Fixed (Propulsion)
Other	IMPACTS	Air Vehicles - Fixed (Structures)
Other	IMPACTS	Air Vehicles - Fixed (SubSystems)
Other	INDUSTRIAL FACILITIES	Air Vehicles - Fixed (Structures)
Other	JOINT MODELING AND SIMULATION SYSTEM (J-MASS)	Air Vehicles - Fixed (Structures)
Other	LEAD CENTER FOR ACQUISTION LOGISTICS	Air Vehicles - Fixed (Avionics)
Other	LEAD CENTER FOR ACQUISTION LOGISTICS	Air Vehicles - Fixed (Propulsion)
Other	LEAD CENTER FOR ACQUISTION LOGISTICS	Air Vehicles - Fixed (Structures)
Other	LEAD CENTER FOR ACQUISTION LOGISTICS	Air Vehicles - Fixed (SubSystems)
Other	MARK XV TERMINATION	Air Vehicles - Fixed (Avionics)
Other	NATIONAL AEROSPACE PLANE (NASP) AIRCRAFT	Air Vehicles - Fixed (Avionics)
Other	NATIONAL AEROSPACE PLANE (NASP) AIRCRAFT	Air Vehicles - Fixed (Propulsion)
Other	NATIONAL AEROSPACE PLANE (NASP) AIRCRAFT	Air Vehicles - Fixed (Structures)
Other	NATIONAL AEROSPACE PLANE (NASP) AIRCRAFT	Air Vehicles - Fixed (SubSystems)
Other	PRAM/RAMTIP	Air Vehicles - Fixed (Structures)
Other	PROJECT 2851	Air Vehicles - Fixed (SubSystems)
Other	QUIET KNIGHT	Air Vehicles - Fixed (Avionics)
Other	RFMETS	Air Vehicles - Fixed (Avionics)
Other	SIMULATOR DEVELOPMENT ACTIVITIES	Air Vehicles - Fixed (SubSystems)
Other	SIMULATOR UPDATE ACTIVITIES	Air Vehicles - Fixed (SubSystems)
Other	SIMULATOR UPDATE DEVELPOMENT	Air Vehicles - Fixed (Structures)
Other	TECHNOLOGY INFORMATION	Air Vehicles - Fixed (Structures)
Other	TECHNOLOGY TRANSFER	Air Vehicles - Fixed (Structures)
Other	THEATER MISSILE DEFENSE	Air Vehicles - Fixed (Avionics)
Other	USAFA TRAINING	Air Vehicles - Fixed (Structures)

	Program Data	
ACAT	PROGRAM NAME	COMMON SUPPORT FUNCTION (CSF)
1D	B-1B BOMBER AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	B-2 BOMBER AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	C-17 AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	COOPERATIVE AIRCRAFT IDENTIFICATION	Air Vehicles - Fixed (Avionics)
1D	F-16 AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	F-22 AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	IMPROVED DATA MODEM	Air Vehicles - Fixed (Avionics)
1D	JPATS AIRCRAFT	Air Vehicles - Fixed (Avionics)
1D	NON-DEVELOPMENTAL AIRLIFT AIRCRAFT (NDAA)	Air Vehicles - Fixed (Avionics)
1C	C-130 AIRCRAFT	Air Vehicles - Fixed (Avionics)
1C	LANTIRN	Air Vehicles - Fixed (Avionics)
II	COMBAT TALON II AIRCRAFT	Air Vehicles - Fixed (Avionics)
II	COMMON TANKER/TRANSPORT RADAR	Air Vehicles - Fixed (Avionics)
II	EF-111A SYSTEM IMPROVEMNT PROGRAM (SIP)	Air Vehicles - Fixed (Avionics)
II	F-15 AIRCRAFT	Air Vehicles - Fixed (Avionics)
II	GUNSHIP AIRCRAFT	Air Vehicles - Fixed (Avionics)
II	T-38 AVIONICS UPGRADE (MASA) AND QUIET KNIGHT	Air Vehicles - Fixed (Avionics)
III/IV	AIR FORCE ACQUISITION MODEL	Air Vehicles - Fixed (Avionics)
III/IV	C/KC-135 AIRCRAFT	Air Vehicles - Fixed (Avionics)
III/IV	COMPASS/ATTITUDE AND HEADING REFERENCE SYSTEMS (C/AHRS)	Air Vehicles - Fixed (Avionics)
III/IV	EMBEDDED GPS/INS	Air Vehicles - Fixed (Avionics)
III/IV	F-111 DIGITAL FLIGHT CONTROL SYSTEM	Air Vehicles - Fixed (Avionics)
III/IV	F-117A AIRCRAFT	Air Vehicles - Fixed (Avionics)
III/IV	GPS SIGNAL DATA CONVERTER	Air Vehicles - Fixed (Avionics)
III/IV	STANDARD FLIGHT DATA RECORDER	Air Vehicles - Fixed (Avionics)
Other	AMC ELECTRONIC COCKPIT	Air Vehicles - Fixed (Avionics)
Other	AVIONICS STRATEGIC PLANNING	Air Vehicles - Fixed (Avionics)
Other	CONTROL DISPLAY NAVIGATION UNIT	Air Vehicles - Fixed (Avionics)
Other	FIBER OPTIC RATE GYRO	Air Vehicles - Fixed (Avionics)
Other	IMPACTS	Air Vehicles - Fixed (Avionics)
Other	LEAD CENTER FOR ACQUISTION LOGISTICS	Air Vehicles - Fixed (Avionics)
Other	MARK XV TERMINATION	Air Vehicles - Fixed (Avionics)
Other	NATIONAL AEROSPACE PLANE (NASP) AIRCRAFT	Air Vehicles - Fixed (Avionics)
Other	QUIET KNIGHT	Air Vehicles - Fixed (Avionics)
Other	RFMETS	Air Vehicles - Fixed (Avionics)
Other	THEATER MISSILE DEFENSE	Air Vehicles - Fixed (Avionics)
1D	B-2 BOMBER AIRCRAFT	Air Vehicles - Fixed (Propulsion)
1D	C-17 AIRCRAFT	Air Vehicles - Fixed (Propulsion)
1D	F-16 AIRCRAFT	Air Vehicles - Fixed (Propulsion)
1D	F-22 AIRCRAFT	Air Vehicles - Fixed (Propulsion)
1D	NON-DEVELOPMENTAL AIRLIFT AIRCRAFT (NDAA)	Air Vehicles - Fixed (Propulsion)
1C	C-130 AIRCRAFT	Air Vehicles - Fixed (Propulsion)
II	F-15 AIRCRAFT	Air Vehicles - Fixed (Propulsion)
II	GUNSHIP AIRCRAFT	Air Vehicles - Fixed (Propulsion)
III/IV	AIR FORCE ACQUISITION MODEL	Air Vehicles - Fixed (Propulsion)
III/IV	PROPULSION	Air Vehicles - Fixed (Propulsion)

	Program Data	
ACAT	PROGRAM NAME	COMMON SUPPORT FUNCTION (CSF)
Other	IMPACTS	Air Vehicles - Fixed (Propulsion)
Other	LEAD CENTER FOR ACQUISTION LOGISTICS	Air Vehicles - Fixed (Propulsion)
Other	NATIONAL AEROSPACE PLANE (NASP) AIRCRAFT	Air Vehicles - Fixed (Propulsion)
1D	B-2 BOMBER AIRCRAFT	Air Vehicles - Fixed (Structures)
1D	C-17 AIRCRAFT	Air Vehicles - Fixed (Structures)
1D	F-16 AIRCRAFT	Air Vehicles - Fixed (Structures)
1D	F-22 AIRCRAFT	Air Vehicles - Fixed (Structures)
1D	JPATS AIRCRAFT	Air Vehicles - Fixed (Structures)
1D	JSTARS AIRCRAFT ENGINEERING SUPPORT	Air Vehicles - Fixed (Structures)
1D	NON-DEVELOPMENTAL AIRLIFT AIRCRAFT (NDAA)	Air Vehicles - Fixed (Structures)
1D	T-1A AIRCRAFT	Air Vehicles - Fixed (Structures)
1C	C-130 AIRCRAFT	Air Vehicles - Fixed (Structures)
II	COMBAT TALON II AIRCRAFT	Air Vehicles - Fixed (Structures)
II	CV-22 AIRCRAFT	Air Vehicles - Fixed (Structures)
II	F-15 AIRCRAFT	Air Vehicles - Fixed (Structures)
II	GUNSHIP AIRCRAFT	Air Vehicles - Fixed (Structures)
II	VC-X (REPLACEMENT) AIRCRAFT	Air Vehicles - Fixed (Structures)
III/IV	ADVANCED X-RAY SYSTEM (AXES)	Air Vehicles - Fixed (Structures)
III/IV	AFOSEM	Air Vehicles - Fixed (Structures)
III/IV	AIR FORCE ACQUISITION MODEL	Air Vehicles - Fixed (Structures)
III/IV	BIG SAFARI AIRCRAFT	Air Vehicles - Fixed (Structures)
III/IV	C-20H SPECIAL AIRLIFT MISSION AIRCRAFT	Air Vehicles - Fixed (Structures)
III/IV	C/KC-135 AIRCRAFT	Air Vehicles - Fixed (Structures)
III/IV	KC-10 AIRCRAFT	Air Vehicles - Fixed (Structures)
III/IV	INTEROPERABLE VISUAL/SENSORS FOR ACC	Air Vehicles - Fixed (Structures)
III/IV	SENIOR YEAR	Air Vehicles - Fixed (Structures)
III/IV	T-3 ENHANCEMENT FLIGHT SCREENER AIRCRAFT	Air Vehicles - Fixed (Structures)
Other	AF SPACE COMMAND TRAINING	Air Vehicles - Fixed (Structures)
Other	AFMC TECH A/I PROGRAMS	Air Vehicles - Fixed (Structures)
Other	AWACS AIRCRAFT ENGINEERING SUPPORT	Air Vehicles - Fixed (Structures)
Other	EM SUPPORT	Air Vehicles - Fixed (Structures)
Other	FACTS	Air Vehicles - Fixed (Structures)
Other	HAZ-MAT ELIMINATION	Air Vehicles - Fixed (Structures)
Other	IMPACTS	Air Vehicles - Fixed (Structures)
Other	INDUSTRIAL FACILITIES	Air Vehicles - Fixed (Structures)
Other	JOINT MODELING AND SIMULATION SYSTEM (J-MASS)	Air Vehicles - Fixed (Structures)
Other	LEAD CENTER FOR ACQUISTION LOGISTICS	Air Vehicles - Fixed (Structures)
Other	NATIONAL AEROSPACE PLANE (NASP) AIRCRAFT	Air Vehicles - Fixed (Structures)
Other	PRAM/RAMTIP	Air Vehicles - Fixed (Structures)
Other	SIMULATOR UPDATE DEVELPOMENT	Air Vehicles - Fixed (Structures)
Other	TECHNOLOGY INFORMATION	Air Vehicles - Fixed (Structures)
Other	TECHNOLOGY TRANSFER	Air Vehicles - Fixed (Structures)
Other	USA: RAINING	Air Vehicles - Fixed (Structures)
1D	B-2 BOMBER AIRCRAFT	Air Vehicles - Fixed (SubSystems)
1D	C-17 AIRCRAFT	Air Vehicles - Fixed (SubSystems)
1D	F-16 AIRCRAFT	Air Vehicles - Fixed (SubSystems)

	Program Data	
ACAT	PROGRAM NAME	COMMON SUPPORT FUNCTION (CSF)
1D	F-22 AIRCRAFT	Air Vehicles - Fixed (SubSystems)
1D	JPATS AIRCRAFT	Air Vehicles - Fixed (SubSystems)
1D	JSTARS FLIGHT CREW TRAIING (J-FTS)	Air Vehicles - Fixed (SubSystems)
1D	NON-DEVELOPMENTAL AIRLIFT AIRCRAFT (NDAA)	Air Vehicles - Fixed (SubSystems)
1C	C-130 AIRCRAFT	Air Vehicles - Fixed (SubSystems)
II	ADVANCE MISSILE WARNING	Air Vehicles - Fixed (SubSystems)
II	COMBAT TALON II AIRCRAFT	Air Vehicles - Fixed (SubSystems)
II	F-15 AIRCRAFT	Air Vehicles - Fixed (SubSystems)
II	GUNSHIP AIRCRAFT	Air Vehicles - Fixed (SubSystems)
II	SOF AIRCREW TRAINING SYSTEM	Air Vehicles - Fixed (SubSystems)
III/IV	A BROAD BASED ENVIRONMENT FOR TEST	Air Vehicles - Fixed (SubSystems)
III/IV	AIR FORCE ACQUISITION MODEL	Air Vehicles - Fixed (SubSystems)
III/IV	AIRCRAFT TECHNICAL MODIFICATIONS: CMMCA	Air Vehicles - Fixed (SubSystems)
III/IV	AIRCRAFT TECHNICAL MODIFICATIONS: TRAACE	Air Vehicles - Fixed (SubSystems)
III/IV	ALE-47	Air Vehicles - Fixed (SubSystems)
III/IV	ASTE	Air Vehicles - Fixed (SubSystems)
III/IV	C-141 AIRCREW TRAINING SYSTEM	Air Vehicles - Fixed (SubSystems)
III/IV	C/KC-135 AIRCRAFT	Air Vehicles - Fixed (SubSystems)
III/IV	GROUND POWER GENERATOR SYSTEM	Air Vehicles - Fixed (SubSystems)
III/IV	JSECT	Air Vehicles - Fixed (SubSystems)
III/IV	SIMULATOR FOR ELECTRONIC UPGRADE	Air Vehicles - Fixed (SubSystems)
Other	AMC SIMULATOR UPGRADE	Air Vehicles - Fixed (SubSystems)
Other	IMPACTS	Air Vehicles - Fixed (SubSystems)
Other	LEAD CENTER FOR ACQUISTION LOGISTICS	Air Vehicles - Fixed (SubSystems)
Other	NATIONAL AEROSPACE PLANE (NASP) AIRCRAFT	Air Vehicles - Fixed (SubSystems)
Other	PROJECT 2851	Air Vehicles - Fixed (SubSystems)
Other	SIMULATOR DEVELOPMENT ACTIVITIES	Air Vehicles - Fixed (SubSystems)
Other	SIMULATOR UPDATE ACTIVITIES	Air Vehicles - Fixed (SubSystems)
1D	TSSAM	Weapons - Cruise Missile
II	ADVANCED CRUISE MISSILE	Weapons - Cruise Missile

- A brief program description
- For each ACAT III and IV programs:
  - The number of such programs
  - A list of program names
- For each program not an ACAT I, II, III, IV:
  - The number of such programs
  - A list of program names
- For the purpose of this question, any program between Milestone I and IV and containing demonstration and validation (Dem/Val 6.4)/Engineering and Manufacturing Development (EMD 6.5) funds in the FY95 PBS is considered to be engaged in engineering development (BRAC Criteria I).

CONCLUSION:

Attachment 3.3.1.2

ACAT	PROGRAM NAME	COMMON SUPPORT FUNCTION (CSF)
ID	B-2 AIRCRAFT	Air Vehicles - Fixed (Structures)
ID	C-17	Air Vehicles - Fixed (Structures)
ID	COOPERATIVE AIRCRAFT IDENTIFICATION	Air Vehicles - Fixed (Structures)
ID	CV-22	Air Vehicles - Fixed (Structures)
ID	F-15	Air Vehicles - Fixed (Structures)
ID	F-16	Air Vehicles - Fixed (Structures)
ID	F-22	Air Vehicles - Fixed (Structures)
ID	IMPROVED DATA MODEM	Air Vehicles - Fixed (Structures)
ID	JPATS	Air Vehicles - Fixed (Structures)
ID	JSTARS AIRCRAFT ENGINEERING SUPPORT	Air Vehicles - Fixed (Structures)
ID	NDAA	Air Vehicles - Fixed (Structures)
ID	T-1A	Air Vehicles - Fixed (Structures)
IC	C-130 AIRCRAFT	Air Vehicles - Fixed (Structures)
II	COMBAT TALON II	Air Vehicles - Fixed (Structures)
II	COMMON TANKER/TRANSPORT RADAR	Air Vehicles - Fixed (Structures)
II	EF-111A SYSTEM IMPROVEMNT PROGRAM (SIP)	Air Vehicles - Fixed (Structures)
II	GUNSHIP	Air Vehicles - Fixed (Structures)
II	T-38 AVIONICS UPGRADE (MASA)	Air Vehicles - Fixed (Structures)
II	VC-X	Air Vehicles - Fixed (Structures)
III/IV	ADVANCED X-RAY SYSTEM (AXES)	Air Vehicles - Fixed (Structures)
III/IV	AFOSEM	Air Vehicles - Fixed (Structures)
III/IV	BIG SAFARI	Air Vehicles - Fixed (Structures)
III/IV	C/KC-135	Air Vehicles - Fixed (Structures)
III/IV	COMMERCIAL AIRCRAFT: KC-10	Air Vehicles - Fixed (Structures)
III/IV	COMMERCIAL AIRCRAFT:C-20H SPECILA AIRLIFT MISSION	Air Vehicles - Fixed (Structures)
III/IV	COMPASS/ATTITUDE AND HEADING REFERENCE SYSTEMS (C/AHRS)	Air Vehicles - Fixed (Structures)
III/IV	EMBEDDED GPS/INS	Air Vehicles - Fixed (Structures)
III/IV	GPS SIGNAL DATA CONVERTER	Air Vehicles - Fixed (Structures)
III/IV	INTEROPERABLE VISUAL/SENSORS FOR ACC	Air Vehicles - Fixed (Structures)
III/IV	SENIOR YEAR	Air Vehicles - Fixed (Structures)
III/IV	STANDARD FLIGHT DATA RECORDER	Air Vehicles - Fixed (Structures)
III/IV	T-3 ENHANCEMENT FLIGHT SCREENER	Air Vehicles - Fixed (Structures)

Engineering Development	Name or Number	Workyears (FY93 Actual)	FY93 Funds Received (Obligation Authority)	Narrative
ACAT IC	C-130	51.1	0.0	This aircraft provides intratheater airlift support. The new upgrades include a new Low Power Color Radar, Night Vision Goggles compatible cockpit, improved electrical power system, Electronic Flight Instruments, defensive systems, GPS, and MLS. Currently only 16 aircraft are in the active Air Force budget. The C-130 MTD is to provide two maintenance training devices.
	LANTIRN	118.0	6.7	Provides combat Air Forces with capability to conduct counter air and interdiction at night and under-the-weather conditions using F-15E and F-16C/D Block 40/42. System is an external targeting pod w/ laser designator, FLIR, IR Maverick missile capability, and a navigation pod w/ terrain-following radar & wide field-of-view IR sensor. Alternatives: No alternatives in development for F-15E or F-16, and only a proposal to internally mount the capability on F-16.

Engineering Development	Name or Number	Workyears (FY93 Actual)	FY93 Funds Received (Obligation Authority)	Narrative
ACAT ID	B-1B	151.7	79.2	The conventional weapons upgrade program includes the development, integration, and production activities to upgrade the B-1B's conventional war fighting role as approved during the 28 Sep 92 and 17 Jun 93 Summits. This conventional upgrade (ACAT 1D) includes two major acquisition programs: survivability upgrade (competitive upgrade to the existing B-1B electronic counter-measure suite) and lethality upgrade (integration of cluster bomb, JDAM, JSOW, and TSSAM onto the B-1B.) The B-1B program includes supportability improvements (ACAT III/IV) which include simulator system and maintenance training equipment updates, overwing fairing fire prevention safety update, ECM antenna update, Lancer 101 engine safety and R&M updates, aft DC power safety update, and conventional bomb module test set updates. Other sustainment activities include procurement of deferred support equipment and execution of the interim contractor support program.
	B-2	355.4	1156.2	The B-2 program buys 20 operational B-2 aircraft as well as the necessary support for one main operating base and deployment capability. Through stealth technology, the B-2 can hold at risk or, if necessary, attack an enemy's warmaking potential, especially time critical targets including: Weapons of mass destruction, Massed congenital forces, Key nodes of air defense and C3I net, and Enemy offensive air capability.
	C-17	458.8	167.9	The C-17 is a multi-engine, turbofan, wide-body, strategic airlift aircraft, which will provide airlift for rapid strategic deployment of combat forces to support national strategy goals, meet mobility requirements within a theater of operation, provide a tactical outsize capability not available now, and provide needed total force structure modernization.

Engineering Development	Name or Number	Workyears (FY93 Actual)	FY93 Funds Received (Obligation Authority)	Narrative
ACAT ID (Cont)	Combat Aircraft Identificatio n	1.3	0.0	Developmental program that will provide a common Identify Friend or Foe (IFF) capability for the DOD. The CAI is a joint program encompassing the NAVY, Air Force, Army, Marine Corps, and Coast Guard with possible NATO involvement. The system will be deployed on sea, land, and airborne platforms and will be compatible with the current Mark XII IFF System and FAA/ICAO Systems as the main interface between military aircraft and Air Traffic Control Systems in controlled airspace.
	F-16	648.0	105.7	Multinational single engine, single-seat, multirole tactical fighter with full air-to-surface and air-to-air combat capability. F-16 C/D models are substantially more capable than the A/B planes. Primary AF aircraft in the surface attack role. Provides enhanced night, under-the-weather air-to-ground capability.

	F-22	352.0	1924.5	The F-22 is the next-generation air superiority fighter for the combat air forces. The overall development goal for the F-22 is to achieve an affordable balance between performance, armament, low observability, advanced avionics, and supportability. The F-22 will have improved lethality to assure first-look/first-kill, and maneuverability/ acceleration to assure superiority over any known or predicted threat in the close-in flight. It will have the survivability to conduct its air superiority mission over enemy territory using balanced combination of supersonic cruise (without afterburner), reduced signatures, tailored countermeasures, and maneuverability. The F-22 Program completed its Dem/Val phase in late 1990 culminated by the EMD source selection. A cost plus award fee contract was awarded in August 1991. The program schedule has been impacted by recent Congressional and OSD budget cuts. The engine completed CDR in July 1992 and is now in test phase. The air vehicle completed PDR in April 1993 an is now continuing with the detailed design phase leading to CDR scheduled for February 1995.
Engineering Development	**Name or Number**	**Workyears (FY93 Actual)**	**FY93 Funds Received (Obligation Authority)**	**Narrative**
ACAT ID (Cont)	Improved Data Modem	1.2	0.0	Modem transfers digital targeting data to support tri-service platforms/missions without verbal communications. During wartime is important for keeping strategic information secure. Used by all four services and their systems such as the F-16, Apache Longbow, and JSTARS. FRP deliveries begin FY94.
	JPATS/T-1A	130.1	4.3	Provides entry level training for USAF/USN student pilots. AF T-37 fleet is aging and requires replacement. JPATS will provide effective training, lower physiological incidents, and decreased support costs. Schedule requires aircraft flight evaluation and aircraft acquisition source selection in FY94 with first production to be exercised FY95. T-1A provides advanced training to the T-37 as the first leg of the dual track training for specialized undergraduate pilot training.

	JSTARS Engineering Support	3.4	0.0	A powerful airborne, multi-mode, ground surveillance radar set plus radar image processing and command and control functions. These are carried in the E-8C JSTARS aircraft which are used commercial 707s. Figures importantly as a major airborne command and control asset in US planning for dealing with future military conflicts. Has foreign military sales potential. ASC supports to ESC on this program by providing all engineering disciplines pertaining to the E-8C air vehicle.
	JSTARS Flight Crew Trainer	4.8	0.0	Aircrew training system to support training requirements outlined by ACC for Joint STARS pilots, copilots, and flight engineers. Systems include dedicated motion-based simulator with full commonality to the E-8C aircraft, courseware, and follow-on contractor operations, management, and support.
	TSSAM	254.0	CLASSIFIED	Stealthy conventional cruise missile which provides low observable standoff capability of to attack high value, heavily defended targets. Air launch system used on planes such as the B-2, B-52, and F/A-18. Penetrates enemy air defenses as it seeks and attacks its intended targets.

Engineering Development	Name or Number	Workyears (FY93 Actual)	FY93 Funds Received (Obligation Authority)	Narrative
ACAT II	AC-130U Gunship	70.9	23.9	This is a highly modified C-130H supporting unconventional warfare/special operations portions of the JCS special operations mission. The aircraft is capable of long range penetrations into politically denied/sensitive areas to infiltrate, resupply, or exfiltrate forces during all weather conditions, day or night. Initial operating capability was achieved in Jul 93 with Full Operating Capability projected in FY97. The Combat Talon II program is managed under the terms of Annex B (RD&A) to the USAF/USSOCOM MOA dated 23 Oct 93.
	Advanced Cruise Missile	137.0	19.0	Provides the B-52 bomber force a stand-off launch capability. Needed to support FOT&E for the life of the weapon system.
	Advanced Missile Warning	29.1	9.1	Program will develop test and integrate a common missile approach and warning capability into existing/current generation tactical fighter aircraft. Only current detection capability against infrared missiles is visual acquisition. Internal installation is planned on the F-16, F-15, F-18, and AV-8B. An electronic countermeasure pod is also a candidate for use on the A-10. Milestone II decision expected in 2QFY95 with EMD award in 3QFY95. Milestone III -- 4QFY98.
	Common Weather Radar	9.3	0.0	Non Developmental Item program for a common radar to replace the aging APN-59 and APS-133 radars. Primary use will be to provide weather detection, precision ground mapping, and rendezvous/intercept capability. Program involves replacement systems for 1900 aircraft and 9 separate platforms including C-135 and KC-135 aircraft. First installations expected in FY97.
	Commercial Aircraft: VC-X	8.9	0.0	Will replace seven VC-137s assigned to 89th AW at Andrews. Current fleet is ~30 years old and not compliant with FAA Stage III airport noise requirements or ICAO requirements for operations overseas (mandatory by 2002). Customers range from President to Congress. RFP and Acquisition Strategy development occurring over the next year.

Engineering Development	Name or Number	Workyears (FY93 Actual)	FY93 Funds Received (Obligation Authority)	Narrative
ACAT II (Cont)	CV-22 Osprey	31.6	0.0	The CV-22 is the special operations forces (SOF) version of the Navy led V-22 program. The aircraft will be used by AFSOC to significantly enhance long range exfiltration missions. The aircraft is new tilt-rotor technology that offers both helicopter and airplane performance. The aircraft will by a composite, fly-by-wire aircraft with enhanced avionics, electronic warfare equipment and a TF/TA multi-function radar. The program is being managed by the Navy and monitored by AF.
	EF-111A SIP	41.9	56.9	Upgrade to the ALQ-99 Tactical Jamming System currently employed on the EF-111A aircraft. Also includes slight trainer upgrade. System provides stand-off jamming support to mask air operations and deny radar acquisition of strike packages, close in jamming in crossing the FEBA and to support SEAD missions, and direct support jamming to deny radar acquisition in the target area and to deceive and confuse integrated air defenses.
	F-15	257.3	49.6	Procurement of F-15E aircraft and modification of F-15A-E aircraft already fielded. Modification of F-15C to conduct the Manned Destructive Suppression of Enemy Air Defenses (SEAD) mission. The primary mission of the F-15E is to conduct deep interdiction during day or night, in and under the weather (F-15E), and to maintaining air superiority (F-15A-D).
	MC-130H Combat Talon II	74.7	0.0	This is a highly modified C-130H supporting unconventional warfare/special operations portions of the JCS special operations mission. The aircraft is capable of long range penetrations into politically denied/sensitive areas to infiltrate, resupply, or exfiltrate forces during all weather conditions, day or night. Initial operating capability was achieved in Jul 93 with Full Operating Capability projected in FY97. The Combat Talon II program is managed under the terms of Annex B (RD&A) to the USAF/USSOCOM MOA dated 23 Oct 93.

Engineering Development	Name or Number	Workyears (FY93 Actual)	FY93 Funds Received (Obligation Authority)	Narrative
ACAT II (Cont)	SOF Aircrew Training System	36.3	19.3	Provides an integrated, state-of-the-art ground based ATS to provide trained, qualified aircrew members for the MC-130E, MC-130H, HC-130P/N, MH53J, and MH-60G weapon systems. Will also provide C-130 engine run certification for maintenance personnel as well as integrated mission rehearsal capability for Army SOC aviation platforms and the above AFSOC platforms. Mission Rehearsal Imagery Support System delivery Jan 94. MC-130H and MC-130E weapon system trainer deliveries scheduled for 3QFY95 and 3QFY96, respectively. Options for other platforms have not yet been funded.
	T-38 Avionics Upgrade (MASA)	7.5	0.0	Support potential avionics upgrades to the T-38. These upgrades are necessary due to supportability problems related to obsolete components and lower reliability of 1960s technology.

Engineering Development	Name or Number	Workyears (FY93 Actual)	FY93 Funds Received (Obligation Authority)	Narrative
ACAT III/IV	38 programs in ACAT III/IV	6.1	0.3	A BROAD BASED ENVIRONMENT FOR TEST (ABBET)
		27.2	9.8	ADVANCED STRATEGIC and TACTICAL INFRARED EXPENDABLES (ASTE)
		4.7	0.3	ADVANCED X-RAY SYSTEM (AXES)
		0.0	0.8	AFOSEM
		0.0	0.1	AIR FORCE ACQUISITION MODEL (AFAM)
		10.3	0.0	AIRCRAFT TECHNICAL MODIFICATIONS: CRUISE MISSILE MISSION and CONTROL AIRCRAFT (CMMCA)
		5.0	0.0	AIRCRAFT TECHNICAL MODIFICATIONS: TRANSPORT ADVANCED AVIONICS and COCKPIT ENHANCEMENT (TRAACE)
		44.2	3.7	AN / ALE-47 COUNTERMEASURE DISPENSING SYSTEM (CMDS)
		14.1		B-52 TSSAM INTEGRATION
	30**	70.2	CLASSIFIED	BIG SAFARI
		11.0	3.9	C-141 AIRCREW TRAINING SYSTEM
		26.2		C / KC-135 (IARS)
			3.5	KC-135 IARS
		6.4		KC-135 TRAINING SYSTEM
			0.0	MULTI-POINT REFUELING / RECEPTACLE
		14.4	0.0	CLS AIRCRAFT: C-20H SPECIAL AIRLIFT MISSION
		6.9	0.0	CLS AIRCRAFT: KC-10
				CLASS V MOD / ON BOARD LOADER
				CLASS V MOD / WING POD
		13.2	9.7	COMPASS / ATTITUDE and HEADING REFERENCE SYSTEM (C / AHRS)
		20.8	92.9	COMPONENT IMPROVEMENT PROGRAM (CIP)

** Sub-projects for Big Safari and Senior Year are available in ASC/CYN

Engineering Development	Name or Number	Workyears (FY93 Actual)	FY93 Funds Received (Obligation Authority)	Narrative
ACAT III/IV (Cont)		11.4	0.1	EMBEDDED GPS / INS
		27.7	0.9	ENGINE MODEL DERIVATIVE PROGRAM
		25.7	0.2	F-111 DIGITAL FLIGHT CONTROL SYSTEM
		37.6	0.5	F-117A AIRCRAFT
		5.1		STANDARD RING LASER GYRO / INERTIAL NAVIGATION UNIT
		9.4	0.0	F-15 DOWN SIZED TESTER
		90.9		F100-PW-229 ENGINE
		66.5		F110-GE-129 ENGINE
				FALCON 110
		2.9	0.0	GPS SIGNAL DATA CONVERTER
		17.1	0.0	GROUND POWER GENERATOR SYSTEM
		7.9	0.0	INTEROPERABLE VISUALS / SENSORS FOR ACC (IVACC)
		13.4	0.0	JOINT SERVICE ELECTRONIC COMBAT (EC) PRODUCTS SYSTEMS TESTER (JSECST)
	79**	185.1	CLASSIFIED	SENIOR YEAR
		9.5	8.3	SIMULATOR for ELECTRONIC COMBAT (EC) PRODUCTS TRAINING (SECT)
		7.1	2.1	STANDARD FLIGHT DATA RECORDER
		13.6	0.0	T-3A ENHANCED FLIGHT SCREENER AIRCRAFT

** Sub-projects for Big Safari and Senior Year are available in ASC/CYN

Engineering Development	Name or Number	Workyears (FY93 Actual)	FY93 Funds Received (Obligation Authority)	Narrative
Other	29 in Other	4.5	0.0	AF SPACE COMMAND TRAINING
		18.5	0.1	AFMC TECHNOLOGY APPLICATION & INSERTION PROGRAMS
		15.7	0.0	AMC ELECTRONIC COCKPIT
		9.5	0.0	AMC SIMULATOR UPGRADE (4 STAR BAR)
		16.3	2.6	AVIONICS STRATEGIC PLANNING
				COMMERCIAL AIRCRAFT: C-XX
		0.7		CONTROL DISPLAY NAVIGATION UNIT
		75.7		FACTS
		1.0		FIBER OPTIC RATE GYRO
				HAZ-MAT ELIMINATION
				IMPACTS
				INDUSTRIAL FACILITIES
		22.9		INTEGRATED AVIONICS TEST (RFMETS)
		15.9		JOINT MODELING and SIMULATION SYSTEM (J-MASS)
		0.0		LEAD CENTER FOR ACQUISITION LOGISTICS
		6.4		MARK XV TERMINATION
		91.0	140.2	NATIONAL AEROSPACE PLANE (NASP)
				HYFLITE
				PHASE 2D
				SINGLE STAGE TO ORBIT (SSTO) AIR VEHICLE
				SSTO PROPULSION
				TECHNOLOGY TRANSFER
		33.0	44.6	PRAM / RAMTIP
		6.4		PROJECT 2851 (DIGITAL DATA BASE)
		1.3		QUIET KNIGHT (SOF) [COVERT PENETRATION]
		20.2		TECHNOLOGY INFORMATION
		2.4		TECHNOLOGY TRANSFER
		0.0		THEATER MISSILE DEFENSE (TMD) (NEW START)
		3.4		USAFA TRAINING

3.3.1.3 **In-Service Engineering:** For each Common Support Function at each activity engaged in in-service engineering, list the in-service engineering efforts, the FY93 funds (from all sources) obligated for these efforts, the FY93 workyears for these efforts, and the weapon system(s) supported by these efforts. In-service engineering consists of all engineering support of fielded and/or out of production systems and includes efforts to improve cost, throughput, and schedule to support customer requirements as well as mods and upgrades for reliability, maintainability, and performance enhancements. (BRAC Criteria I)

CONCLUSION: ASC is not involved in In-Service Engineering. ASC programs involve acquisition and evolution and planning for sustainment. All sustainment (In-Service Engineering) is accomplished for the ASC program offices by the Air Logistic Centers. Under IWSM, ASC has entered into direct partnerships on all our programs with specific ALCs for every air vehicle program AFMC manages. Through Integrated Product development, ASC designs in sustainment criteria to the weapon system in coordination with the ALCs. The ALCs execute the sustainment (depot) activities and funding process.

Common Support Functions	In-Service Engineering Efforts (List)	FY93 Actual		Weapon System(s) Supported
		Funds Received (Obligation Authority)	Workyears	
All	0	0	0	0

3.3.2 **Projected Funding**

3.3.2.1 **Direct Funding:** For each applicable CSF, identify direct mission funding by appropriation from FY94 to FY97. Use FY95 PBS for FY95-FY97. (BRAC Criteria I)

CONCLUSION:

CSF	FY94 ($M Then Year)	FY95 ($M Then Year)	FY96 ($M Then Year)	FY97 ($M Then Year)
AIR VEHICLES - FIXED				
-- AVIONICS	2275.5	2486.1	1936.8	1547.7
-- PROPULSION	821.1	929.0	646.9	449.3
-- STRUCTURES	4978.6	5096.5	6769.9	5769.6

-- FLIGHT SUBSYSTEMS	393.7	401.7	599.0	721.4
WEAPONS				
-- CRUISE MISSILES	455.0	476.6	485.0	528.7

Note: ASC does not offer any conclusions concerning budget trends for the CSFs (eg Structures increasing and Avionics and Propulsion decreasing). These trends are only indicate of the fidelity of the data received from program offices between 28 Jul and 2 Aug. ASC used the "Structures" CSF as a catch all for dollars not directly meeting the CSF definitions in the other three low level indentures.

3.3.2.2 **Other Obligation Authority:** For each applicable CSF, identify reimbursable and direct-cite funding (other obligation authority expected) from FY94 to FY97. Funding allocation must be traceable to FY95 PBS. (BRAC Criteria I)

CONCLUSION:

CSF	FY94 ($M Then Year)	FY95 ($M Then Year)	FY96 ($M Then Year)	FY97 ($M Then Year)
AIR VEHICLES - FIXED*	1,696.1	1,638.2	1,712.2	1,628.5

*Includes FMS and DOD funds

3.4 Facilities and Equipment

3.4.1 **Major Equipment and Facilities:** Describe major facilities and equipment necessary to support each Common Support Function (include SCIFs). If the facilities and equipment are shared with other functions, identify those functions and the percentage of total time used by each of the functions. Provide labeled photographs that picture the breadth and scope of the equipment and facilities described. If it is unique to DOD, to the Federal Government, or to the US, describe why it is unique. Insert the replacement cost. For this exercise, Replacement cost = (Initial cost + capital investment) multiplied by the inflation factor for the original year of construction. (BRAC Criteria II)

CONCLUSION: See Table and Notes

Common Support Function	Major Facility or Equipment Description	Unique To			
		DOD	Federal Gov't	U. S.	Replacement Cost ($K)

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.4.1 of the ASC-Wright Patterson response to the LJCSG guidance package. The 10 Aug 1994 version did not break out equipment or facilities either by facility/equipment nor by CSF. The replacement costs must be broken out by CSF by equipment/facility. The sharing by percentage must also be shown.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

MAJCOM REVIEWER: _____
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF Date:
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

//

94-09-23 17:59 RCVD

CONTROL NUMBER: LJCSWG-AF 002

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.4.1, Facilities and Equipment, for ASC-WPAFB response to the Laboratory JCSG guidance package. Response dated 13 Aug 94 listed facilities but doesn't break out all facilities to the lowest level CSF, nor show the % Shared. For example, several entries are for "Air Vehicles".

Also, the bottom two entries are identified as supporting the "Space" CSF, but no work effort was shown against a Space CSF. Either the reference to "Space" should be deleted, or all the questions in Section III must be answered for this CSF regardless of the funding level.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

MAJCOM REVIEWER: _____
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF Date:
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

[illegible]

[illegible]: LJCBPG-AF 003

[illegible]: To provide SAFAQX staff corrected answers to question 3.4.1, Facilities and Equipment, for [illegible] to the Laboratory JCBG guidance package. Response dated 11 Aug 94 listed [illegible] was all facilities to the lowest level CEF, including the % shared. For example, [illegible] for "Air Vehicles".

A few of the bottom two entries are identified as supporting the "Space" CEF, but no work effort was [illegible] CEF. Either the reference to "Space" should be deleted, or all the questions in Section III should be answered for this CEF regardless of the funding level.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-6850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be Complete

RECOMMENDATION: Response must be in accordance with LJCBG Guidance Package instructions

DISPOSITION: Concur Does not concur (explain:)

MAJCOM REVIEWER: Joe Bradford
(print name, organization, DSN)
Joe Bradford, GM14 AFMC/XRMP 787-3[illegible]

BASE: Concur Does not concur (explain:)

We have added the percetages to the answer. Our 13 Aug 94 answer does not include "Space" and has broken out Air Vehciles to the lowest level. See attached.

BASE REVIEWER: Robert Marcischak
(print name, organization, DSN)
ROBERT J MARCISCHAK, ASC/CYN, DSN 785-0304

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES H. HANSON, Lt Col, USAF
Chief, Contracting, Quality Assurance Division
SAF/AQXM (Dep Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

FOR OFFICIAL USE ONLY - BRAC Data

ASC/WPAFB (Acquisition & SPOs) Input -- Revised 23 Aug 94

PURPOSE: To document answer to Lab Questionnaire Question 3.4.1 -- **Major Equipment and Facilities.**

SOURCE: Don Beam, 645 ABW/CECX, 787-4804, WIMS (Work Information Management System) Replacement Cost Menu Item: MPY 1994 (Attachment 3.4.1)
Maria Zimmer 645 CCSG/SCSA, 785-4832, Document S-Ss-21014A, 7 June 1994

METHOD: Building/Facilities used by ASC programs were defined (Attachment 3.4.1 and Attachment 3.4.1A). Building areas were mapped to CSFs (see Question 3.5.1), and civil engineering provided calculations for replacement costs per building. Replacement Cost = (Initial Cost + Capital Investment) times (x) Inflation Factor for Original Year of Construction [(IC + CI) x IF_{OYC}]. ASC/CY then calculated the building replacement costs for each CSF by determining what percentage of the each building is used by each program and then by each program CSF and distributing the replacement cost accordingly.

Since this is all administrative space, there are no special facilities requiring photographs for inclusion/attachment to this document.

The computer replacement costs were provided by the Computer Center. Since ASC uses approximately 25% of these resources, we used 25% of the replacement cost.

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ASC/WPAFB (Acquisition & SPOs) Input – Revised 23 Aug 94

CONCLUSION: See Table and Notes

Common Support Function	Major Facility or Equipment Description	Unique To: DOD	Unique To: Federal Gov't	Unique To: U. S.	Replacement Cost (SK)****
Air Vehicles - Fixed	Total Air Vehicles - Fixed				(893,440.5)
--Structures	Acq Mgmt Offices				618,270.0
	Acq Mgmt Offices*				* 1,035.0
	Special Computer Support				** 2,662.5
	Total Structures				621,867.5
-- Avionics	Acq Mgmt Offices				142,657.0
	Acq Mgmt Offices*				* 1,104.0
	Total Avionics				143,761.0
-- Propulsion	Acq Mgmt Offices				19,899.0
	Acq Mgmt Offices*				* 207.0
	Total Propulsion				20,106.0
-- Flight Subsystems	Acq Mgmt Offices				103,153.0
	Acq Mgmt Offices*				* 4,554.0
	Total Flight Subsystems				107,707.0
Weapons --Cruise Missile	Acq Mgmt Offices				34,580.0
Total					***928,020.5

* Not Government-owned Space

** Special Computer Replacement Cost. The ASC Computer Center supports ASC and has some unique capabilities. These systems include INTEL IPSC-860 Model 8, CRAY XMP/216, ADI Real Time Station System, Paragon XP/S-15, and Convex System. These systems are located in Building 676, Area B. Although this is not an ASC SPO building nor are the computer systems owned by the SPOs, these computer systems support ASC SPOs approximately 25% of their operating time. The exact amount of support to individual CSFs cannot be tracked. They are used for system performance assessment, system analysis, survivability analysis, etc. 25% of the replacement cost for these computer systems was allocated to the Structures CSF and is shown in the table.

*** These replacement costs do not cover Acquisition Management Complex (AMC) I and IIb which are currently under construction.

**** Building replacement costs were calculated on a prorata sharing basis of assigned acquisition program space for each occupied building. ASC/CY used 645ABW/EX replacement cost data for each building. The table shows resultant 100% replacement costs for each CSF. Current acquisition occupied space is 88% for Weapons -- Cruise Missiles and 82% for Air Vehicles - Fixed. (Each CSF under Air Vehicles - Fixed occupies 82% of building space.)

FOR OFFICIAL USE ONLY - BRAC Data
ASC/WPAFB (Acquisition & SPOs) Input -- Revised 23 Aug 94

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: Robert Marcischak **Date:** 23 Aug 94
ROBERT J MARCISCHAK, GS-13, PROG MANG

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Joe Brafford **Date:** 24 Aug 94
Joe Brafford, GM-14, AFMC/XRMP, 787-5591

ATC# 3.4.1

ATC# 3.4.1. MAJOR EQUIPMENT AND FACILITIES

AREA B	COST ($000)	OFFICE SYMBOL	V/S	CSE
20008	8,559	SP		AIR VEHICHLES
20011	32,659	YT	X	AIR VEHICLES
20011A (21606)	37,111	FM	X	AIR VEHICLES
20012	39,049	YP		AIR VEHICLES (FIXED)
20014	26,858	VJ	X(S)	(CRUISEWEAPONS MISSILES)
20016	277,740	YS	X	AIR VEHICLES (FIXED)
20017	15,652	CY		AIR VEHICLES
20020	105,809	EN		AIR VEHICLES
20022	43,543	SM		AIR VEHICLES (FIXED/AVIONICS)
20028	32,047	RE	X	AIR VEHICLES (FIXED)
20028A (21610)	1,814	EN		AIR VEHICLES
20039	11,540	YP	X	AIR VEHICLES (FIXED)
20046	4,418	SM		AIR VEHICLES (FIXED)
50	7,272	YF	X	AIR VEHICLES (FIXED)
50A (21615)	5,058	YF	X	AIR VEHICLES (FIXED)
20052	12,525	NA	X	AIR VEHICLES (FIXED/STRUCTUR
20056	25,138	VF		AIR VEHICLES (FIXED)
20057	27,939	SM		AIR VEHICLES (FIXED/AVIONICS)
20070	8,912	YP		AIR VEHICLES (FIXED)
20125	55,707	EN		AIR VEHICLES
20126	5,892	EN		AIR VEHICLES
20156	7,452	EN		AIR VEHICLES
20192	8,426	VC	X	WEAPONS (CRUISE MISSILES)
20193	2,986	VC	X	WEAPONS (CRUISE MISSILES)
20195	3,363	VC		WEAPONS (CRUISE MISSILES)
20450	32,510	XR	X	AIR VEHICLES
20485	7,628	EN		AIR VEHICLES
22041	1,560**	YX		SPACE SYSTEMS
22042	1,560**	VL		SPACE SYSTEMS

ATCH 3.4.1

AREA C	COST ($000)	OFFICE SYMBOL	V/S	CSF
30001	105,939	PK		AIR VEHICLES
30039	44,205	MO		AIR VEHICLES
30150	2,705	HC		AIR VEHICLES
31220	1,835	HC		AIR VEHICLES
OFF BASE				
C-17 SPO	6,900**	YC		AIR VEHICLES (FIXED)

SUBTOTAL ($000):	AIR VEHICLES	$ 960,658
	WEAPONS	41,633
	SPACE SYSTEMS	3,120**
	AIR VEHICLES	6,900**

AND ~~GOUP~~ TOTAL: ($000): $ 1,012,311

* VAULT/SCIF
** NOT GOVT OWNED SPACE

Replaced by Pages 36A-36E

Air Vehicles -Fixed	Acquisition Program Offices				963,660.00
--Structures					
-- Avionics					
-- Propulsion					
-- Flight Subsytems					
Air Vehicle - Fixed*	C-17 Prog Office Bldg (Off Base)*				6,900.00*
Weapons --Cruise Missile	Acquisition Program Offices				41,633.00

* Not Government-owned Space

Note 1: Since the only accurate way to calculate replacement costs is by whole buildings, we are not able to break these replacement costs down any further than shown above.

Note 2: The ASC Computer Center supports ASC and has some unique capabilities. These systems include INTEL IPSC-860 Model 8, CRAY XMP/216, ADI Real Time Station System, Paragon XP/S-15, and Convex System. These systems are located in Building 676, Area B. Although this is not an ASC SPO building nor are the computer systems owned by the SPOs, these computer systems support ASC SPOs between 20 and 25% of their operating time. The exact amount of support to individual CSFs cannot be tracked.

3.5 Expansion Potential

3.5.1 **Laboratory Facilities:** Use facilities records as of fourth-quarter FY93 in answering the following (in sq ft) for each CSF: (BRAC Criteria II)

CONCLUSION: All space for acquisition programs is considered administrative. There are 17 KSF SCIF space.

Common Support Function	Facility or Equipment Description	Type of Space	Space Capacity (KSF)		
			Current	Used	Excess***
AIR VEHICLES – **Avionics** Govt. Off Base	Acq Mgmt Offices	Administrative	498.7 8.5*	498.7 8.5*	29.1**
AIR VEHICLES – **Propulsion** Govt. Off Base	Acq Mgmt Offices	Administrative	45.2 1.8*	45.2 1.8*	7.5**
AIR VEHICLES – **Structures** Govt. Off Base	Acq Mgmt Offices	Administrative	1243.3 8.0*	1243.3 8.0*	135.4**

AIR VEHICLES –Flight Subsystems Govt. Off Base	Acq Mgmt Offices	Administrative	 108.4 35.7*	 108.4 35.7*	 8.3**
WEAPONS – Cruise Missile	Acq Mgmt Offices	Administrative	62.6	62.6	9.7**

* Not government-owned Space
** Space is not contiguous and cannot be captured without movement of personnel.
*** The excess space is based on 3.5.1.1 using 135 Sq Ft/workstation. The total ASC excess capacity is 190,000 square feet which can be apportioned to any of the above CSFs with personnel moves and associated funding.

3.5.1.1 Describe the capacity of your activity to absorb additional similar workyears categorized in the same common support function with minor facility modification. If major modification is required, describe to what extent the facilities would have to be modified. (Use FY97 workyears as your requirement) (BRAC Criteria III)

CONCLUSION: See Table. Major facility modification, i.e., MILCON renovation, is required to capture available facility space for 1400 workstations, since this is non-contiguous space. All these workstations are available to support any of the CSFs at ASC. We are not able to break the number into the CSFs accurately since the number came from the AFMC-21 exercise. The breakout is done by spreading the additional space equally according to manpower.

Common Support Function	Facility or Equipment Description	Type of Space	Excess workstations
AIR VEHICLES - Fixed – Avionics	Acq Mgmt Offices	Administrative	215
AIR VEHICLES - Fixed –Propulsion	Acq Mgmt Offices	Administrative	55
AIR VEHICLES - Fixed – Structures	Acq Mgmt Offices	Administrative	997
AIR VEHICLES - Fixed – Flight Subsystems	Acq Mgmt Offices	Administrative	61
WEAPONS -Cruise Missiles	Acq Mgmt Offices	Administrative	72

3.5.1.2 If there is capacity to absorb additional workyears, how many additional workyears can be supported? (BRAC Criteria III)

CONCLUSION: See Question 3.5.1.1. There may be 1400 workstations available to support any of the CSFs at ASC. Assuming one worksatation per person, that means 1400 workyears could be supported. However, this is currently non-contiguous space.

3.5.1.3 For 3.5.1.1 and 3.5.1.2 (above) describe the impact of military construction programs or other alteration projects programmed in the FY95 PBS. (BRAC Criteria II)

CONCLUSION: There are no current MILCON projects for exisitng acquisition office space in FY95. There is the Acquisition Management Complex (AMC) programmed to develop new office space in Area B in a 10 phase approach. Phases 1 and 2 are already under way. Future updates include:

FY96:	Bld 11A, 60000 Sq Ft renovation	$6.0M
FY97:	Bld 11A, 34500 Sq Ft renovation	$3.5M
FY97:	AMC Phase 3, 108000 Sq Ft	$18.5M

3.5.2 **Land Use:** Provide number of buildable acres for additional laboratory/administrative support construction at your installation. (BRAC Criteria II)

CONCLUSION: There are 70 buildable acres in Area B and 30 buildable acres in Areas A & C for any CSF work activity directed to the base.

3.5.3 **Utilities:** Provide an estimate of your installation's capability to expand or procure additional utility services (electric, gas, water). Estimates should be provided in appropriate units -- e.g. KWH of electricity. (BRAC Criteria II)

CONCLUSION:

Water:	10.0 million gallons/day (MG/D) @ 60 % current usage.
Sewage:	5.0 (MG/D) @ 80 % current usage.
Electric:	140 million watts (megawatts) @ 60 % current usage.
Natural Gas:	0.425 million cubic feet/hr (MCFH) @ 80 % usage.
Steam/HTHW:	1.210 million British thermal units/hr (MBTUH) @ 53 % current usage.

Numbers shown above are for a "big picture" look at utility capability and usage for Wright-Patterson AFB. Utilities may be comprised of several separate systems or subsystems that may have

generating or distributing limitations and therefore excess capability of utilities on base may vary with geographical location.

- Local industry provides ad hoc manufacturing support such as heavy metal plating, forging, structural casting, shot perning, metal forming, and additional welding, machining, and PCB fabrication capacity when required.

3.1.1 Geographic/Climatological Features: Describe any geographic/climatological features in and around your activity that are relevant to each CSF. Indicate and justify those that are required versus those that just serve to enhance accomplishing the mission of the activity. For example, clear air at high altitude that increases quality of atmospheric, ground-based laser experiments in support of the weapons CSF. (BRAC Criteria I)

CONCLUSION:

Following information applies to the Advanced Materials and all Air Vehicle - Fixed CSFs. From a geographic perspective, the DMMF is located near a majority of its customers. Close proximity allows the customer to be a part of the Integrated Project Team and facilitates customer interaction and communication. In FY93, sixty-one percent of DMMF direct labor supported projects for ASC organizations located at WPAFB , OH. Of this amount, 33 percent was for ASC SPOs, 19 percent for Wright Laboratory, and 9 percent for the 4950th Test Wing. In FY94 the 4950th Test Wing will complete a move to Edwards AFB, CA, to consolidate operations with the 412th Test Wing.

In addition to being collocated with a majority of its customers, the DMMF is centrally located to support the major AF test centers and ranges: AFFTC, CA; AFDTC, FL; and AEDC, TN.

The DMMF is also located in close proximity to supporting organizations: Wright Laboratory, ASC/EN, and the DMMFs tri-service partners: Naval Air Warfare Center, Aircraft Division, Indianapolis, IN and the US Army Tank and Automotive Research and Development Engineering Center, Warren, MI.

3.1.2 Licenses & permits: Describe and list the licenses or permits (e.g., environmental, safety, etc.) that your activity currently holds and justify why they are required to allow tests, experiments, or other special capabilities at your location for each CSF. For example, permit to store and use high explosives. (BRAC Criteria I)

CONCLUSION:

ASC/AM has industrial facilities which use and store hazardous materials and produce air and water emissions. Water emissions are regulated to comply with the Industrial Waste Water Discharge Administrative Order issued by the City of Dayton, OH. Action must be taken to assure that industrial waste from various manufacturing processes, do not contaminates the Dayton waste water treatment system or surrounding environment.

The following air emission and hazardous waste storage permits apply to the Advanced Materials and all Air Vehicle - Fixed CSFs:

Permit	Description

700178L001	Vapor Degreaser. Open top vapor degreaser used to clean fabricated parts prior to finishing or subsequent fabrication or assembly steps. Clean surfaces are required for paint adhesion.
700178K002	Devilbiess paint spray booth. Facility used to apply paint finishes (top coat and primers) to fabricated materials. Finishes are required to prevent corrosion and provide a serviceable finish.
700178K003	Large paint spray booth. Facility used to apply paint finishes (top coat and primers) to large fabricated parts and assemblies. Finishes are required to prevent corrosion and provide a serviceable finish.
700178P003, 4, and 5	Abrasive cleaning and polishing processes. Processes needed to remove corrosion prior to finishing and to meet surface finish specifications for fabricated parts.
700178P006	Plating and chemical conversion process. Anodize and Alodine finishes are required on some fabricated parts to prevent corrosion and provide a serviceable finish.
B5-013	Storage of 3200 pound per year corrosive and 400 pound per year reactive materials used in the fabrication of Printed Circuit Boards (PCBs).
B5-012	Storage of paint shop waste materials, 450 pounds per year.
B5-086	Accumulation point for ignitable, corrosive, and reactive materials and manufacturing waste materials. Location for waste materials prior to disposal.
B5-011	Storage of 6000 pounds per year corrosive and 8000 pounds per year reactive materials and resultant waste products used in the platting shop.
B5-014	Storage of 64 pounds per year of corrosive materials and waste products used in the composites fabrication area.

3.1.3 Environmental constraints: Describe and list the environmental or land use constraints present at your activity which limit or restrict your current scope for each CSF, i.e., would not allow increased "volume" or "spectrum" for the CSF. Example — Volume: frequency of a type of experiment. Example — Spectrum: Current permit to detonate high explosives will not allow detonation or storage of increased quantity of explosives without legal waiver (state law) or relocation of surrounding (non-govt) buildings. (BRAC Criteria II)

CONCLUSION:

Question 3.1.2 identified several regulated processes with air emissions. WPAFB, OH is located in a nonattainment area for Ozone. Any new or modified sources which emits high levels of volatile organic compounds or nitrogen oxide compounds will have greater restrictions placed on them. This applies to changes in scope of the Advanced Material 1 all Air Vehicle - Fixed CSFs.

SEE PAGE 6A

AIR STAFF CORRECTION WORKSHEET

PURPOSE: To provide corrected answer to **AERONATICAL SYSTEMS CENTER (MOD CENTER), WRIGHT-PATTERSON AFB, OH.**

SOURCE: **'95 BRAC Questionnaire**

CONCLUSION: **Update needed (~~no change~~)** SEE below

MAJCOM (CONCURS)(NONCONCURS): **CONCURS (Provided info VIA questionnaire)**

BASE (CONCURS) (DOES NOT CONCUR): -same-

I certify the above information is accurate and complete to the best of my knowledge and belief, based upon information provided by identified sources.

AIR STAFF REVIEWER: R. McCann (CEVP) **DATE:** 28 JUL 1994

ASC is located within a non-attainment area for ozone. Any new or modified source which emits high levels of volatile organic or nitrogen oxide compounds will have greater restrictions placed upon it.

3.1.4 Special Support Infrastructure: List and describe the importance of any mission related special support infrastructure (e.g. utilities) present at your location for your activity. (BRAC Criteria I)

CONCLUSION:

Airfield. WPAFB, OH has one active airfield with two runways. Runway 05L/23R is 12,600 feet long and 300 feet wide. Runway 05R/23L is 7,000 feet long and 150 feet wide. Both runways are stressed for all aircraft operations. ASC/AM requires the airfield be adjacent to it aircraft modification facilities to receive and release project aircraft. Historically, ASC/AM has modified C-135, C-130, C-141, T-39, T-38, F-4, F-111, and B-52 aircraft, but future projects may be on any aircraft being developed or in the AF inventory. Airfield management and Transient Alert are required for airfield operations. Transient Alert receives, parts, moves, services, and launches aircraft at WPAFB, OH. They provide and maintain Aircraft Ground Equipment (AGE) for ASC/AM.

Contracting and Base Supply System services are required. ASC/AM is a R&D industrial facility and has an organic Logistics Materiel Control Activity (LMCA).

3.1.5. Proximity to Mission-Related organizations: List and describe the importance and impact of not having nearby organizations which facilitate accomplishing or performing your mission -- e.g. operational units, FFRDCs, universities/colleges, other government organizations, and commercial activities. Restrict your response to the top five. Complete the following: (BRAC Criteria I)

CONCLUSION:

Common Support Functions	Name	Type of Organization	Distance Miles	Workyears Performed by Your Activity	Workyears Funded by Your Activity
A/V - F - Str: 12% A/V - F - Avi: 41% A/V - F - Flt: 47%	645 LOG	Transient Alert	1	0	5
"	ASC/WL	AF Laboratory	6	0	3
"	ASC/EN	Eng'g & Tech Mgt	6	79	81
"	AEL & CTAS	A/C Mod Support	10	205	247
A/V - F - Str: 10% A/V - F - Avi: 33% A/V - F - Flt: 37% A/V - F - Pro: 4% Adv Mtrl: 16%	H&W Elec	CNC Equip Repair	0	0	2

Key:
A/V-F-Str: Air Vehicles - Fixed - Structure
A/V-F-Avi: Air Vehicles - Fixed - Avionics
A/V-F-Flt: Air Vehicles - Fixed - Flight Subsystems
A/V-F-Pro: Air Vehicles - Fixed - Propulsion
Adv Mtrl: Advanced Materials

645 LOG/LGMT. Transient Alert supports aircraft operations at WPAFB, OH. They provide towing, jacking, fueling, and launch and recovery support for aircraft being modified by ASC/AM. In addition, they provide and maintain Aircraft Ground Equipment (AGE) used in the aircraft modification process.

Wright Laboratory accomplishes a variety of test and inspection functions for ASC/AM, including Non-Destructive Inspection (NDI), determining material properties, and static testing of prototype structures. In addition, they provide ad hoc technical support for failure analysis, aerodynamic evaluations, acoustic and vibration analysis, and material process development. This work would probably be contracted if WL was not nearby.

ASC/EN provides ad hoc technical and systems support and is the independent engineering review authority for major T-2 aircraft modifications as identified in AFMCR 80-33. Technical support would be contracted if EN were not close by, however they could continue to review major modification designs.

ASC/AM has task order contracts with CTAS and AEL to providing engineering, fabrication, and aircraft modification services. These contracts are used when project requirements can not be met by organic capacity. Both organizations have local technical support offices and ASC/AM work load is a majority of their local business. If the ASC/AM mission were to move, these local offices would probably relocate as well or cease to exist.

H&W Electronics repairs and maintains ASC/AMs 46 Computer Numerical Control (CNC) machine tools. Personnel are assigned at the fabrication facility. Contract value is $155K.

3.2 Personnel:

3.2.1 Total Personnel: What is the total number of government (military and civilian), on-site federally funded research and development center (FFRDC), and on-site system engineering technical assistance (SETA) personnel engaged in science and technology (S&T), engineering development and in-service engineering activities as of end FY93? For individuals that predominantly work in CSFs, involved in more than one CSF, account for those individuals in the CSF that represents the preponderance of their effort. (BRAC Criteria I)

CONCLUSION:

CSF: Air Vehicles - Fixed - Structure

Types of personnel	Number of Personnel			
	Government		On-Site FFRDC	On-Site SETA
	Civilian	Military		
Technical	30	0	0	0
Management (Supv)	4	1	0	0
Other	10	0	0	0

CSF: Air Vehicles - Fixed - Avionics

Types of personnel	Number of Personnel			
	Government		On-Site FFRDC	On-Site SETA
	Civilian	Military		
Technical	104	1	0	0
Management (Supv)	14	3	0	0
Other	36	1	0	0

CSF: Air Vehicles - Fixed - Flight Subsystems

Types of personnel	Number of Personnel			
	Government		On-Site FFRDC	On-Site SETA
	Civilian	Military		
Technical	118	2	0	0
Management (Supv)	16	4	0	0
Other	41	1	0	0

CSF: Air Vehicles - Fixed - Propulsion

Types of personnel	Number of Personnel			
	Government		On-Site FFRDC	On-Site SETA
	Civilian	Military		
Technical	7	0	0	0
Management (Supv)	1	0	0	0
Other	2	0	0	0

CSF: Advance Material

Types of personnel	Number of Personnel			
	Government		On-Site FFRDC	On-Site SETA
	Civilian	Military		
Technical	10	0	0	0
Management (Supv)	1	0	0	0
Other	3	0	0	0

Note: 1. 645 MSC advised us that personnel data for 30 Sep 93 was no longer available because of a computer tape problem. Above data was derived from a PMS report run on 9 May 94 and totals 410 people. Actual Workyears shown in question 2.1 is 445 and is based on a 30 Sep 93 strength report. This is a summary document however, and can not be used to answer questions 3.2.1, 3.2.2, and 3.2.3. Since that date, manning has reduced to the above levels through manpower reduction incentives, RIF, and a freeze on filling vacant positions.

2. Technical includes 208 Wage Grade craftsmen who work in Integrate Project Teams (IPTs) with professional engineers and technicians to design and fabricate R&D equipment and accomplish aircraft modifications.

3. Above numbers include personnel matrixed from the following organizations:

Organization	Number
ASC/EN	85
ASC/PK	1
645 CCSG	4

These personnel have been subtracted from the ASC Acquisition Questionnaire and are not double counted.

3.2.2 Education: What is the number of government personnel actively engaged in S&T, engineering development and in-service engineering activities by highest degree and type of position? Provide the data in the following table: (BRAC Criteria I)

CONCLUSION:

REPLACED by PAGES 10A-10C

Type of Degree/ Diploma	Number of Government Personnel by Type of Position		
	Technical	Management (Supv)	Other
High School or Less	190	24	66
Associates	32	2	14
Bachelor	42	9	12
Masters	8	9	2

7CR
7R

CONTROL NUMBER: LJCSWG-AF 009

PURPOSE: To provide SAF/AQX staff corrected answers to Questions 3.2.2 (Education) and 3.2.3 (Experience) for the Developmental Manufacturing and Modification Facility (DMMF - ASC/AM) Wright-Patterson AFB response to the Laboratory Joint Data Call The response provided in the 8 Aug 94 Revision does not break out either the Education (3.2.2) or Experience (3.2.3) data by Common Support Function (CSF). The DMMF has reported work in five CSFs. The Education and Experience data must be broken out by CSF reported.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

MAJCOM REVIEWER: _____
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF Date:
Manufacturing_Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

For credibility purposes only

Revised 29 Aug 94

INSTALLATION WORKSHEET
DMMF
(Developmental Manufacturing and Modification Facility)
ASC/AM
WPAFB, OH 45433

PURPOSE: To document answer to question: 3.2.2 of the LAB Joint Cross-Service questionnaire.

SOURCE: Ms Doris Barnett, ASC/AM, 787-3751. Personnel Management System (PMS) report for and organization strength as of 9 May 94, and 645 MSC personnel report identifying education level.

METHOD: Data was extracted from above reports. Technical includes personnel which impart technical value to the organizations product, i.e. touch labor. Management is limited to personnel with supervision in their position description. Other includes: personnel who manage the product such as program managers and production controllers; provide supporting service such as reporting or inspection; and administrative and organizational support personnel. Data was compiled on the integrated DMMF workfoce. Division into the shown CSFs was determined by multiplying this integrated view by the specific CSF manning percentages developed from questions 3.2.1 and 3.3.1.1.

CONCLUSION:

Air Vehicles - Fixed - Structure

Type of Degree/ Diploma	Number of Government Personnel by Type of Position		
	Technical	Management (Supv)	Other
High School or Less	20	3	7
Associates	3	0	2
Bachelor	6	1	1
Masters	1	1	0
Doctorate (include Med/Vet/etc.)	0	0	0

Air Vehicles - Fixed - Avionics

Type of Degree/ Diploma	Number of Government Personnel by Type of Position		
	Technical	Management (Supv)	Other
High School or Less	72	8	26
Associates	13	1	5
Bachelor	17	4	5
Masters	3	4	1
Doctorate (include Med/Vet/etc.)	0	0	0

Air Vehicles - Fixed - Flight Subsystems

Type of Degree/ Diploma	Number of Government Personnel by Type of Position		
	Technical	Management (Supv)	Other
High School or Less	83	11	30
Associates	14	1	6
Bachelor	20	4	5
Masters	3	4	1
Doctorate (include Med/Vet/etc.)	0	0	0

Air Vehicles - Fixed - Propulsion

Type of Degree/ Diploma	Number of Government Personnel by Type of Position		
	Technical	Management (Supv)	Other
High School or Less	6	1	1
Associates	1	0	0
Bachelor	0	0	1
Masters	0	0	0
Doctorate (include Med/Vet/etc.)	0	0	0

Advanced Materials

Type of Degree/ Diploma	Number of Government Personnel by Type of Position		
	Technical	Management (Supv)	Other
High School or Less	9	1	2
Associates	1	0	1
Bachelor	0	0	0
Masters	0	0	0
Doctorate (include Med/Vet/etc.)	0	0	0

Note: 1. 645 MSC advised us that personnel data for 30 Sep 93 was no longer available because of a computer tape problem. Above data was derived from a PMS report run on 9 May 94 and totals 410 people. Actual Workyears shown in question 2.1 is 445 and is based on a 30 Sep 93 strength report. This is a summary document however, and can not be used to answer questions 3.2.1, 3.2.2, and 3.2.3. Since that date, manning has reduced to the above levels through manpower reduction incentives, RIF, and a freeze on filling vacant positions.

2. Technical includes 208 Wage Grade craftsmen who work in Integrate Project Teams (IPTs) with professional engineers and technicians to design and fabricate R&D equipment and accomplish aircraft modifications.

3. Above numbers include personnel matrixed from the following organizations:

Organization	Number
ASC/EN	85
ASC/PK	1
645 CCSG	4

These personnel have been subtracted from the ASC Questionnaire and are not double counted.

I Certify that the above information is accurate and complete to the best of my knowledge and belief.

Ms Doris Barnett

Prepared by: Ms Doris Barnett
Personnel Specialist
ASC/AM, WPAFB, OH

Date: 29 Aug 94

I Certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer:

Date:

10C

Revised 29 Aug 94

INSTALLATION WORKSHEET
DMMF
(Developmental Manufacturing and Modification Facility)
ASC/AM
WPAFB, OH 45433

PURPOSE: To document answer to question: 3.2.3 of the LAB Joint Cross-Service questionnaire.

SOURCE: Ms Doris Barnett, ASC/AM, 787-3751. Personnel Management System (PMS) report for and organization strength as of 9 May 94.

METHOD: Data was extracted from above report. Technical includes personnel which impart technical value to the organizations product, ie touch labor. Management is limited to personnel with supervision in their position description. Other includes: personnel who manage the product such as program managers and production controllers; provide supporting service such as reporting or inspection; and administrative and organizational support personnel. Data was compiled on the integrated DMMF workfoce. Division into the shown CSFs was determined by multiplying this integrated view by the specific CSF manning percentages developed from questions 3.2.1 and 3.3.1.1.

CONCLUSION:

Air Vehicle - Fixed - Structures

Type of Position	Years of Government and/or Military Service				
	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Technical	0	12	8	5	5
Management (Supv)	0	0	1	2	2
Total	0	12	9	7	7

Data for "Other" category is as follows:

Type of Position	Years of Government and/or Military Service				
	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Other	0	2	2	3	2

Air Vehicle - Fixed - Avionics

Type of Position	Years of Government and/or Military Service				
	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Technical	1	41	28	17	17
Management (Supv)	0	1	4	5	7
Total	1	42	32	22	24

Data for "Other" category is as follows:

Type of Position	Years of Government and/or Military Service				
	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Other	1	9	9	10	8

Air Vehicle - Fixed - Subsystems

Type of Position	Years of Government and/or Military Service				
	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Technical	1	47	32	20	20
Management (Supv)	0	1	5	6	8
Total	1	48	37	26	29

Data for "Other" category is as follows:

Type of Position	Years of Government and/or Military Service				
	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Other	1	10	10	12	9

Air Vehicle - Fixed - Propulsion

Type of Position	Years of Government and/or Military Service				
	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Technical	0	3	2	1	1
Management (Supv)	0	0	0	0	1
Total	0	3	2	1	2

Data for "Other" category is as follows:

Type of Position	Years of Government and/or Military Service				
	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Other	0	1	0	0	1

Advanced Materials

Type of Position	Years of Government and/or Military Service				
	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Technical	0	4	3	2	2
Management (Supv)	0	0	0	0	1
Total	0	4	3	2	3

Data for "Other" category is as follows:

Type of Position	Years of Government and/or Military Service				
	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Other	0	1	1	1	1

Note: 1. 645 MSC advised us that personnel data for 30 Sep 93 was no longer available because of a computer tape problem. Above data was derived from a PMS report run on 9 May 94 and totals 410 people. Actual Workyears shown in question 2.1 is 445 and is based on a 30 Sep 93 strength report. This is a summary document however, and can not be used to answer questions 3.2.1, 3.2.2, and 3.2.3. Since that date, manning has reduced to the above levels through manpower reduction incentives, RIF, and a freeze on filling vacant positions.

2. Technical includes 208 Wage Grade craftsmen who work in Integrate Project Teams (IPTs) with professional engineers and technicians to design and fabricate R&D equipment and accomplish aircraft modifications.

3. Above numbers include personnel matrixed from the following organizations:

Organization	Number
ASC/EN	85
ASC/PK	1
645 CCSG	4

These personnel have been subtracted from the ASC Questionnaire and are not double counted.

I Certify that the above information is accurate and complete to the best of my knowledge and belief.

Prepared by: Ms Doris Barnett Ms. Doris Barnett Date: 29 Aug 94
Personnel Specialist
ASC/AM, WPAFB, OH

I Certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Barbara K. Morgan Date: 8/29/94
BARBARA K. MORGAN, DPC7, GS-13

11D

30 Sep 93 strength report. This is a summary document however, and can not be used to answer questions 3.2.1, 3.2.2, and 3.2.3. Since that date, manning has reduced to the above levels through manpower reduction incentives, RIF, and a freeze on filling vacant positions.

2. Technical includes 208 Wage Grade craftsmen who work in Integrate Project Teams (IPTs) with professional engineers and technicians to design and fabricate R&D equipment and accomplish aircraft modifications.

3. Above numbers include personnel matrixed from the following organizations:

Organization	Number
ASC/EN	85
ASC/PK	1
645 CCSG	4

These personnel have been subtracted from the ASC Questionnaire and are not double counted.

3.2.4 Accomplishments During FY91-93: For government personnel answer the following questions.

3.2.4.1 How many patents were awarded and patent disclosures (only count disclosures with issued disclosure numbers) were made? (BRAC Criteria I)

CONCLUSION:

CSF	Disclosures	Awarded	Patent Titles (List)
Air Veh- Fixed - All	0	0	None
Advanced Materials	0	0	None
Total	0	0	

3.2.4.2 How many papers were published in peer reviewed journals? (BRAC Criteria I)

CONCLUSION:

CSF	Number Published	Paper Titles (List)
Air Veh- Fixed - All	0	None
Advanced Material	0	None
TOTAL	0	

3.3 Workload

3.3.1 FY93 Workload

3.3.1.1 Work Year and Lifecycle: Identify the number of actual workyears executed for each applicable CSF in FY93 for each of the following: government civilian; military; on-site FFRDCs; and on-site SETAs. (BRAC Criteria I)

CONCLUSION:

CSF: Air Vehicles - Fixed - Structures:

"LAB"	Fiscal Year 1993 Actual			
	Civilian	Military	FFRDC	SETA
Science & Technology	7	0	0	0
Engineering Development	14	0	0	0
In-Service Engineering	26	1	0	0

CSF: Air Vehicles - Fixed - Avionics:

"LAB"	Fiscal Year 1993 Actual			
	Civilian	Military	FFRDC	SETA
Science & Technology	42	2	0	0
Engineering Development	122	3	0	0
In-Service Engineering	0	0	0	0

CSF: Air Vehicles - Fixed - Flight Subsystems:

"LAB"	Fiscal Year 1993 Actual			
	Civilian	Military	FFRDC	SETA
Science & Technology	25	1	0	0
Engineering Development	134	5	0	0
In-Service Engineering	28	1	0	0

CSF: Air Vehicles - Fixed - Propulsion:

"LAB"	Fiscal Year 1993 Actual			
	Civilian	Military	FFRDC	SETA
Science & Technology	14	0	0	0
Engineering Development	0	0	0	0
In-Service Engineering	0	0	0	0

ASC (SPOs and Mod Center)

CONTROL NUMBER: LJCSWG-AF 024

PURPOSE: To provide SAF/AQX staff corrected answers to Question 2.3.1.2 Engineering Development by ACAT of the (see Distribution List) response to the Laboratory Joint Data Call. When reporting ACAT systems your response should be restricted to hardware or software programs/systems which are listed as ACAT Programs in your Program Management Directives (PMDs) or in other Military Departments ACAT listing for FY 1993. In addition, pay particular attention to your responses in the "OTHER" category. These will not be on the MILDEP ACAT listings. You should list the non-ACAT programs you are working on here. Ensure that these are actual Product Programs (i.e. hardware/software systems, vaccines, etc.) Do not state "various". You must list individual programs. Review your response to Question 3.3.1.2 and make sure it complies with the above guidance or correct it to meet the guidance.

METHOD: Comparison of answers to questions PROFESSIONAL JUDGEMENT & TELECON @ SAF/A

CONCLUSION: DATA PREVIOUSLY SUBMITTED COMPLIED WITH ORIGINAL INSTRUCTION THERE NO CORRECTIONS ARE NECESSARY FOR ASC/AM/CYN Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain)

MAJCOM REVIEWER: Joe Bradford 20 SEP 1994
(print name, organization, DSN)
Joe Bradford, GM14, AFMC/XEMP, 787-5591

BASE: Concurs Does not concur (explain)

BASE REVIEWER: E. E. WOZNIAK 645/XPP 787-6291
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

E. E. Wozniak

4QX

** TOTAL PAGE.002 **

PAGE.005

AUG-25-1994 14:46 FROM HQ USAF XOOR TO *74-88861741 P.004/006

7CF
2K

CONTROL NUMBER: LJCSWG-AF 009

PURPOSE: To provide SAF/AQX staff corrected answers to Questions 3.2.2 (Education) and 3.2.3 (Experience) for the Developmental Manufacturing and Modification Facility (DMMF - ASC/AM) Wright-Patterson AFB response to the Laboratory Joint Data Call The response provided in the 8 Aug 94 Revision does not break out either the Education (3.2.2) or Experience (3.2.3) data by Common Support Function (CSF). The DMMF has reported work in five CSFs. The Education and Experience data must be broken out by CSF reported.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concur Does not concur (explain:)

MAJCOM REVIEWER: Barbara K. Morgan
(print name, organization, DSN)
BARBARA K. MORGAN, GS-13, DPCF

BASE: Concur Does not concur (explain:)

Data for questions 3.2.2 and 3.2.3 has been broken down into reported CSFs as requested. Revised Worksheets for these two questions and the conclusion summary document are attached. Enclosed is a disk of the conclusion summary file.

BASE REVIEWER: Ronald Case
RONALD CASE, ASC/AM, 787-3711 29AUG 94
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Ass Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

"LAB" JOINT CROSS-SERVICE GROUP QUESTIONNAIRE

DMMF
(DEVELOPMENTAL MANUFACTURING AND MODIFICATION FACILITY)
ASC/AM, WPAFB, OH 45433

2.1 Workload. Use the following table to describe historic and projected workload at each activity in terms of funding and workyears. Assume previous BRAC closures and realignments are implemented on schedule. Projected funding will be derived from FY95 President's Budget Submission (Then year dollars). Past fiscal year data shall begin with FY86 or at the inception of the activity as it existed on 1 Oct 93. (BRAC Criteria I & IV)

CONCLUSION:

Information Required	Fiscal Years											
	86	87	88	89	90	91	92	93	94	95	96	97
Total Funds Programmed ($M)	N/A [1]	N/A [1]	N/A [1]	N/A [1]	N/A [1]	25.6	28.4	38.8 [2]	30.1	30.1	30.1	30.1
Total Actual Funds ($M)	N/A [1]	N/A [1]	N/A [1]	N/A [1]	N/A [1]	25.8	30.5	31.1				
Programmed[3] Workyears	368	338	329	325	319	331	310	403[4]	351	346	315	298
Actual[5] Workyears	399	415	395	447	451	433	446	445				

Notes:

1. ASC/AM was formed in FY94. Prior to FY94 it was part of the 4950th Test Wing stationed at WPAFB, OH. The Wing has been consolidated with the 412th Test Wing at Edwards AFB, CA. Wing records showing internal distribution of programmed and actual funding are no longer available for FY86 - FY90.

2. This figure reflects a higher projection of personnel to be transferred from the 4950th Test Wing to ASC/AM than was actually approved, and a program change with reduced contract requirements.

3. In FY90, 74 programmed positions were realigned to ASC/EN and matrixed back to ASC/AM. In FY92, 5 additional positions were realigned to ASC/EN and matrixed back. In addition to these positions, 5 645 CCSG positions and 1 from ASC/PK are matrixed to ASC/AM. All ASC/AM positions (UMD and matrix), except for the one ASC/PK position, are MFP 6 and identified by PEC 65807A, I, and R.

4. Some overhire positions were converted to reimbursable authorizations in FY93 and added to the UMD.

5. Actual workyears exceed programmed because overhire authority was approved to meet workload requirements during FY86 - 92.

2.2 Excess "Lab" Capacity -- Measured at the DOD Component Level

CONCLUSION:

Excess Lab Capacity = 153 workyears

Note, the term "Excess Lab Capacity" is a measure of work that could be accommodated by the physical plant only. Utilizing this excess capacity would require additional manpower authorizations and equipment.

3.0 Mission: Describe the major capabilities at your activity contributing to the common support function in bulletized format. Describe any relationship and interconnectivity with other functions (common or otherwise) in support of the overall activity mission.

CONCLUSION:

The DMF is an R&D industrial organization specializing in the design and fabrication of one-of-a-kind, prototype systems and components for the S&T, T&E, acquisition, and support communities. Flexibility and responsiveness are hallmark characteristics of the organization.

A. Mission

- Test & Evaluation support for AF test centers and ranges.
  - Accomplishes T-2 aircraft modifications supporting flight test requirements of aeronautical systems and components.
  - Fabricates unique aircraft support equipment for flight test operations, test articles for ground test, e.g. wind tunnel models, test facility modifications, and test equipment and instrumentation.

- R&D Fabrication and Prototype Support for AF Laboratories, SPOs, and ALCs.

- Demonstration and transfer of emerging technologies to government organizations and the industrial base as part of Defense Conversion efforts.
  - Joint projects with Wright Laboratory, Mantec, and CALS Technical Office
  - Provides hands-on environment for SPO personnel to become familiar with engineering and manufacturing tools and processes used by their contractors.

- Accomplishes small-lot manufacturing and non-R&D aircraft modifications for workload leveling and to support priority mission requirements.

- Accomplishes special interest, high priority AFMC projects for using commands and DoD.
  - "High Gear" programs such as Open Skies aircraft modification.
  - Critical mission requirements, e.g. projects for Desert Shield and Storm

B. Capabilities and Resources

- Air Vehicles - Fixed - Structures, - Avionics, and - Flight Subsystems
  - Engineering and Analysis
    - Design and analysis of aircraft modifications involving primary aircraft structure, electrical and mechanical systems, instrumentation and avionics, external aerodynamics, and stability and control.
    - Design and analysis of aeronautical systems and support equipment.
    - 75 engineers, designers, analysts, draftsman, and manufacturing engineers
    - Advanced design and analysis tools include 64 Computer Aided Engineering (CAE) workstations; NASTRAN analysis program, and a Computation Fluid Dynamics workstation.

  - Aircraft modification
    - 80 aircraft mechanics, electricians, and sheet metal craftsman, program managers, and productions controllers.
    - Craftsman are journeyman level and capable of working from engineering drawings.
    - Three hangars totaling 114,000 sq ft and capable of housing 7 C-135 Aircraft.
    - Sheet metal and electrical cable lay-up shops.
    - Pressure testing of aircraft optical windows .

  - Manufacturing
    - Unique capability because of large number of in-house processes and capabilities.
    - 223,000 sq ft main shop floor with approximately 540 machines and equipment, and 200 craftsman, program managers, and production controllers.
    - 52 Computer Numerical Control (CNC) machine tools and a Distributed Numerical Control (DNC) network.
    - Computerized shop floor control system with bar code data entry provides schedule and status information.
    - 15 process areas including: Electronics (PCB), machining, sheet metal, wood/pattern, composites, vacuum forming, stereolithography, welding, painting, chemical conversion coatings, heat treatment, casting, CNC programming, and quality control measurement laboratory.
    - Unique equipment includes: 3-D Systems Model 500 Stereolithography system; autoclave (8ft dia x 20 ft long, 300 psi, 800F); and a 6-Axis Gantry Vertical Spindle mill.

  - Two dedicated machine shops supports Flight Dynamics directorate of WL.
    - R&D fabrication for Structures, Aeromechanics, and Vehicle Subsystems Divisions.
    - Fabricates test models, facility modifications, and test equipment for wind tunnels, aircraft ground simulators, and actuator and structural test facilities.

  - Support Systems
    - Aircraft configuration and control functions including Configuration Control Board (CCB) process.
    - Quality Assurance program to manage DMMF quality processes including Material Review Boards (MRBs).
    - Program Control provides cost, schedule, and status reporting.
    - Systems Integration branch provides electronic tools and integrated digital work environment.

- Air Vehicles - Fixed - Propulsion
  - Machine Shop supporting Propulsion and Power directorate of Wright Laboratory
  - Eight craftsman and one supervisor
  - Collocated in WL/PO facilities, Building 18
    - Personnel work directly with scientist and engineers to develop test equipment, instrumentation, and facility modifications
  - Equipment includes:
    - Two CNC Mills
    - 6 conventional milling machines
    - 5 lathes
    - Ram Electric Discharge Machine (EDM)
    - Variety of surface grinders, band saws, metal shear, cut-off saw, etc

- Advanced Materials
  - Machine Shop supporting the Material directorate of Wright Laboratory
    - Located within Building 5
    - Dedicated area and equipment
  - Ten craftsmen and one supervisor
  - Works directly with scientist and engineers to cut test specimens of advanced materials and fabricate test equipment and components
  - Equipment includes:
    - 5 Wire EDMs
    - 1 EDM Deep Hole Drill
    - 2 CNC Turning Centers
    - 1 Cavitron (Ultra sonic machining)
    - 1 CNC Mill
    - 6 Conventional milling machines
    - 4 Conventional Lathes
    - 2 Surface Grinders
    - Cut-off saw, band saw, ID / OD grinder, and other miscellaneous equipment

C. Interconnectivity

- 645th Air Base Wing
  - Transient Alert provides Aircraft Ground Equipment (AGE) and aircraft towing support.
  - Precision Equipment Measurement Laboratory for calibration services.
- Wright Laboratory Materials and Flight Dynamics Directorate (WL/ML, WL/FI)
  - Non Destructive Test (NDI) support.
  - Materials and manufacturing process consultation.
  - Mechanical testing of material samples (material / process qualification) and R&D structures.
- Integrated Engineering and Technical Management Directorate (ASC/EN) provides specialized engineering support as well as acting as the independent review authority on major T-2 modifications.
- University of Dayton provides ad hoc analysis support.
- Tri-Service MOA to provide integrated full service support for DMMF customers.
  - Air Warfare Center, Aircraft Division, Indianapolis, IN provides support in the areas of avionics and software integration and electronics design and fabrication.
  - US Army Tank and Automotive Research and Development Engineering Center, Warren, MI, provides simul on analysis.

CSF: Advanced Materials

"LAB"	Fiscal Year 1993 Actual			
	Civilian	Military	FFRDC	SETA
Science & Technology	20	0	0	0
Engineering Development	0	0	0	0
In-Service Engineering	0	0	0	0

3.3.1.2 Engineering Development By ACAT: For each Common Support Function (e.g. airborne C4I) at each activity engaged in engineering development, provide:

CONCLUSION: FY 93 Funds Received/Obligation Authority ($ in 000's)

CSF: Air Vehicle - Fixed - Flight Subsystems

Engineering Development	Name or Number	Workyears (FY93 Actual)	FY93 Funds Received (Obligation Authority)	Narrative
ACAT IC				None
ACAT ID	F-16	48.5	1,913	DMMF provided the design, fabrication, acceptance testing, technical data and logistics support for F-16 Cockpit Familiarization Trainers (CFTs) and Egress Procedures Trainers (EPTs). DMMF also provided the design, fabrication, verification, and installation of NVG-compatible lighting kits. In addition, DMMF supported the F-16 program by fabricating several pieces of support equipment identified on the F-16 Support Equipment Requirements Document (SERDs).

	B-1	12.59	462	DMMF supported the B-1 program by fabricating several pieces of support equipment identified on the B-2 Support Equipment Requirements Document (SERDs).
	B-2	11.2	570	DMMF supported the B-2 program by fabricating several pieces of support equipment identified on the B-2 Support Equipment Requirements Document (SERDs).
	C-17	22.3	760	DMMF support for the C-17 included, engineering and drawing reviews, as well as fabricating several pieces of support equipment identified on the C-17 Support Equipment Requirements Document (SERDs).
ACAT II	F-15	20.1	13,400	DMMF provided the complete design, operational and maintenance tech orders, and fabrication of the F-15E, TFE-23, TFE-24, and TFE-25 Hardware Systems Trainers (HSTs) provideing for more effective training of ground support personnel.
	COMBAT TALON II SUPPORT	2.25	3,408	DMMF provided the complete design, fabrication and installation for an Overboard Exhaust modification to the Combat Talon II Environmental Control System to relieve an over-pressure problem. DMMF also designed and fabricated a special container to transport the Combat Talon II nose radome.
ACAT III/IV	KC-10 LOADER	8.5	338	Purpose of the loader is to enhance the KC-10A's airlift mission by providing an integral loader capability. DMMF designed and fabricated the loader.
Other	11	10.93	674.1	LIST
				C-141 INSTRUMENT UPGRADE
				F-22 SHOP SUPPORT

				NKC-135A TEST BED SUPPORT
				EQUIPMENT REMOVAL ACFT 8050
				PARATROOP RETREVIAL
				TANKER CONVERSION
				IMPROVED REFUEL NOZZLE
				8-LITRE LOX
				CRUISE MISSLE CABLES
				CMMCA FLIGHT TEST
				C-135 TEST BED MOD

CSF: Air Vehicle - Fixed - Structures

Engineering Development	Name or Number	Workyears (FY93 Actual)	FY93 Funds Received (Obligation Authority)	Narrative
ACAT I	C-17	9.76	10	DMMF provide support for the C-17 Live Fire Test (LFT) effort.
Other	3	4.55	295.2	LIST
				SOLL II
				IMPROVED PHOTO WINDOW
				T-39 HATCH WINDOW

CSF: Air Vehicle - Fixed - Avionics

Engineering Development	Name or Number	Workyears (FY93 Actual)	FY93 Funds Received (Obligation Authority)	Narrative

ACAT III/IV	OPEN SKIES	77.24	7,950	DMMF modified a WC-135 aircraft with sensor suite capable of operating and obtaining surveillance information under all weather conditions around the world to meet the IOC requirements of the Open Skies Treaty.
Other	35	48.73	2,957	LIST
				DME/P
				CMLSA
				PORTABLE SIDESLIP GAUGE
				CMMCA
				ATMOSPHERIC DATA COLLECTION
				SLOPE BACK RACK DRAWING
				GPS SUPPORT
				BOEING 720 AIRCRAFT
				ESD SUPPORT
				ARIA:
				OPTICAL WINDOWS
				ARIA RECEIVER MOD
				DUAL INS
				ARIA REPAIR
				ARIA SUPPORT
				SP-25 OPTICS
				GPS RECEIVER
				DSCS 3 UPGRADE
				DECOMM UPGRADE
				SECURE SATCOM
				MULTIPLEXIERS
				RECEIVER COOLING
				RADAR ENHANCEMENT
				SCANNER MOD
				HORN ANTENNA
				EC-18 OPTICS
				EC-18 DOCUMENTATION CLEANUP
				ARIA RECORD TIMING
				'S' BAND MOD
				ADTUMP PROGRAM
				ARIA GENERAL SUPPORT
				INS DATA
				MILSTAR C-135 AERO EVAL
				MILSTAR FSED

				T-39 GPS
				ADVANCED RADAR TEST BED (ARTB)
				C-141 GPS
				GPS RANGE MOD
				PRESSURE VESSLE MOD
				AIRBORNE SIGNAL CONDITIONING
				T-39 TEST BED MOD

3.3.1.3 In-Service Engineering: For each Common Support Function at each activity engaged in in-service engineering, list the in-service engineering efforts, the FY93 funds (from all sources) obligated for these efforts, the FY93 workyears for these efforts, and the weapon system(s) supported by these efforts. In-service engineering consists of all engineering support of fielded and/or out of production systems and includes efforts to improve cost, throughput, and schedule to support customer requirements as well as mods and upgrades for reliability, maintainability, and performance enhancements. (BRAC Criteria I)

CONCLUSION: FY93 DMMF projects on fielded systems. Funds Received/Obligation Authority ($ in 000's)

Common Support Functions	In-Service Engineering Efforts (List)	FY93 Actual		Weapon System(s) Supported
		Funds Received (Obligation Authority)	Workyears	
Air Vehicles - Fixed - Flight Subsystems		1,054	29	
	C-141 Oxygen Pallets	261	5.6	C-141
	F-117 Environmental Covers	639	19.4	F-117
	Floodlight Kit Replacement	67	2.1	KC-135
	F-15 AIM9 Adapters	3	.14	F-15
	Bore Sight Kits	84	1.5	F-16

Common Support Functions	In-Service Engineering Efforts (List)	FY93 Actual		Weapon System(s) Supported
		Funds Received (Obligation Authority)	Workyears	
Air Vehicles - Fixed - Structures		1,065	27	
	PACER Wing	434	13	C-141
	Longerons	346	6	F-5
	CASA 212 Modification	27	.42	CASA 212
	Gorilla Fittings	258	7.6	C-141

Common Support Functions	In-Service Engineering Efforts (List)	FY93 Actual		Weapon System(s) Supported
		Funds Received (Obligation Authority)	Workyears	
Air Vehicles - Fixed - Avionics		15	1	
	GPS Antenna Mount	15	.06	C-141

3.3.2 Projected Funding

3.3.2.1 Direct Funding: For each applicable CSF, identify direct mission funding by appropriation from FY94 to FY97. Use FY95 PBS for FY95-FY97. (BRAC Criteria I)

CONCLUSION: DMMF Direct Funding ($ in 000's)

CSF	Appropriation	FY94	FY95	FY96	FY97
Air Vehicle - Fixed - Structures	3600, PE65807 3600, PE64759 3500, MIL PERS	660 109 41	668 112 42	660 121 43	660 122 44
Air Vehicle - Fixed - Avionics	3600, PE658007 3600, PE64759 3500, MIL PERS	2,280 378 218	2,309 385 222	2,280 418 226	2,280 421 231
Air Vehicle - Fixed- Flt Subsystems	3600, PE65807 3600, PE64759 3500, MIL PERS	2,640 437 260	2,674 446 265	2,640 484 270	2,640 487 274
Air Vehicle - Fixed - Propulsion	3600, PE65807 3600, PE64759 -	180 30 -	182 30 -	180 33 -	180 33 -

Advanced Materials	3600, PE65807 3600, PE64759 -	240 40 -	243 41 -	240 44 -	240 44 -

3.3.2.2 Other Obligation Authority: For each applicable CSF, identify reimbursable and direct-cite funding (other obligation authority expected) from FY94 to FY97. Funding allocation must be traceable to FY95 PBS. (BRAC Criteria I)

CONCLUSION: Reimbursable project funding ($ in 000's)

CSF	FY94	FY95	FY96	FY97
Air Vehicle - Fixed - Structures	2,493	2,475	2,475	2,475
Air Vehicle - Fixed - Avionics	8,611	8,550	8,550	8,550
Air Vehicle - Fixed- Sub Systems	9,970	9,900	9,900	9,900
Air Vehicle - Fixed - Propulsion	680	675	675	675
Advanced Materials	906	900	900	900

3.4 Facilities and Equipment

3.4.1 Major Equipment and Facilities: Describe major facilities and equipment necessary to support each Common Support Function (include SCIFs). If the facilities and equipment are shared with other functions, identify those functions and the percentage of total time used by each of the functions. Provide labeled photographs that picture the breadth and scope of the equipment and facilities described. If it is unique to DOD, to the Federal Government, or to the US, describe why it is unique. Insert the replacement cost. For this exercise, Replacement cost = (Initial cost + capital investment) multiplied by the inflation factor for the original year of construction. (BRAC Criteria II)

CONCLUSION:

Common Support Function	Major Facility or Equipment Description	Unique To			Replacement Cost ($K)
		DOD	Federal Gov't	U. S.	
A/V - F - Str: 7% A/V - F - Avi: 36% A/V - F - Flt: 24% A/V - F - Pro: 5% Adv Mtrl: 28%	6-Axis Mill, gantry type, large bed	Yes[1]	Yes	Yes	1,500

A/V - F - Str: 4% A/V - F - Avi: 16% A/V - F - Flt: 76% Adv Mtrl: 28%	Autoclave, 8'x20' 300 psi, 800F Hi temp,Hi pressure, CNC control	Yes[2]	Yes	No	1,000
A/V - F - Str: 12% A/V - F - Avi: 40% A/V - F - Flt: 46% A/V - F - Pro: 1% Adv Mtrl: 1%	Computer Aided Eng'g 64 Intergraph Stations	No	No	No	8,269
A/V - F - Avi: 47% A/V - F - Flt: 53%	Computational Fluid Dynamics Workstation	No	No	No	110
A/V - F - Str: 11% A/V - F - Avi: 39% A/V - F - Flt: 44% A/V - F - Pro: 3% Adv Mtrl: 3%	Fabrication Facility, Bldg 5, WPAFB, OH	Yes[3]	No	No	50,293[4]
A/V - F - Str: 12% A/V - F - Avi: 41% A/V - F - Flt: 47%	Aircraft Modification Hangars, Bldgs 206 & 152, WPAFB, OH	No	No	No	39,988[5]
A/V - F - Str: 18% A/V - F - Avi: 43% A/V - F - Flt: 36% A/V - F - Pro: 2% Adv Mtrl: 1%	Laser Punching Center	No	No	No	450
A/V - F - Str: 15% A/V - F - Avi: 37% A/V - F - Flt: 11% A/V - F - Pro: 37%	Wire Electrical Discharge Machines, (WEDM) 4 each	No	No	No	530
A/V - F - Str: 49% A/V - F - Avi: 27% A/V - F - Flt: 14% A/V - F - Pro: 7% Adv Mtrl: 3%	Jigmill,4 axis Computer Numerical Control (CNC)	No	No	No	750
A/V - F - Str: 55% A/V - F - Avi: 24% A/V - F - Flt: 21%	Vertical Spindle 4 axis mill (CNC)	No	No	No	900
A/V - F - Avi: 63% A/V - F - Flt: 6% A/V - F - Pro: 13% Adv Mtrl: 18%	Stereolithography Machine	Yes[6]	No	No	800
A/V - F - Str: 31% A/V - F - Avi: 37% A/V - F - Flt: 26% A/V - F - Pro: 6%	Router (CNC) 5 x 12ft bed	No	No	No	450
A/V - F - Str: 12% A/V - F - Avi: 40% A/V - F - Flt: 46% A/V - F - Pro: 1% Adv Mtrl: 1%	Bldg.72 Hazmat Storage Facility	No	No	No	306

A/V - F - Str: 11% A/V - F - Avi: 37% A/V - F - Flt: 42% A/V - F - Pro: 5% Adv Mtrl: 5%	Bldg.448 Cleaning facility	No	No	No	70
A/V - F - Str: 12% A/V - F - Avi: 41% A/V - F - Flt: 47%	Bldg.207 Engineering offices	No	No	No	373
A/V - F - Str: 12% A/V - F - Avi: 41% A/V - F - Flt: 47%	Bldg.115 Storage, area B	No	No	No	350
A/V - F - Str: 12% A/V - F - Avi: 41% A/V - F - Flt: 47%	Bldg.204 Storage, area C	No	No	No	5.8
Advanced Materials	Wire Electrical Discharge Machines, (WEDM) 5 each	No	No	No	1,791[7]

Key:
A/V-F-Str: Air Vehicles - Fixed - Structure
A/V-F-Avi: Air Vehicles - Fixed - Avionics
A/V-F-Flt: Air Vehicles - Fixed - Flight Subsystems
A/V-F-Pro: Air Vehicles - Fixed - Propulsion
Adv Mtrl: Advanced Materials

NOTES:

1. The 6-Axis gantry Mill is one-of-a-kind within the AF and is also unique in the state of Ohio's private sector.

2. The autoclave is unique in the aspect of pressure, temperature, and the computer control system for composite fabrication.

3. The Building 5 manufacturing facility is unique because of the wide variety of fabrication process available under one roof. Capabilities include composites, sheet metal, machine, welding, finishing, casting, electronics, wood working, hydro-forming, stereolithography, and Computer Aided Manufacturing (CAM) programming of CNN machine tools.

4. Building 5 replacement cost includes manufacturing equipment and facility process improvements.

Building	$23,006,823
Equipment	26,734,350
Process	552,035
Total	$50,293,208

5. Buildings 206 & 152 are aircraft modification hangars, replacement cost includes support equipment.

Building	$21,230,342
Equipment	18,757,652
Total	$39,987,994

6. One of two stereolithography systems in AF. Unique because of size capability.

7. Advanced Materials, Zone Shop No. 2, Building 5.
   Equipment: $ 1,790,649
   Zone Shop is internal to Building 5 and its facility and facility process improvement costs are included in that estimate.

3.5 Expansion Potential

3.5.1 Laboratory Facilities: Use facilities records as of fourth-quarter FY93 in answering the following (in sq ft) for each CSF: (BRAC Criteria II)

CONCLUSION:

Common Support Function	Facility or Equipment Description	Type of Space*	Space Capacity (KSF)		
			Current	Used	Excess
A/V - F - Str: 11% A/V - F - Avi: 39% A/V - F - Flt: 44% A/V - F - Pro: 3% Adv Mtrl: 3%	Bldg 5, Fabrication	Technical	215	215	0
Advanced Materials	Bldg 5, Materials Laboratory Support	Technical	8	8	0
A/V - F - Str: 12% A/V - F - Avi: 41% A/V - F - Flt: 47%	Bldg 206, A/C Mod	Technical	174	174	0
A/V - F - Str: 12% A/V - F - Avi: 41% A/V - F - Flt: 47%	Bldg 152, A/C Mod	Technical	32	32	0
A/V - F - Str: 12% A/V - F - Avi: 41% A/V - F - Flt: 47%	Bldg 207, Support Engineering	Administrative	3.6	3.6	0
A/V - F - Str: 12% A/V - F - Avi: 40% A/V - F - Flt: 46% A/V - F - Pro: 1% Adv Mtrl: 1%	Bldg 72, Hazmat	Technical	4	4	0
A/V - F - Str: 11% A/V - F - Avi: 37% A/V - F - Flt: 42% A/V - F - Pro: 5% Adv Mtrl: 5%	Bldg 448, Cleaning	Utility	.6	.6	0

A/V - F - Str: 12% A/V - F - Avi: 41% A/V - F - Flt: 47%	Bldg 115, Area B	Storage	7.7	7.7	0
A/V - F - Str: 12% A/V - F - Avi: 41% A/V - F - Flt: 47%	Bldg 204, Area C	Storage	.1	.1	0
Air Veh - Fix - Propulsion	Bldg 18 Laboratory Support	Technical	5.7	5.7	0
A/V - F - Str: 12% A/V - F - Avi: 41% A/V - F - Flt: 47%	Bldg 145 Laboratory Support	Technical	6.1	6.1	0
A/V - F - Flt	Bldg 24C Laboratory Support	Technical	5	5	0[1]

Key:
A/V-F-Str: Air Vehicles - Fixed - Structure
A/V-F-Avi: Air Vehicles - Fixed - Avionics
A/V-F-Flt: Air Vehicles - Fixed - Flight Subsystems
A/V-F-Pro: Air Vehicles - Fixed - Propulsion
Adv Mtrl: Advanced Materials

Note 1: Building 24C Machine Shop will be closed in FY95 and the workload transferred to the main fabrication shop, Building 5.

3.5.1.1 Describe the capacity of your activity to absorb additional similar workyears categorized in the same common support function with minor facility modification. If major modification is required, describe to what extent the facilities would have to be modified. (Use FY97 workyears as your requirement) (BRAC Criteria III)

CONCLUSION:

ASC/AM workload is currently limited by the number of personnel and not facilities or fabrication equipment. Given additional manning, support to all CSFs currently supported by ASC/AM could be increased by approximately 100 percent. A 50 to 75 percent increase in existing support personnel would be required for this increased workload. Additional office space would be required, but this could probably be supported within existing facilities at Wright Patterson AFB and new construction would not be required. Each functional area is addressed below:

Engineering. Engineering primarily supports the Air Vehicles - Fixed - Structures, Avionics and Flight Subsystems CSFs. Engineering capacity could be increased approximately 20 percent within existing office space. This would require a equivalent increase in Computer Aided Design (CAE) terminals that would cost approximately $500K. The engineering function could be expanded further to support increases in the product areas by reallocating existing office space. A 100 percent increase in capacity would require approximately $3M in addition CAE workstations and other design and analysis tools. The majority of engineering would work on the day shift with liaison support at night.

Fabrication. Fabrication facility would go to a full two shift operation. Above shop floor personnel would increase approximately 50 percent. Some facility modifications would be required and additional storage space needed for project materials and equipment. Fabrication facilities (Buildings 5, 18, and 24C) support all CSFs at supported at ASC/AM.

Aircraft modification. Historically, aircraft modification has been a one shift operation with overtime support as required. Capt Salmans determined that in FY93 hangar space utilization was approximately 50 percent of capacity. In addition, some modifications can be accomplished on the ramp and do not need hangar space. For these reasons, it is felt that aircraft modification capacity could be increased by 100 percent with additional personnel and proportional increases in support from engineering and fabrication. Current hangers are sized for 7 C-135 or 4 C-141 aircraft. Tall tail aircraft such as the C-17 or C-5 cannot be put in the hangars because of limited roof height. A MCP project would be required to modify existing hangars or to build a new hanger to house this class of aircraft. Aircraft modification operations support Air Vehicles - Fixed - Structures, Avionics, and Flight Subsystem CSFs.

3.5.1.2 If there is capacity to absorb additional workyears, how many additional workyears can be supported? (BRAC Criteria III)

CONCLUSION:

Additional Workyear Capability = 272 + .75(138) = 375 Workyears

3.5.1.3 For 3.5.1.1 and 3.5.1.2 (above) describe the impact of military construction programs or other alteration projects programmed in the FY95 PBS. (BRAC Criteria II)

CONCLUSION:

No MCP programs are included in the FY95 PBS. The only facilities alteration program planned is the modification of Building 206 to add an Optical Window facility in FY95. This alteration will be used to store and pressure test optical glass windows used in aircraft modifications. No impact to this project is anticipated as a result of increased workload.

3.5.2 Land Use: Provide number of buildable acres for additional laboratory/administrative support construction at your installation. (BRAC Criteria II)

CONCLUSION:

Number of buildable acres are as follows:

Areas A&C:	30
Area B	70

3.5.3 Utilities: Provide an estimate of your installation's capability to expand or procure additional utility services (electric, gas, water). Estimates should be provided in appropriate units -- e.g. KWH of electricity. (BRAC Criteria II)

CONCLUSION:

Ability to expand utility usage within capacity of existing systems is:

Utility	Available Capacity
Water	~~4 million gal / day~~
Sewage	~~1 million gal / day~~
Electric	~~56 million watts~~
Natural Gas	~~0.09 million cubic ft / hr~~
Steam/HTHW	~~0.57 MBTUH~~

SEE CORRECTIONS DATED 17 Aug 94

Note: Numbers shown above are for a "big picture" look at utility capacity and usage at WPAFB, OH. Utilities may be comprised of several separate systems or sub systems that may have generating or distribution limitations and therefore, excess capacity of utilities on base may vary with geographic location.

DATE: 17 August, 1994

MEMORANDUM FOR RECORD, AF/CEPP

AIR STAFF CORRECTION WORKSHEET

PURPOSE: To provide corrected answer to Question 3.5.3, Utilities, in the Joint Cross Service Data for ASC/AM, Wright-Patterson AFB

SOURCE: Installation worksheets and other Joint data for Wright-Patterson.

METHOD: Comparison of data submitted by Wright Lab, Armstrong Lab and ASC/AM at Wright-Patterson

CONCLUSION: In reviewing the data submitted from these three labs revealed different inputs from each lab for the same question. The data submitted by Wright Lab was correct, the other two were not. Change the data for ASC/AM to the following:

Utility	Existing Data	Change To
Water	4.0 MG/D	6.52 MG/D and 57% usage
Sewage	1.0 MG/D	5.0 MG/D and 80% usage
Electrical	56 MW	140 MWH and 60% usage
Nat Gas	.09 MCF/H	10.2 MCFD and 40% usage
Steam	.57 MBTUH	1.21 MBTUH and 40% usage

MAJCOM CONCURS: N/A.

BASE CONCURS: N/A

I certify that the above information is accurate and complete to the best of my knowledge and belief.

AIR STAFF REVIEWER: Marvin N. Fisher **DATE:** 17 Aug 94

Maj Marvin N. Fisher
AF/CEPP

94-08-31 08:27 RCVD

"LAB" JOINT CROSS-SERVICE GROUP GUIDANCE PACKAGE

Section I: Taskings
1.1 Guidelines
1.2 Standards
1.3 Assumptions
1.4 Measures of Merit
1.5 Activities
1.6 Common Support Functions

Section II: Capacity of DOD Components
2.1 Workload
2.2 Excess Capacity

Section III: Capability of Activities to Perform Common Support Functions
3.0 Mission
3.1 Location
3.2 Personnel
3.3 Workload
3.4 Facilities & Equipment
3.5 Expansion Potential

Section IV: Appendices
A. Macro Process/Schedule
B. List of Activities
C. Common Support Functions

SECTION I: TASKING

In accordance with the Deputy Secretary of Defense memorandum dated 7 Jan 94, the Laboratory Joint Cross-Service Group (LJCSG) with DOD components should, where operationally and cost effective, strive to: retain in only one Service militarily unique capabilities used by two or more Services; consolidate workload across the Service to reduce capacity; and assign operational units from more than one Service to a single base. Specifically, the purpose of the LJCSG is:

- Determine common support functions and bases to be addressed by LJCSG
- Establish guidelines, standards, assumptions, measures of merit, data elements and milestone schedules for DOD Component conduct of cross-service analysis of common support functions
- Review excess capacity analysis
- Develop closure or realignment alternatives
- Analyze cross-service trade-offs

The following information identifies to the Services common support functions and data element requirements necessary to support the cross-service analysis of these common support functions.

1.1 Guidelines

Because the DOD components are organized differently, "Lab" activities are considered to be those involved in the following life cycle efforts: Science and technology, and/or engineering development, and/or in-service engineering.

Service missions and force structure will be as stipulated in the FY1995-2000 Defense Planning Guidance and Interim Force Structure Plan.

The Military Departments will use the projected funding in the FY95 President's Budget Submission (Future Years Defense Plan -- FYDP) and an estimate of funds that will be received from outside the military department for execution.

If "lab" excess capacity exists, the Military Departments will start to reduce it where operationally and cost effective through a combination of downsizing in place within the departments, internal service consolidation, and cross service alternatives.

The Military Departments will gather, exchange, and analyze data collected per this guidance call for Common Support Functions (Appendix C) at "lab" activities (Appendix B) in accordance with the milestones and schedule dates identified in Appendix A.

Cross-service alternatives will result in an aggregate reduction in the overall "lab" infrastructure across the Military Departments -- personnel/funding/facilities and equipment.

Common cross-service Measures of Merit will be consistently applied for all cross-service alternatives.

Integration of weapon systems/components into operational forces will remain with the individual Military Departments responsible for those forces.

1.2 Standards

Evaluation of cross-service alternatives will be consistent with PL 101-510 (as amended) and the eight BRAC criteria. Only certified data will be used.

The COBRA cost model will be used to calculate estimated costs, estimated savings, and Return on Investment (ROI) of alternatives leading to proposed closures and realignments. Common inputs will be used for Military COBRA runs incorporating cross-service alternatives.

Military value analysis will be conducted by the Military Departments IAW Title 10, USC responsibilities.

1.3 Assumptions

"Lab" Common Support Functions and activities identified herein represent the major opportunities for developing cross-service alternatives. The Military Departments are not precluded from proposing other cross-service alternatives to reduce excess capacity as they assess the full complement of "lab" functions.

Previous BRAC decisions will be factored into cross-service alternatives.

"Lab" capacity will be based on budgeted workyears. A workyear is considered to be 2080 hours adjusted for time not on the job (e.g. sick leave, annual leave, etc.)

1.4 Measures of Merit

The following Measures of Merit represent the outcome from the DOD component final realignment and closure recommendations that are supported by the capabilities data which will be gathered by activity and common support function in Section III of this guidance.

- Reduction of "lab" infrastructure

- Return on investment (COBRA)
- Military value (BRAC criteria 1-4) -- the composite assessment of the quality of the remaining "lab" infrastructure

1.5 Activities

The Military Departments will collect capacity data for each "lab" activity identified in Appendix B. The "lab" activities were selected by considering all individual aggregates of personnel and facilities located at one base, under the same commander, performing predominantly science and technology (S&T), engineering development, and/or in-service engineering work. Small subelements of these "lab" activities were included with the activity. Larger subelements were broken out and defined as separate activities. The list of activities was then narrowed down to the list in Appendix B based on a joint Military Department assessment of common support functions with cross-service potential.

1.6 Common Support Functions

The common support functions (CSFs) were selected as shown in Appendix C based on a joint Military Department assessment of commonalty and cross-servicing potential. Common support functions which were already consolidated and being cross serviced were not included.

Common Support Functions are divided into two categories: product and pervasive. Product functions include all S&T, engineering development, and in-service engineering efforts associated with a product from all funding sources. Pervasive functions only include those efforts that are S&T funded, i.e. Technology Base (6.1)/Exploratory Development (6.2)/Advanced Development (6.3).

SECTION II: CAPACITY OF DOD COMPONENTS

2.1 **Workload.** Use the following table to describe historic and projected workload at each activity in terms of funding and workyears. Assume previous BRAC closures and realignments are implemented on schedule. Projected funding will be derived from FY95 President's Budget Submission (Then year dollars). Past fiscal year data shall begin with FY86 or at the inception of the activity as it existed on 1 Oct 93. (BRAC Criteria I & IV)

Information Required	Fiscal Years											
	86	87	88	89	90	91	92	93	94	95	96	97
Total Funds Programmed ($M)						4.6	4.9	3.1	.3	1.7	1.7	1.7
Total Actual Funds ($M)						4.6	4.9	3.1	.3	1.7	1.7	1.7
Programmed Workyears						28	26	19	18	19	19	19
Actual Workyears						27	20	20	19	19	19	19

- Budgeted workyears are the selected indicator of the "lab" infrastructure's capacity at an aggregate level for each Military Department. They include both workyears funded directly by the Military Department and the workyears funded from organizations outside the Military Department.

Workyears = government personnel and on-site FFRDCs and SETAs

2.2 **Excess "Lab" Capacity -- Measured at the DOD Component Level**

- Excess "Lab" Capacity = Sum of the Peak Workyears - Sum of the Projected Workyears
  -- Peak at each activity = Highest value between FY86 (or since inception of organization) and FY93
  -- Projected at each activity = Estimated at FY97

28 - 19 = 9

Note: The relationship between the "Peak Workyear" and the " Projected Workyear" is not an indication of "Excess Capacity", but merely an indication of overall reductions in the OC-ALC, USAF, and DOD resources.

SECTION III: CAPABILITY OF ACTIVITIES TO PERFORM COMMON SUPPORT FUNCTIONS (CSFs): Provide the information described for each common support function listed in Appendix C in which you are actively engaged.

3.0 Mission: Describe the major capabilities at your activity contributing to the common support function in bulletized format. Describe any relationship and interconnectivity with other functions (common or otherwise) in support of the overall activity mission.

- Air Vehicles - Fixed Wing - Structures
- Air Vehicles - Fixed Wing - Propulsion
- Air Vehicles - Fixed Wing - Avionics
- Air Vehicles - Fixed Wing - Flight Subsystems
- Air Vehicles - Weapon System - Cruise Missile

Mission of the above CSFs:

- Manage the ALC Reliability and Maintainability (R&M) Program
- Manage the ALC Product Improvement Program
- Perform reliability cost and performance analyses in support of OC-ALC
- Perform engineering design and analysis for modification of aircraft, missiles, and related systems
- Maintain ALC files of drawings and revisions
- Control ALC engineering drawings
- Manage Productivity Reliability Availability, Maintainability (PRAM) Program

3.1 Location

3.1.1 **Geographic/Climatological Features:** Describe any geographic/climatological features in and around your activity that are relevant to each CSF. Indicate and justify those that are required versus those that just serve to enhance accomplishing the mission of the activity. For example, clear air at high altitude that increases quality of atmospheric, ground-based laser experiments in support of the weapons CSF. (BRAC Criteria I)

There are no distinctive geographical/climatological features for the Common Support Functions for Air Vehicles--Fixed Wing: Structures, Propulsion, Avionics, and Flight Subsystems, or Air Vehicles--Weapon System--Cruise Missiles.

3.1.2 **Licenses & permits:** Describe and list the licenses or permits (e.g., environmental, safety, etc.) that your activity currently holds and justify why they are required to allow tests, experiments, or other special capabilities at your location for each CSF. For example, permit to store and use high explosives. (BRAC Criteria I)

There are no distinctive licenses and permits for the Common Support Functions for the Air Vehicles--Weapon System--Cruise Missiles or Air Vehicles--Fixed Wing: Structures, Propulsion, Avionics, and Flight Subsystems.

3.1.3 **Environmental constraints:** Describe and list the environmental or land use constraints present at your activity which limit or restrict your current scope for each CSF, i.e., would not allow increased "volume" or "spectrum" for the CSF. Example -- Volume: frequency of a type of experiment. Example -- Spectrum: Current permit to detonate high explosives will not allow detonation or storage of increased quantity of explosives without legal waiver (state law) or relocation of surrounding (non-govt) buildings. (BRAC Criteria II)

There are no distinctive environmental constraints for the Common Support Functions for the Air Vehicles--Weapon System--Cruise Missiles or Air Vehicles--Fixed Wing: Structures, Propulsion, Avionics, and Flight Subsystems.

3.1.4 **Special Support Infrastructure:** List and describe the importance of any mission related special support infrastructure (e.g. utilities) present at your location for your activity. (BRAC Criteria I)

There is no distinctive Special Support Infrastructure for the Common Support Functions for the Air Vehicles--Weapon System--Cruise Missiles or Air Vehicles--Fixed Wing: Structures, Propulsion, Avionics, and Flight Subsystems.

3.1.5. **Proximity to Mission-Related organizations:** List and describe the importance and impact of not having nearby organizations which facilitate accomplishing or performing your mission -- e.g. operational units, FFRDCs, universities/colleges, other government organizations, and commercial activities. Restrict your response to the top five. Complete the following: (BRAC Criteria I)

*					

* There are no distinctive Proximity to Mission-Related Organizations for the Common Support Functions for the Air Vehicles--Weapon System--Cruise Missiles or Air Vehicles--Fixed Wing: Structures, Propulsion, Avionics, and Flight Subsystems.

3.2 Personnel:

3.2.1 **Total Personnel:** What is the total number of government (military and civilian), on-site federally funded research and development center (FFRDC), and on-site system engineering technical assistance (SETA) personnel engaged in science and technology (S&T), engineering development and in-service engineering activities as of end FY93? For individuals that predominantly work in CSFs, involved in more than one CSF, account for those individuals in the CSF that represents the preponderance of their effort. (BRAC Criteria I)

REPLACED by 8A-8D

Types of personnel	Number of Personnel			
	Government		On-Site FFRDC	On-Site SETA
	Civilian	**Military**		
Technical	13	3	0	0
Management (Supv)	3	0	0	0
Other	0	0	0	0

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.2.1 of the OC-ALC response to the LJCSG guidance package. The 10 Aug 1994 version did not provide data at the lowest level CSF per the instruction.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

Thomas L. Koepnick

MAJCOM REVIEWER: THOMAS L. KOEPNICK AFMC/XPX 787-2621
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

3.2.1 was broken down by lowest CSF and faxed to HQ AFMC/XPX 28 Jul 94. Attached are copies of those worksheets.

BASE REVIEWER: MARILYN BAGGETT, OC-ALC/FMPPM, 339-5195
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

CONTROL NUMBER: LJCSWG-AF 008

PURPOSE: To provide SAF/AQX staff corrected answers to Question 3.2.1 OC-ALC response to Request For Clarification (RFC) dated 15 August 94. Response to RFC provided CSF breakout as requested except it appears the table for Air Vehicle-Fixed-Avionics was inadvertently left out. Please send the question 3.2.1 table for Air Vehicle-Fixed-Avionics.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

MAJCOM REVIEWER: _____
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF Date:
Manufacturing_Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

For readability purposes only

AQX-

94-09-08 14:1

008

CONTROL NUMBER: LJCSWG-AF 008

3.2.1

PURPOSE: To provide SAF/AQX staff corrected answers to Question 3.2.1 OC-ALC response to Request For Clarification (RFC) dated 15 August 94. Response to RFC provided CSF breakout as requested except it appears the table for Air Vehicle-Fixed-Avionics was inadvertently left out. Please send the question 3.2.1 table for Air Vehicle-Fixed-Avionics.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: (Concurs) Does not concur (explain:)

SEE ATTACHED

Thomas L. Koepick

MAJCOM REVIEWER: THOMAS L. KOEPNICK HQ AFMC/XPX
(print name, organization, DSN) DSN 787-2622

BASE: (Concurs) Does not concur (explain:)

"Fixed Wing" has been added to the attached worksheets.
AVIONICS

BASE REVIEWER: MARILYN BAGGETT, OC-ALC/FMPPM, DSN 339-5195
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

Item 3

3.2 Personnel:

3.2.1 Total Personnel: What is the total number of government (military and civilian), on-site federally funded research and development center (FFRDC), and on-site system engineering technical assistance (SETA) personnel engaged in science and technology (S&T), engineering development and in-service engineering activities as of end FY93? For individuals that predominantly work in CSFs, involved in more than one CSF, account for those individuals in the CSF that represents the preponderance of their effort. (BRAC Criteria I)

Common Support functions: Air Vehicles - Fixed Wing - Structures:

NUMBER OF PERSONNEL

Types of personnel	Government		On-Site FFRDC	On-Site SETA
	Civilian	Military		
Technical	7	1	0	0
Management (Supv)	1	0	0	0
Other	0	0	0	0

Common Support functions: Air Vehicles - Fixed Wing - Propulsion:

NUMBER OF PERSONNEL

Types of personnel	Government		On-Site FFRDC	On-Site SETA
	Civilian	Military		
Technical	1	0	0	0
Management (Supv)	0	0	0	0
Other	0	0	0	0

Common Support functions: Air Vehicles - Fixed Wing - Avionics:

NUMBER OF PERSONNEL

Types of personnel	Government		On-Site FFRDC	On-Site SETA
	Civilian	Military		
Technical	2	1	0	0
Management (Supv)	1	0	0	0
Other	0	0	0	0

Common Support functions: Air Vehicles - Fixed Wing - Flight Susbsystems:

NUMBER OF PERSONNEL

Types of personnel	Government		On-Site FFRDC	On-Site SETA
	Civilian	Military		
Technical	2	1	0	0
Management (Supv)	1	0	0	0
Other	0	0	0	0

Common Support functions: Weapons System - Cruise Missile:

NUMBER OF PERSONNEL

Types of personnel	Government		On-Site FFRDC	On-Site SETA
	Civilian	Military		
Technical	1	0	0	0
Management (Supv)	0	0	0	0
Other	0	0	0	0

3.2.2 **Education:** What is the number of government personnel actively engaged in S&T, engineering development and in-service engineering activities by highest degree and type of position? Provide the data in the following table: (BRAC Criteria I)

Common Support Function: Weapon System - Cruise Missile

Type of Degree/ Diploma	Number of Government Personnel by Type of Position		
	Technical	Management (Supv)	Other
High School or Less	0	0	0
Associates	0	0	0
Bachelor	1	0	0
Masters	0	0	0
Doctorate (include Med/Vet/etc.)	0	0	0

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.2.2 of the OC-ALC response to the LJCSG guidance package. The 10 Aug 1994 version did not provide data at the lowest level CSF per instruction.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

MAJCOM REVIEWER: _____
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.2.2 of the OC-ALC response to the LJCSG guidance package. The 10 Aug 1994 version did not provide data at the lowest level CSF per instruction.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

Thom L. Koepnick

MAJCOM REVIEWER: THOMAS KOEPNICK AFMC/XPX 787-2622
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

3.2.2 was broken down by lowest CSF and faxed to HQ AFMC/XPX 28 Jul 94. Attached are copies of those worksheets.

BASE REVIEWER: MARILYN BAGGETT, OC ALC/FMPPM, 339-5195
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

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JOINT CROSS SERVICE GROUP (JCSG) LABS

DATA CALL

CERTIFICATION WORKSHEET

INSTALLATION: Tinker Air Force Base Oklahoma

PURPOSE: To document answer to Question Number 3.2.2

SOURCE: James R. Lee, OC-ALC/TIET, DSN 336-3040, Personnal Data - Desire List (PA) of 10 May 94

METHOD: Review with OC-ALC/MO (Manpower Office)

CONCLUSION: Common Support Function: Weapon System - Cruise Missile

NUMBER OF GOVERNMENT PERSONNEL BY TYPE OF POSITION

Type of Degree/Diploma	Technical	Management (Supv)	Other
High School or Less	0	0	0
Associates	0	0	0
Bachelor	1	0	0
Masters	0	0	0
Doctorate	0	0	0

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: James R. Lee Date: 26 July 94
JAMES R. LEE, Chief
Technology Insertion Branch
Scientific & Technical Div/TI

Reviewer: [illegible] Date: 28 JUL 1994
(FMP Representative)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Thomas L. Koepnick Date: 14 Aug 94
THOMAS KOEPNICK AFMC/XPX 787-2622

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JOINT CROSS SERVICE GROUP (JCSG) LABS

DATA CALL

CERTIFICATION WORKSHEET

INSTALLATION: Tinker Air Force Base Oklahoma

PURPOSE: To document answer to Question Number 3.2.2

SOURCE: James R. Lee, OC-ALC/TIET, DSN 336-3040, Personnal Data - Desire List (PA) of 10 May 94

METHOD: Review with OC-ALC/MO (Manpower Office)

CONCLUSION: Common Support Function: Air Vehicles - Flight Subsystems

NUMBER OF GOVERNMENT PERSONNEL BY TYPE OF POSITION

Type of Degree/Diploma	Technical	Management (Supv)	Other
High School or Less	0	0	0
Associates	0	0	0
Bachelor	3	1	0
Masters	0	0	0
Doctorate	0	0	0

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: James R. Lee Date: 26 July 94
JAMES R. LEE, Chief
Technology Insertion Branch
Scientific & Technical Div/TI

Reviewer: Date: 28 JUL 1994
(FMP Representative)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Thom L. Koepnick Date: 14 Aug 94
THOMAS KOEPNICK AFMC/XPX 787-2622

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DATA CALL

CERTIFICATION WORKSHEET

INSTALLATION: Tinker Air Force Base Oklahoma

PURPOSE: To document answer to Question Number 3.2.2

SOURCE: James R. Lee, OC-ALC/TIET, DSN 336-3040, Personnal Data - Desire List (PA) of 10 May 94

METHOD: Review with OC-ALC/MO (Manpower Office)

CONCLUSION: Common Support Function: Air Vehicles - Propulsion

NUMBER OF GOVERNMENT PERSONNEL BY TYPE OF POSITION

Type of Degree/Diploma	Technical	Management (Supv)	Other
High School or Less	0	0	0
Associates	0	0	0
Bachelor	1	0	0
Masters	0	0	0
Doctorate	0	0	0

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: James R. Lee Date: 26 July 94
JAMES R. LEE, Chief
Technology Insertion Branch
Scientific & Technical Div/TI

Reviewer: [signature] Date: 28 JUL 1994
(FMP Representative)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Thomas L. Koepnick Date: 14 Aug 94
THOMAS KOEPNICK AFMC/XPX 787-2622

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DATA CALL

CERTIFICATION WORKSHEET

INSTALLATION: Tinker Air Force Base Oklahoma

PURPOSE: To document answer to Question Number 3.2.2

SOURCE: James R. Lee, OC-ALC/TIET, DSN 336-3040, Personnal Data - Desire List (PA) of 10 May 94

METHOD: Review with OC-ALC/MO (Manpower Office)

CONCLUSION: Common Support Function: Air Vehicles - Avionics

NUMBER OF GOVERNMENT PERSONNEL BY TYPE OF POSITION

Type of Degree/Diploma	Technical	Management (Supv)	Other
High School or Less	0	0	0
Associates	0	0	0
Bachelor	2	1	0
Masters	1	0	0
Doctorate	0	0	0

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: James R. Lee Date: 26 July 94
JAMES R. LEE, Chief
Technology Insertion Branch
Scientific & Technical Div/TI

Reviewer: [illegible] Date: 28 JUL 1994
(FMP Representative)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Thomas L. Koepnick Date: 14 Aug 94
THOMAS KOEPNICK AFMC/XPX 787-2622

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DATA CALL

CERTIFICATION WORKSHEET

INSTALLATION: Tinker Air Force Base Oklahoma

PURPOSE: To document answer to Question Number 3.2.2

SOURCE: James R. Lee, OC-ALC/TIET, DSN 336-3040, Personnal Data - Desire List (PA) of 10 May 94

METHOD: Review with OC-ALC/MO (Manpower Office)

CONCLUSION: Common Support Function: Air Vehicles - Structures

NUMBER OF GOVERNMENT PERSONNEL BY TYPE OF POSITION

Type of Degree/Diploma	Technical	Management (Supv)	Other
High School or Less	0	0	0
Associates	0	0	0
Bachelor	6	0	0
Masters	2	1	0
Doctorate	0	0	0

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: James R. Lee Date: 26 July 94
JAMES R. LEE, Chief
Technology Insertion Branch
Scientific & Technical Div/TI

Reviewer: [illegible] Date: 28 JUL 1994
(FMP Representative)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Thomas L. Koppnick Date: 14 Aug 94
THOMAS KOPPNICK AFMC/XPX 787-2622

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PURPOSE: To provide SAF/AQX staff corrected answers to question 3.2.3 of the OC-ALC response to the LJCSG guidance package. The 10 Aug 1994 version did not provide data at the lowest level CSF per the instructions.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

MAJCOM REVIEWER: _____
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSEN, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.2.3 of the OC-ALC response to the LJCSG guidance package. The 10-Aug 1994 version did not provide data at the lowest level CSF per the instructions.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

Thomas L. Koeprick

MAJCOM REVIEWER: THOMAS L. KOEPRICK AFMC/XPX 787-3621
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

3.2.3 was broken down by CSF and faxed to HQ AFMC/XPX 28 Jul 94. Attached are copies of those worksheets.

BASE REVIEWER: MARILYN BAGGETT OC-ALC/FMPPM
(print name, organization, DSN) 339-5795

I certify the information above is accurate and complete to the best of my knowledge and belief

CHARLES R. HANSON, Lt Col USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

dlg

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CERTIFICATION WORKSHEET

INSTALLATION: Tinker Air Force Base Oklahoma

PURPOSE: To document answer to Question Number 3.2.3

SOURCE: James R. Lee, OC-ALC/TIET, DSN 336-3040, Personal Data - Desire List (PA) of 10 May 94

METHOD: Review with OC-ALC/MO (Manpower Office)

CONCLUSION: Common Support Function: Air Vehicles - Structures

YEARS OF GOVERNMENT AND/OR MILITARY SERVICE

Type of Position	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Technical	1	0	1	2	4
Management (supv)	0	0	0	0	1
TOTAL	1	0	1	2	5

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: James R. Lee Date: 26 July 94
JAMES R. LEE, Chief
Technology Insertion Branch
Scientific & Technical Div/TI

Reviewer: [illegible] Date: 28 JUL 1994
(FMP Representative)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Thomas L. Koepnick Date: 14 Aug 94
THOMAS L. KOEPNICK AFMC/XPX 787-2622

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DATA CALL

CERTIFICATION WORKSHEET

INSTALLATION: Tinker Air Force Base Oklahoma

PURPOSE: To document answer to Question Number 3.2.3

SOURCE: James R. Lee, OC-ALC/TIET, DSN 336-3040, Personal Data - Desire List (PA) of 10 May 94

METHOD: Review with OC-ALC/MO (Manpower Office)

CONCLUSION: Common Support Function: Air Vehicles - Avionics

YEARS OF GOVERNMENT AND/OR MILITARY SERVICE

Type of Position	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Technical	1	0	1	0	1
Management (supv)	0	0	0	1	0
TOTAL	1	0	1	1	1

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: _____ Date: 26 July 94
JAMES R. LEE, Chief
Technology Insertion Branch
Scientific & Technical Div/TI

Reviewer: _____ Date: 28 JUL 1994
(FMP Representative)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: _____ Date - 14 Aug 94
THOMAS L. KOEPACK AFMC/XPX 787-2622

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DATA CALL

CERTIFICATION WORKSHEET

INSTALLATION: Tinker Air Force Base Oklahoma

PURPOSE: To document answer to Question Number 3.2.3

SOURCE: James R. Lee, OC-ALC/TIET, DSN 336-3040, Personal Data - Desire List (PA) of 10 May 94

METHOD: Review with OC-ALC/MO (Manpower Office)

CONCLUSION: Common Support Function: Air Vehicles - Propulsion

YEARS OF GOVERNMENT AND/OR MILITARY SERVICE

Type of Position	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Technical	0	0	1	0	0
Management (supv)	0	0	0	0	0
TOTAL	0	0	1	0	0

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: James R. Lee Date: 26 July 94
JAMES R. LEE, Chief
Technology Insertion Branch
Scientific & Technical Div/TI

Reviewer: [illegible] Date: 28 JUL 1994
(FMP Representative)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Thomas L. Koepnick Date: 14 Aug 94
THOMAS KOEPNICK AFMC/XPX 787-2622

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CERTIFICATION WORKSHEET

INSTALLATION: Tinker Air Force Base Oklahoma

PURPOSE: To document answer to Question Number 3.2.3

SOURCE: James R. Lee, OC-ALC/TIET, DSN 336-3040, Personal Data - Desire List (PA) of 10 May 94

METHOD: Review with OC-ALC/MO (Manpower Office)

CONCLUSION: Common Support Function: Air Vehicles - Subsystems

YEARS OF GOVERNMENT AND/OR MILITARY SERVICE

Type of Position	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Technical	0	3	0	0	0
Management (supv)	0	0	0	1	0
TOTAL	0	3	0	1	0

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: James R. Lee Date: 26 July 94
JAMES R. LEE, Chief
Technology Insertion Branch
Scientific & Technical Div/TI

Reviewer: [illegible] Date: 28 JUL 1994
(FMP Representative)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Thomas L. Koepnick Date: 14 Aug 94
THOMAS KOEPNICK AFMC/XPX 787-2622

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DATA CALL

CERTIFICATION WORKSHEET

INSTALLATION: Tinker Air Force Base Oklahoma

PURPOSE: To document answer to Question Number 3.2.3

SOURCE: James R. Lee, OC-ALC/TIET, DSN 336-3040, Personal Data - Desire List (PA) of 10 May 94

METHOD: Review with OC-ALC/MO (Manpower Office)

CONCLUSION: Common Support Function: Weapon Systems - Cruise Missile

YEARS OF GOVERNMENT AND/OR MILITARY SERVICE

Type of Position	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Technical	0	1	0	0	0
Management (supv)	0	0	0	0	0
TOTAL	0	1	0	0	0

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: _____ Date: 26 July 94
JAMES R. LEE, Chief
Technology Insertion Branch
Scientific & Technical Div/TI

Reviewer: _____ Date: 28 JUL 1994
(FMP Representative)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: _____ Date: 14 Aug 94
THOMAS KOERNICK AFMC/XPX 787-2622

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3.2.4 **Accomplishments During FY91-93:** For government personnel answer the following questions.

3.2.4.1 How many patents were awarded and patent disclosures (only count disclosures with issued disclosure numbers) were made? (BRAC Criteria I)

CSF	Disclosures	Awarded	Patent Titles (List)
None			
Total			

3.2.4.2 How many papers were published in peer reviewed journals? (BRAC Criteria I)

CSF	Number Published	Paper Titles (List)
All CSFs listed in 3.0	**1**	The DRAIR Advisor: A Knowledge-Based System for Materiel Deficiency Analysis by Jerry Ferguson
All CSFs listed in 3.0	**1**	An Introduction to the S_Spin Hash Function: Making More Out of the Multidimensional Array by Ty Coburn
TOTAL	**2**	

3.3 Workload

3.3.1 **FY93 Workload**

3.3.1.1 **Work Year and Lifecycle:** Identify the number of actual workyears executed for each applicable CSF in FY93 for each of the following: government civilian; military; on-site FFRDCs; and on-site SETAs. (BRAC Criteria I)

"LAB"	Fiscal Year 1993 Actual

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.3.1.1 of the OC-ALC response to the LJCSG guidance package. The 10 Aug 1994 response did not provide data at the lowest level CSF per the instructions.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

MAJCOM REVIEWER: _____
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.3.1.1 of the OC-ALC response to the LJCSG guidance package. The 10 Aug 1994 response did not provide data at the lowest level CSF per the instructions.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

Thomas L. Koepnick

MAJCOM REVIEWER: THOMAS KOEPNICK AFMC/XPX 787-2622
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

3.3.1.1 was broken down by lowest CSF and faxed to HQ AFMC/XPX 28 Jul 94. Attached are copies of those worksheets.

BASE REVIEWER: MARILYN BAGGETT OC-ALC/FMPPM 339-5195
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

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CERTIFICATION WORKSHEET

INSTALLATION: Tinker Air Force Base Oklahoma

PURPOSE: To document answer to Question Number 3.3.1.1

SOURCE: James R. Lee, OC-ALC/TIET, DSN 336-3040, Extended Unit Manpower Document (UMD) 1993

METHOD: Review with OC-ALC/MO (Manpower Office)

CONCLUSION: Common Support Function: Air Vehicle - Structures

"LAB"	FISCAL YEAR 1993 ACTUAL			
	CIV	MIL	FFRDC	SETA
Science & Technology	0	0	0	0
Engineering Development	0	0	0	0
In-Service Engineering	8	1	0	0

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: _____ Date: 26 July 94
JAMES R. LEE, Chief
Technology Insertion Branch
Scientific & Technical Div/TI

Reviewer: _____ Date: 28 JUL 1994
(FMP Representative)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: _____ Date: 14 Aug 94
THOMAS L. KOEPNICK AFMC/XPX 787-2622

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CERTIFICATION WORKSHEET

INSTALLATION: Tinker Air Force Base Oklahoma

PURPOSE: To document answer to Question Number 3.3.1.1

SOURCE: James R. Lee, OC-ALC/TIET, DSN 336-3040, Extended Unit Manpower Document (UMD) 1993

METHOD: Review with OC-ALC/MO (Manpower Office)

CONCLUSION: Common Support Function: Air Vehicle - Avionics

"LAB"	FISCAL YEAR 1993 ACTUAL			
	CIV	MIL	FFRDC	SETA
Science & Technology	0	0	0	0
Engineering Development	0	0	0	0
In-Service Engineering	3	1	0	0

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: James R. Lee Date: 26 July 94
JAMES R. LEE, Chief
Technology Insertion Branch
Scientific & Technical Div/TI

Reviewer: [illegible] Date: 28 JUL 1994
(FMP Representative)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Thomas L. Koppick Date: 14 Aug 94
THOMAS L. KOPPICK AFMC/XPX 787-2622

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DATA CALL

CERTIFICATION WORKSHEET

INSTALLATION: Tinker Air Force Base Oklahoma

PURPOSE: To document answer to Question Number 3.3.1.1

SOURCE: James R. Lee, OC-ALC/TIET, DSN 336-3040, Extended Unit Manpower Document (UMD) 1993

METHOD: Review with OC-ALC/MO (Manpower Office)

CONCLUSION: Common Support Function: Air Vehicle - Propulsion

"LAB"	FISCAL YEAR 1993 ACTUAL			
	CIV	MIL	FFRDC	SETA
Science & Technology	0	0	0	0
Engineering Development	0	0	0	0
In-Service Engineering	1	0	0	0

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: James R. Lee Date: 26 July 94
JAMES R. LEE, Chief
Technology Insertion Branch
Scientific & Technical Div/TI

Reviewer: [illegible] Date: 28 JUL 1994
(FMP Representative)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Thomas L. Kogai Date: 14 Aug 94
THOMAS L. KOGANICK AFMC/XPX 787-2622

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CERTIFICATION WORKSHEET

INSTALLATION: Tinker Air Force Base Oklahoma

PURPOSE: To document answer to Question Number 3.3.1.1

SOURCE: James R. Lee, OC-ALC/TIET, DSN 336-3040, Extended Unit Manpower Document (UMD) 1993

METHOD: Review with OC-ALC/MO (Manpower Office)

CONCLUSION: Common Support Function: Air Vehicle - Subsystems

"LAB"	FISCAL YEAR 1993 ACTUAL			
	CIV	MIL	FFRDC	SETA
Science & Technology	0	0	0	0
Engineering Development	0	0	0	0
In-Service Engineering	3	1	0	0

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: _____ Date: 26 July 94
JAMES R. LEE, Chief
Technology Insertion Branch
Scientific & Technical Div/TI

Reviewer: _____ Date: 28 JUL 1994
(FMP Representative)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: _____ Date: 14 Aug 94
THOMAS L. KOEPMOK AFMC/XPX 787-2622

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DATA CALL

CERTIFICATION WORKSHEET

INSTALLATION: Tinker Air Force Base Oklahoma

PURPOSE: To document answer to Question Number 3.3.1.1

SOURCE: James R. Lee, OC-ALC/TIET, DSN 336-3040, Extended Unit Manpower Document (UMD) 1993

METHOD: Review with OC-ALC/MO (Manpower Office)

CONCLUSION: Common Support Function: Weapon Systems - Cruise Missile

"LAB"	FISCAL YEAR 1993 ACTUAL			
	CIV	MIL	FFRDC	SETA
Science & Technology	0	0	0	0
Engineering Development	0	0	0	0
In-Service Engineering	1	0	0	0

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: James R. Lee Date: 26 July 94
JAMES R. LEE, Chief
Technology Insertion Branch
Scientific & Technical Div/TI

Reviewer: [signature] Date: 28 JUL 1994
(FMP Representative)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Thomas L. Koepack Date: 14 Aug 94
THOMAS L. KOEPPACK AFMC/XPX 787-2622

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Replaced by Pages 11A-11E

	Civilian	Military	FFRDC	SETA
Science & Technology	0	0	0	0
Engineering Development	0	0	0	0
In-Service Engineering	16	3	0	0

3.3.1.2 **Engineering Development By ACAT:** For each Common Support Function (e.g. airborne C4I) at each activity engaged in engineering development, provide:

- For each ACAT IC, ID, and II program (as defined in DODI 5000.2):
  - The name of the program
  - A brief program description
- For each ACAT III and IV programs:
  - The number of such programs
  - A list of program names
- For each program not an ACAT I, II, III, IV:
  - The number of such programs
  - A list of program names
- For the purpose of this question, any program between Milestone I and IV and containing demonstration and validation (Dem/Val 6.4)/Engineering and Manufacturing Development (EMD 6.5) funds in the FY95 PBS is considered to be engaged in engineering development (BRAC Criteria I).

Engineering Development	Name or Number	Workyears (FY93 Actual)	FY93 Funds Received (Obligation Authority)	Narrative
ACAT IC	*			(Description)
ACAT ID	(Name)			(Description)
ACAT II	(Name)			(Description)
ACAT III/IV	(Number)			(List)
Other	(Number)			(List)

* There are no Engineering Developments for the Common Support Functions for the Air Vehicles--Fixed Wing: Structures, Propulsion, Avionics, and Flight Subsystems or Air Vehicles--Weapon System--Cruise Missile.

3.3.1.3 **In-Service Engineering:** For each Common Support Function at each activity engaged in in-service engineering, list the in-service engineering efforts, the FY93 funds (from all sources) obligated for these efforts, the FY93 workyears for these efforts, and the weapon system(s) supported by these efforts. In-service engineering consists of all engineering support of fielded and/or out of production systems and includes efforts to improve cost, throughput, and schedule to support customer requirements as well as mods and upgrades for reliability, maintainability, and performance enhancements. (BRAC Criteria I)

REPLACED by PAGES 12A & 12B

Common Support Functions	In-Service Engineering Efforts (List)	FY93 Actual		Weapon System(s) Supported
		Funds Received (Obligation Authority)	Workyears	
A/C Fixed Wing - Structure - Propulsion - Avionics - Flight Subsystem Weapons	See mission in 3.0	None	29	B1, B2, B52, C-135, E3

3.3.2 **Projected Funding**

REPLACED by PAGES 12E & 12F

3.3.2.1 **Direct Funding:** For each applicable CSF, identify direct mission funding by appropriation from FY94 to FY97. Use FY95 PBS for FY95-FY97. (BRAC Criteria I)

CSF	FY94	FY95	FY96	FY97
As in 3.0	250,000	1,700,000	1,700,000	1,700,000

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.3.1.3 In-Service Engineering of the OC-ALC response to the LJCSG guidance package. The 10 Aug 1994 response did not provide data at the lowest level CSF per the instructions.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

MAJCOM REVIEWER: _____
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF Date:
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.3.1.3 In-Service Engineering of the OC-ALC response to the LJCSG guidance package. The 10 Aug 1994 response did not provide data at the lowest level CSF per the instructions.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

Thom L. Koegnick

MAJCOM REVIEWER: THOMAS KOEGNICK AFMC/XPX 787-2621
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

3.3.1.3 was broken down by lowest CSF and faxed to HQ AFMC/XPX 28 Jul 94. Attached are copies of those worksheets.

BASE REVIEWER: MARILYN BAGGETT, OC-ALC/FMPPM
(print name, organization, DSN) 339-5195

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

dmo

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DATA CALL

CERTIFICATION WORKSHEET

INSTALLATION: Tinker Air Force Base Oklahoma

PURPOSE: To document answer to Question Number 3.3.1.3

SOURCE: James R. Lee, OC-ALC/TIET, DSN 336-3040

METHOD: Review work records with OC-ALC Product Directorates and OC-ALC/MO (Manpower Office)

CONCLUSION: In-Service Engineering

COMMON SUPPORT FUNCTIONS	IN-SERVICE ENGINEERING EFFORTS (LIST)	FY93 ACTUAL FUNDS RECEIVED	FY93 ACTUAL WORKYEARS	WEAPON SYSTEM(S) SUPPORTED
A/C Fixed Wing	see mission in 3.0	none		B1, B-2, B-52, C-135, E-3
-Structure			9	
-Propulsion			1	
-Avionics			4	
-Flight Subsystem			4	

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: James R. Lee Date: 26 July 94
JAMES R. LEE, Chief
Technology Insertion Branch
Scientific & Technical Div/TI

Reviewer: [illegible] Date: 28 JUL 1994
(FMP Representative)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

AJCOM Reviewer: Thomas L. Koepnick Date: 14 Aug 94
THOMAS L. KOEPNICK, AFMC/XPX 787-2622

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JOINT CROSS SERVICE GROUP (JCSG) LABS

DATA CALL

CERTIFICATION WORKSHEET

INSTALLATION: Tinker Air Force Base Oklahoma

PURPOSE: To document answer to Question Number 3.3.1.3

SOURCE: James R. Lee, OC-ALC/TIET, DSN 336-3040

METHOD: Review work records with OC-ALC Product Directorates and OC-ALC/MO (Manpower Office)

CONCLUSION: In-Service Engineering

COMMON SUPPORT FUNCTIONS	IN-SERVICE ENGINEERING EFFORTS (LIST)	FY93 ACTUAL FUNDS RECEIVED	FY93 ACTUAL WORKYEARS	WEAPON SYSTEM(S) SUPPORTED
Weapons System Cruise Missile	see mission in 3.0	none	1	B1, B-2, B-52, C-135, E-3

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: James R. Lee Date: 24 July 94
JAMES R. LEE, Chief
Technology Insertion Branch
Scientific & Technical Div/TI

Reviewer: [illegible] Date: 28 JUL 1994
(FMP Representative)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Thomas L. Koeppick Date: 14 Aug 94
THOMAS L. KOEPPICK AFMC/XPX 787-2622

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12B

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.3.2.1 of the OC-ALC response to the LJCSG guidance package. The 10 Aug 1994 response did not provide data at the lowest level CSF per the instructions.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

MAJCOM REVIEWER: _____
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.3.2.1 of the OC-ALC response to the LJCSG guidance package. The 10 Aug 1994 response did not provide data at the lowest level CSF per the instructions.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

Thomas L. Koepnick

MAJCOM REVIEWER: THOMAS L. KOEPNICK AFMC/XPX 787-2622
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

3.3.2.1 was broken down by lowest CSF and faxed to HQ AFMC/XPX 28 Jul 94. Attached are copies of those worksheets.

BASE REVIEWER: MARILYN BAGGETT, OC-ALC/FMPPM 339-5795
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

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JOINT CROSS SERVICE GROUP (JCSG) LABS

DATA CALL

CERTIFICATION WORKSHEET

INSTALLATION: Tinker Air Force Base Oklahoma

PURPOSE: To document answer to Question Number 3.3.2.1

SOURCE: James R. Lee, OC-ALC/TIET, DSN 336-3040, Represents MIPRs from U.S. Coast Guard for OC-ALC/TIET Engineering Services

METHOD: Review with Directorate Financial Officers

CONCLUSION: Direct Funding

CSF	FY94	FY95	FY96	FY97
Air Vehicle				
-Structures	0	0	0	0
-Propulsion	0	0	0	0
-Avionics	250,000	1,700,000	1,700,000	1,700,000
-Subsystems	0	0	0	0

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: James R. Lee Date: 26 July 94
JAMES R. LEE, Chief
Technology Insertion Branch
Scientific & Technical Div/TI

Reviewer: [illegible] Date: 28 JUL 1994
(FMP Representative)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Thomas L. Koepnick Date: 14 Aug 94
THOMAS KOEPNICK AFMC/XPX 787-2622

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JOINT CROSS SERVICE GROUP (JCSG) LABS

DATA CALL

CERTIFICATION WORKSHEET

INSTALLATION: Tinker Air Force Base Oklahoma

PURPOSE: To document answer to Question Number 3.3.2.1

SOURCE: James R. Lee, OC-ALC/TIET, DSN 336-3040, Represents MIPRs from U.S. Coast Guard for OC-ALC/TIET Engineering Services

METHOD: Review with Directorate Financial Officers

CONCLUSION: Direct Funding

CSF	FY94	FY95	FY96	FY97
Weapon System -Cruise Missile	0	0	0	0

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: _____ Date: 26 July 94
JAMES R. LEE, Chief
Technology Insertion Branch
Scientific & Technical Div/TI

Reviewer: _____ Date: 28 JUL 1994
(FMP Representative)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: _____ Date: _____

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12F

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.3.2.2 Other Obligation Authority of the OC-ALC response to the LJCSG guidance package. The 10 Aug 1994 response did not provide data at the lowest level CSF per the instructions.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

MAJCOM REVIEWER: _____
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col USAF Date:
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.3.2.2 Other Obligation Authority of the OC-ALC response to the LJCSG guidance package. The 10 Aug 1994 response did not provide data at the lowest level CSF per the instructions.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: (Concurs) Does not concur (explain:)

Thomas L. Koepnick

MAJCOM REVIEWER: THOMAS L. KOEPNICK AFMC/XPX 787-2623
(print name, organization, DSN)

BASE: (Concurs) Does not concur (explain:)

3.3.2.2 was broken down by lowest CSF and faxed to HQ AFMC/XPX 28 Jul 94. Attached are copies of those worksheets.

BASE REVIEWER: MARILYN BAGGETT, OCALC/FMPPM 339-5795
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

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JOINT CROSS SERVICE GROUP (JCSG) LABS

DATA CALL

CERTIFICATION WORKSHEET

INSTALLATION: Tinker Air Force Base Oklahoma

PURPOSE: To document answer to Question Number 3.3.2.2

SOURCE: James R. Lee, OC-ALC/TIET, DSN 336-3040, Represents MIPRs from U.S. Coast Guard for OC-ALC/TIET Engineering Services

METHOD: Review with Directorate Financial Officers

CONCLUSION: Other Obligation Authority

CSF	FY94	FY95	FY96	FY97
Air Vehicle				
-Structures	0	0	0	0
-Propulsion	0	0	0	0
-Avionics	275,000	2,000,000	2,000,000	2,000,000
-Subsystems	0	0	0	0

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: James R. Lee Date: 26 July 94
JAMES R. LEE, Chief
Technology Insertion Branch
Scientific & Technical Div/TI

Reviewer: [illegible] Date: 28 JUL 1994
(FMP Representative)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Thomas L. Koepnick Date: 14 Aug 94
THOMAS L. KOEPNICK AFMC/XPX 787-2[illegible]

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JOINT CROSS SERVICE GROUP (JCSG) LABS

DATA CALL

CERTIFICATION WORKSHEET

INSTALLATION: Tinker Air Force Base Oklahoma

PURPOSE: To document answer to Question Number 3.3.2.2

SOURCE: James R. Lee, OC-ALC/TIET, DSN 336-3040, Represents MIPRs from U.S. Coast Guard for OC-ALC/TIET Engineering Services

METHOD: Review with Directorate Financial Officers

CONCLUSION: Other Obligation Authority

CSF	FY94	FY95	FY96	FY97
Weapon System -Cruise Missile	0	0	0	0

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: _____ Date: 26 July 94
JAMES R. LEE, Chief
Technology Insertion Branch
Scientific & Technical Div/TI

Reviewer: _____ Date: 28 JUL 1994
(FMP Representative)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Thomas L. Koepnick Date: 14 Aug 94
THOMAS L. KOEPNICK AFMC/XPX 787-2622

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MB

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.4.1 Major Equipment and Facilities of the OC-ALC response to the LJCSG guidance package. The 10 Aug 1994 response did not provide data at the lowest level CSF per the instructions, nor identify sharing. If there is no identifiable cost for facilities or equipment for only 19 people so state.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

MAJCOM REVIEWER: _____
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.4.1 Major Equipment and Facilities of the OC-ALC response to the LJCSG guidance package. The 10 Aug 1994 response did not provide data at the lowest level CSF per the instructions, nor identify sharing. If there is no identifiable cost for facilities or equipment for only 19 people so state.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

SEE BASE RESPONSE

Thomas L. Koepnick

MAJCOM REVIEWER: THOMAS L. KOEPNICK AFMC/XPX 787-2622
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

This question was previously answered on SAF/AQX worksheet and submitted to HQ AFMC/XPX 26 Jul 94. A copy of our response is attached.

BASE REVIEWER: MARILYN BAGGETT, OC-ALC/FMPPM
(print name, organization, DSN) 339-5795

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

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SAF/AQX CORRECTION WORKSHEET

PURPOSE: All reporting activities provide updated question 3.4.1 data. All organizations should address the sharing of equipment and facilities with other CSFs as appropriate, and specifically identify the percentage of total time used by each of the functions.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Submit complete data

CONCLUSION: Data must be submitted in compliance with LJCSG Guidance Package

RATIONALE: Equipment sharing must be identified

MAJCOM: Concurs Does not concur (explain):

MAJCOM REVIEWER: _____
(print name, organization, DSN)

BASE: Concurs Does not concur (explain):

It is not appropriate to breakout by CSF. Equipment is ordinary CAD/CAM and office equipment.

BASE REVIEWER: James R. Lee DCALC/DIED 336-3040
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing & Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date: 25 July 94

3.3.2.2 **Other Obligation Authority:** For each applicable CSF, identify reimbursable and direct-cite funding (other obligation authority expected) from FY94 to FY97. Funding allocation must be traceable to FY95 PBS. (BRAC Criteria I)

REPLACED by Pages 13A & 13B

CSF	~~FY94~~	FY95	~~FY96~~	~~FY97~~
As in 3.0	~~275,000~~	2,000,000	~~2,000,000~~	2,000,000

3.4 Facilities and Equipment

3.4.1 **Major Equipment and Facilities:** Describe major facilities and equipment necessary to support each Common Support Function (include SCIFs). If the facilities and equipment are shared with other functions, identify those functions and the percentage of total time used by each of the functions. Provide labeled photographs that picture the breadth and scope of the equipment and facilities described. If it is unique to DOD, to the Federal Government, or to the US, describe why it is unique. Insert the replacement cost. For this exercise, Replacement cost = (Initial cost + capital investment) multiplied by the inflation factor for the original year of construction. (BRAC Criteria II)

Common Support Function	Major Facility or Equipment Description	Unique To			Replacement Cost ($K)
		DOD	Federal Gov't	U. S.	
*					

* The work areas of OC-ALC/TIET consist of a normal office environment with normal personal computers and workstations. The work areas are located in Bldg 3001 and occupy 6148 Sq Ft.

3.5 Expansion Potential

3.5.1 **Laboratory Facilities:** Use facilities records as of fourth-quarter FY93 in answering the following (in sq ft) for each CSF: (BRAC Criteria II)

Common Support Function	Facility or Equipment Description	Type of Space	Space Capacity (KSF)		
			Current	Used	Excess
*					

*** OC-ALC has no Laboratory Facilities.**

3.5.1.1 Describe the capacity of your activity to absorb additional similar workyears categorized in the same common support function with minor facility modification. If major modification is required, describe to what extent the facilities would have to be modified. (Use FY97 workyears as your requirement) (BRAC Criteria III)

The capacity of OC-ALC/TIET to absorb additional similar workyears categorized in the same common support function with minor facility modification is four additional. Major modification is not required. A larger office area would be required.

3.5.1.2 If there is capacity to absorb additional workyears, how many additional workyears can be supported? (BRAC Criteria III)

An additional four workyears can be supported.

3.5.1.3 For 3.5.1.1 and 3.5.1.2 (above) describe the impact of military construction programs or other alteration projects programmed in the FY95 PBS. (BRAC Criteria II)

There are no known military construction programs for OC-ALC/TIET in the FY95 PBS.

3.5.2 Land Use: Provide number of buildable acres for additional laboratory/administrative support construction at your installation. (BRAC Criteria II)

162 acres.

3.5.3 **Utilities:** Provide an estimate of your installation's capability to expand or procure additional utility services (electric, gas, water). Estimates should be provided in appropriate units -- e.g. KWH of electricity. (BRAC Criteria II)

Water: 3.17 million gallons/day (MG/D) 22% current usage. Tinker has full stand alone water capability with abundant municipal backup.

Sewage Capacity: 1.5 MG/D; 50% current usage.

Electrical Distribution: Peak usage is 66.61 MW; which is 41% of the current usage. System capacity is equal to 163 MW (total transformer capacity additive).

Natural Gas: 0.32 million cubic feet (MCF)/hour; 52% current usage.

High temperature water/steam generation distribution: 1,692 million British thermal units per hour (MBTU/H) 59.36% current usage. 1,662 MBTU/H of the 1,692 MBTU/H is dual fuel capable (Natural gas primary, No. 2 fuel oil backup)

Oklahoma Gas and Electric (OG&E) company has a peaking plant on the base. It is in the contract that Tinker will have priority use of this peaking plant in times of total power failure, which will provide the entire base with power. With Tinker AFB operating at its' peak demand, OG&E peaking plant would be 83% utilized.

OG&E is in the process of upgrading service to Tinker AFB's electrical system. The upgrade is a step up in voltage service from 69 KV to 138 KV, thus making it easier for Tinker to add to its' existing capacity in the future.

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.3.1.1 Work Year and Life Cycle of the OO-ALC response to the LJCEG guidance package. The 10 Aug 1994 response did not provide data at the lowest level CEF per the instructions.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

WARNING: Response must be in accordance with LJCEG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

SEE BASE RESPONSE

Thomas L. Koepnick

MAJCOM REVIEWER: THOMAS L. KOEPNICK AFMC/XPX 787-2622
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

SEE ATTACHED

Philip A Puskett

BASE REVIEWER: Philip A Puskett, OO-ALC/FMPC, DSN 458-1127

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.3.1.3 In-Service Engineering of the OO-ALC response to the LJCSG guidance package. The 10 Aug 1994 response did not provide data at the lowest level CSF per the instructions. CSFs are identified in the left column but the information is not broken out.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-2950

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concur Does not concur (explain:)

SEE BASE RESPONSE

Thomas L. Koepnick

MAJCOM REVIEWER: THOMAS L. KOEPNICK AFMC/XPX 787-2622
(print name, organization, DSN)

BASE: Concur Does not concur (explain:)

SEE ATTACHED

BASE REVIEWER: Philip A Packett
Philip A Packett, OO-ALC/FMPC, DSN 458-1127

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

PURPOSE: To provide SAF/AQX staff correct answers to question 3.5.1 Laboratory Facilities of the OO-ALC response to the LJCSG guidance package. The items listed in the MO input column are not common support functions as defined in appendix C to the guidance package. Correct the entries to reflect the CEFs listed in appendix C.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concur (Does not concur (explain:))

SEE BASE RESPONSE

Thomas L. Koepnick

MAJCOM REVIEWER: THOMAS L. KOEPNICK AFMC/XPX
(print name, organization, DSN) 787-2622

BASE: Concur Does not concur (explain:)

SEE ATTACHED

BASE REVIEWER: Philip A Parker
Philip A Parker, OO-ALC/FMEC, DSN 458-1127

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF — Date:
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

W2 100

CONTROL NUMBER: LJCSWG-AF 012

PURPOSE: To provide SAF/AQX staff corrected answers to all of Section 3 data in the OO-ALC–Hill AFB response to the Laboratory Joint Data Call. The 10 Aug. 1994 version did not identify CSFs to the lowest level in all Section 3 responses. This question needs to be answered for each CSF. For each CSF you are to describe the major capabilities at your activity contributing to the CSF in bulletized format. In addition to describing major capabilities at your activity contributing to the CSF in bulletized format, you were asked to describe any relationship and interconnectivity of the CSF for which you are answering the question, with other functions (common or otherwise) in support of the overall mission. Is there any relationship or interconnectivity? If so, list the functions and describe the relationships or interconnectivity for each. Include only functions performed by your activity. Do not include relationships or interconnectivity outside your activity. If there isn't any relationship or interconnectivities, so state that there aren't any. There are references in various question responses to Air Vehicle and Air Vehicle, Fixed-Avionics and Subsytems; Weapons and Weapons- ICBMs, Conventional Missiles/Rockets, Projectiles, Bombs and Guns/Ammo; Space Systems, Pervasive and Product. There is not consistency in answering all of the questions. Space Systems, Pervasive and Product are not CSFs at the lowest level as called out in the LJCSG Guidance Package Appendix C. The activity must identify those CSFs at the lowest level for which they are expending workyears even if it is fractions of workyears. You must then be consistent in answering all questions in Section 3 for all of those CSFs.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

MAJCOM REVIEWER: _____
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF Date:
Manufacturing_Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Item 2
pgs 1-16

CONTROL NUMBER: LICSWG-AF 012

PURPOSE: To provide SAF/AQX staff corrected answers to all of Section 3 data in the OO-ALC-Hill AFB response to the Laboratory Joint Data Call. The 10 Aug. 1994 version did not identify CSFs to the lowest level in all Section 3 responses. This question needs to be answered for each CSF. For each CSF you are to describe the major capabilities at your activity contributing to the CSF in bulletized format. In addition to describing major capabilities at your activity contributing to the CSF in bulletized format, you were asked to describe any relationship and interconnectivity of the CSF for which you are answering the question, with other functions (common or otherwise) in support of the overall mission. Is there any relationship or interconnectivity? If so, list the functions and describe the relationship or interconnectivity for each. Include only functions performed by your activity. Do not include relationships or interconnectivity outside your activity. If there isn't any relationship or interconnectivity, so state that there aren't any. There are references in various question responses to Air Vehicle and Air Vehicle, Fixed-Avionics and Subsystems; Weapons and Weapons- ICBMs, Conventional Missiles/Rockets, Projectiles, Bombs and Guns/Ammo; Space Systems, Pervasive and Product. There is not consistency in answering all of the questions. Space Systems, Pervasive and Product are not CSFs at the lowest level as called out in the LICSG Guidance Package Appendix C. The activity must identify those CSFs at the lowest level for which they are expending workyears even if it is fractions of workyears. You must then be consistent in answering all questions in Section 3 for all of those CSFs.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-1550

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LICSG Guidance Package Instructions

MAJCOM: (Concur) Does not concur (explain:)

SEE ATTACHED HARDCOPY/DISKETTE

MAJCOM REVIEWER: THOMAS L. KOEPNICK HQ AFMC/XPX 787-2622
(print name, organization, DSN)

BASE: (Concur) Does not concur (explain:)

BASE REVIEWER: Dick Walter 8-30-94
(print name, organization, DSN)
Dick Walter, OO_ALC/FMPC, DSN 458-1127

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

Lab Joint Cross-Service Questionnaire
Ogden Air Logistics Center

Purpose: To document answer to **question 2.1** Workload. Use the following table to describe historic and projected workload at each activity in terms of funding and workyears. Assume previous BRAC closures and realignments are implemented on schedule. Projected funding will be derived from FY95 President's Budget Submission (Then year dollars). Past fiscal year data shall begin with FY 86 or at the inception of the activity as it existed on 1 Oct 93. (BRAC Criteria I and IV)

Conclusion:

Information Required	Fiscal Years											
	86	87	88	89	90	91	92	93	94	95	96	97
Total Funds Programmed ($M)									.5M	.5M	.5M	.5M
Total Actual Funds ($M)						.5M	.7M	.6M				
Programmed Workyears									14	14	14	14
Actual Workyears						18	22	18				

*** Note: These are actual workyears and funds expended to support lab capacity.**

Purpose: To document answer to **question 2.2** Excess "Lab" Capacity - Measured at the DoD Component Level. Excess "Lab" Capacity = Sum of the Peak Workyears - Sum of the Projected Workyears.
-- Peak at each activity = Highest value between FY86 (or since inception of organization) and FY93.
-- Projected at each activity = Estimated at FY97

Conclusion: Peak Workyear was 1992 with ..... 22 assigned
Less Projected Workyears of ..... 14 assigned
(From 1 May 1994 Report)
Excess Capacity for 1997 ..... 8 projected

3

Purpose: To document answer to **question number 3.0** Mission: Describe the major capabilities at your activity contributing to the common support function in bulletized format. Describe any relationship and interconnectivity with other functions (common or otherwise) in support of the overall activity mission.

Conclusion:

1a. Major Capabilites:

Provides Center Technology Support, Reliability/Quality Engineering, Industrial Process Improvement Support and Technology Transfer to the Aircraft, Missile, Commodities and Technology and Industrial Support Directorates, as well as to the 419th and 388th Fighter Wings. In addition, we provide technology support to the Space Defense Initiative (SDI) centered at Los Angeles Air Force Base. We provide technology insertion, reliability and maintainability support, standardization as well as aging and surveillance support. We act as advisors to the above mentioned activities.

1b. Relationship and Interconnectivity:

Our Engineering and Technologies Branch sponsors and provides administrative and technical support to the Center Senior Engineering Council. This council addresses Center wide technology issues and projects. Most of the business conducted by the council involves the technological capabilities, cost effectiveness and efficiencies of the depot functions.

Scientific Technical Information Office (STINFO) provides world wide access to approximately 500 technology information data bases. We perform technical data research projects for depot functions.

Office of Research Technology Application (ORTA) provides interface with Industry, Academia and other government agencies for the purpose of technology transfers and Cooperative Research and Development Agreements (CRDA) with depot functions.

Technical Management of the Design Engineering Program (DEP) Contract - Engineering services contract for reliability and maintainability (R&M) improvements on aircraft.

Program Management for Productivity, Reliability, Availability, Maintainability (PRAM) and the Reliability, Availability, Maintainability Technology Insertion Program (RAMTIP) covers engineering funding program for weapon system improvements.

The Special Technology Insertion Projects provide program management and engineering support for technology insertion to improve technical capabilities and effectiveness of depot functions.

Y

R&M Engineering Support - Support depot acquisitions in establishing and evaluating R&M requirements. Perform special R&M engineering evaluations and analyses. Develop R&M tools and procedures for depot functions.

Depot Industrial Process Improvement Support provides instruction and consulting services in "Theory of Constraints" and performs industrial process improvement studies.

1c. The major capabilities and relationship and inter connectivity of the functions described in paragraphs 1a and 1b above are provided in the following Common Support Functions.

Air Vehicles, Fixed	Weapons	Space Systems	Pervasive
Structure	ICBM	All	Electronic Devices
Avionics	Conventional Missiles		Environmental Sciences
Flight Subsystems	Guided Projectiles		Environmental Quality
	Bombs		Advanced Materials
	Directed Energy		

Purpose: To document answer to **question number 3.1.1** Geographic/Climatological Features: Describe any geographic/climatological features in and around your activity that are relevant to each CSF. Indicate and justify those that are required versus those that just serve to enhance accomplishing the mission of the activity. For example, clear air at high altitude that increases quality of atmospheric, ground-based laser experiments in support of the weapons CSF. (BRAC Criteria I).

Conclusion: The geographic collocation of the in-service engineering function with weapon systems management for AGM-65, F-16, Minuteman and Peacekeeper Missile, and depot repair processes for the F-18, C-130 facilitates the re-engineering and reverse engineering processes. Only by collocation can the engineering function directly sustain the needs of the center by enhancing the above-mentioned weapon systems support. The above provides estimated support to the following CSFs:

Air Vehicles, Fixed	Weapons
Structure	ICBM
Avionics	Conventional Missiles
Flight Subsystems	Guided Projectiles
	Bombs
	Directed Energy

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Purpose: To document and answer to **question number 3.1.2** Licenses & permits: Describe and list the licenses or permits (e.g., environmental, safety, etc) that your activity currently holds and justify why they are required to allow tests, experiments, or other special capabilities at your location for each CSF. For example, permit to store and use high explosives. (BRAC Criteria I)

Conclusion: None. The organizations and processes reported in this data call neither maintain nor require any licenses or permits to perform their assigned mission.

Purpose: To document and answer **question number 3.1.3** Environmental constraints: Describe and list the environmental or land use constraints present at your activity which limit or restrict your current scope for each CSF, i.e., would not allow increased "volume" or "spectrum" for the CSF. Example - Volume: frequency of a type of experiment. Example - Spectrum: Current permit to detonate high explosives will not allow detonation or storage of increased quantity of explosives without legal waiver (state law) or relocation of surrounding (non-govt) buildings. (BRAC Criteria II)

Conclusion: We have no restrictions.

Purpose: To document answer to **question number 3.1.4** Special Support Infrastructure: List and describe the importance of any mission related special support infrastructure (e.g. utilities) present at your location for your activity. (BRAC Criteria I)

Conclusion:

1. Collocation with weapon system users, i.e., 388th Fighter Wing, provide us the opportunity to utilize equipment they have which alleviates our having to purchase additional equipment.

2. Our collocation with the 388th Fighter Wing allowed us to take a technology from industry and apply this to a military weapon system. The leading edge of the aircraft was sustaining damage and paint removal while flying. We identified a technological change and were able to test a new leading edge protector and use the fighter wing collocated at Hill AFB to test this.

3. We are also collocated with the industrial back shops (i.e. machine, carpentry and electrical) from the depot maintenance organization. While validating the Neural Radiant Energy Detection System (NREDS), we were able to utilize these back shops to build fixtures, power extensions, and environmental enclosures.

Purpose: To document answer to **question number 3.1.5** Proximity to Mission-Related organizations: List and describe the importance and impact of not having nearby organizations which facilitate accomplishing or performing your mission -- e.g. operational units, FFRDCx, universities/colleges, other government organizations, and commercial activities. Restrict your response to the top five. Complete the following: (BRAC Criteria I)

Conclusion: Several agreements with local colleges allow us to "brain trade" top PHD candidates and get mutually beneficial projects completed.

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Name	Type of Organization	Dist.	Common Support Function	WY performed	WY funded
ITA	Fed / State Govt/Industry Consortium	25 mi	Electronic Devices Environmental Sciences Environmental Quality Advanced Materials	new	new
USU	Academic	75 mi	Electronic Devices Environmental Sciences Environmental Quality Advanced Materials	1/2	none
BDM	Industry..Eng Sup	2 mi	Electronic Devices Environmental Sciences Environmental Quality Advanced Materials	8 man yrs	8 man yrs

Note* ITA = Intermountain Technology Alliance
USU = Utah State University
BDM = Name of Company, doesn't stand for any particular name

1. For technology transfer of Ogden ALC technologies to the local community and state effectively, it is imperative that we be located near federal, state and government offices.

2. Through a joint venture with the academic environment, graduate students utilize our facilities and accomplish testing and research. Their findings are made available for our use and benefit.

3. The close proximity to a company such as BDM which has nationwide resources, allows us to tap into their unique skills and abilities, thus increasing our effectiveness.

Purpose: To document answer to **question number 3.2.1** Total Personnel: What is the total number of government (military and civilian), on-site system engineering technical assistance (SETA) personnel engaged in science and technology (S&T), engineering, development and in-service engineering activities as of end FY93? For individuals in the CSF that represents the preponderance of their effort. (BRAC Criteria I).

Conclusion: A staff engineering group in the Engineering and Technologies Branch (TIET) provide technology, reliability and maintainability (R&M), quality, and technical mangement policy is included.

Type of Personnel	Government		FFRDC on-site	SETA on-site
	Civilian	Military		
Technical	6	4	0	0
Management	1	1	0	0
Other	2	0	0	0

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Purpose: To document and answer to **question number 3.2.2** Education: What is the number of government personnel actively engaged in S&T, engineering development and in-service engineering activities by highest degree and type of position? Provide the date in the following table: (BRAC Criteria I)

Conclusion: A staff engineering group, Engineering and Technologies Branch (TIET) provide technology, reliability and maintainability, quality and technical management policy is included. The support is distributed equally between the lowest Common Support Functions for Air Vehicles, Weapons and Pervasive. (Reference question 3.0)

Type of Degree	Number of Government Personnel by Type of Position		
	Technical	Management	Other
High School or less	0	0	1
Associates	0	0	1
Bachelor	3	1	0
Masters	8	0	0
Doctorate	0	0	0

Purpose: To document and answer to **question number 3.2.3** Experience: What is the experience level of government personnel? Fill in the number of government personnel in the appropriate boxes of the following table: (BRAC Criteria I)

Conclusion: A staff engineering group, Engineering and Technologies Branch (TIET) provide technology, reliability and maintainability, quality and technical management policy is included. The support is distributed equally between the lowest Common Support Functions for Air Vehicles, Weapons and Pervasive. (Reference question 3.0)

Type of Position	Years of Government and/or Military Service				
	< 3 years	3-10 years	11-15 years	16-20 years	> 20 years
Technical	0	5	1	1	3
Mgmt (Sup)	0	0	0	1	1
Other	0	0	1	0	1
Total	0	5	2	2	5

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Purpose: To document and answer to **question number 3.2.4.1** How many patent were awarded and patent disclosures (only count disclosures with issued disclosure numbers) were made? (BRAC Criteria I).

Conclusion:

CSF	Dis-closure	Awarded	Patent Titles
AV/Fix/Structure	0	1	Process for Forming Fiberglass Articles
AV/Fix/Structure	1		Rubber Bumper
Wpns/Conv Msls	1		APG-66 Radar Printed Circuit Boards
AV/Fix/Structure	1		Mechanic's Flashlight
AV/Fix/Structure	1		CO2 Tire Inflation Device
AV/Fix/Avionics	1		Ogden Data Device
Perv/Adv Mtls	1	0	Nuclear Fusion using Electrostatic Devices
Perv/Elec Devices	1		Lyndenmeyer Image Compression
Perv/Elec Devices	1		Low Stress Intermittent Fault Detector
Perv/Elec Devices	1		Hybrid Associated Memory
Perv/Elec Devices	1		Fuzzy Associated Memory
Perv/Elec Devices	1		Fuzzy Differential Genetic Algorithm
Perv/Elec Devices	1		Chromatic Cellular Automata
Perv/Envir Sciences	1		Lightning Harness
Perv/Elec Devices	1		Optimal Linear Array Photo Detector

Purpose: To document answer to **question number 3.2.4.2** How many papers were published in peer reviewed journals? (BRAC Criteria I).

Conclusion:

CSF	# Pub	Paper Titles
Air Vehicles, Fixed, Avionics	1	Automatic Test Equipment (ATE) Enabling Technologies
Air Vehicles, Fixed, Avionics	1	Visualizing Current Flow
Air Vehicles, Fixed, Avionics	1	Integrated Tech Enhanced ATE with Adaptive Fault Detection
Air Vehicles, Fixed, Avionics	1	An alternate Fault Detection Method using Predictive Sensitivity
Air Vehicles, Fixed, Avionics	1	A Neural Radiant Energy Detection System (NREDS)
**Air Vehicles, Fixed, Avionics	1	Engineering Validation of the NREDS System

** TIET Paper

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Purpose: To document answer to **question number 3.3.1.1** Work Year and Lifecycle: Identify the number of actual workyears executed for each applicable CSF in FY93 for each of the following: government civilian; military; on-site FFRDC's, and on-site SETAs. (BRAC Criteria I)

Conclusion: During FY93 the in-service engineering functions primarily support the Fixed Wing Aircraft Avionics and Fight Systems as defined in Appendix C. Our engineering staff is moved from one function listed in the Common Support Functions, Product Functions, to another based on the requirement at the time. The FY93 break-out is only based on the present needs of the Air Logistics Center and not respective to the focus prior to FY93 nor what would be expected in the future. Due to the integration of the efforts the remaining personnel can not be specified and must remain as general support to the lowest Common Support Functions to air vehicles, weapons, and space systems.

LAB	**Fiscal Year 1993 Actual**			
	Civilian	Military	FFRDC	SETA
S&T	0	0	0	0
Engineering Development	0	0	0	0
Air Vehicles, Fixed, Avionics and Fight Sub-systems	8	4		
Air Vehicles Weapons Space Systems	1	1		

Purpose: To document answer to **question 3.3.1.2** Engineering Development By ACAT: For each Common Support Function (e.g. airborne C41) at each activity engaged in engineering development, provide....for each ACAT and/or program:

Conclusion: TIET does not perform research and development for new weapon systems. TIET does not receive any research and development (R&D) funding. This question applies to acquisition phase milestones I-IV and TIET operates all of its program support in milestone V.

Purpose: To document answer to **question number 3.3.1.3** In-Service Engineering: For each Common Support Functional each activity engaged in in-service engineering efforts, the FY93 funds (from all sources) obligated for these efforts, the FY93 workyears for these efforts, and the weapon system(s) supported by these efforts. In-service engineering consists of all engineering support of fielded and/or out of production systems and includes efforts to improve cost, throughput, and s edule to support customer requirements as well as mods and upgrades for reliability, maintainability, and performance enhancements. (BRAC Criteria I)

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Conclusion: The work performed by this functional organization often crosses functional boundaries and are so integrated that detailed breakout is not practical. The breakout provided below are rounded estimates based on actual program funding.

Common Support Functions	In Service Engineering Efforts	FY93 Funds Received	Actual Workyears	Weapon System(s) Supported
Air Vehicles, Fixed				F-16, F-4
Structure	Rev Engineering, Tech Trans, R&M Tech Insertion Scientific & Technology Information Office	$75K	2	
Avionics	Same as above	$876K	2	
Flight Subsystems	Same as above	$75K	2	
Weapons				
ICBM	Same as above	$16.7K	1	Minutman,
Conventional Missiles	Same as above	$16.7K	1	Peacekeeper
Guided Projectiles	Same as above	$16.7K	1	ICBMs,
Bombs	Same as above	$16.7K	1	Small Missiles
Directed Energy	Same as above	$16.7K	1	
Space Systems (All)	Same as above	$8.4K	1	
Pervasive				
Electronic Devices	Same as above	$674.8K	.5	
Environ Sciences	Same as above	$4.8K	.5	
Environ Quality	Same as above	$4.8K	.5	
Advanced Mtls	Same as above	$4.8K	.5	

Purpose: To document answer to **question number 3.3.2.1** Direct Funding: For each applicable CSF, identify direct mission funding by appropriation from FY94 to FY97. Use FY95 PBS for FY95-FY97. (BRAC Criteria I)

Conclusion:

CSF	FY94	FY95	FY96	FY97
Air Vehicles, Fixed				
Structure	5.2K	158.5K	158.5K	158.5K
Avionics	5.2K	158.5K	158.5K	158.5K
Flight Subsystems	5.2K	158.5K	158.5K	158.5K
Weapons				
ICBM	2.6K	79.2K	79.1K	79.2K
Conventional Missiles	2.6K	79.2K	79.1K	79.2K
Guided Projectiles	2.6K	79.2K	79.1K	79.2K
Bombs	2.6K	79.2K	79.1K	79.2K

Direct Energy	2.6K	79.2K	79.1K	79.2K
Space Systems (All)	2.6K	79.2K	79.1K	79.2K
Pervasive				
Electronics Devices	1.5K	45.3K	45.3K	45.3K
Environ Sciences	1.5K	45.3K	45.3K	45.3K
Environmental Quality	1.5K	45.3K	45.3K	45.3K
Advanced Materials	1.5K	45.3K	45.3K	45.3K

Purpose: To document answer to **question 3.3.2.2** Other Obligation Authority: For each applicable CSF, identify reimbursable and direct-cite funding (other obligation authority expected) from FY94 to FY97. Funding allocation must be traceable to FY95 PBS. (BRAC Criteria I)

Conclusion: YES. The funding for the reported functions are documented in our response to 3.3.2.1.

Purpose: To document answer to **question 3.4.1** Major Equipment and Facilities: Describe major facilities and equipment necessary to support each Common Support Function (include SCIFs). If the facilities and equipment are shared with other functions, identify those functions and the percentage of total time used by each of the functions. Provide labeled photographs that picture the breadth and scope of the equipment and facilities described. If it is unique to DoD, to the Federal government, or to the US, describe why it is unique. Insert the replacement cost. For this exercise, Replacement cost = (initial cost + capital investment) multiplied by the inflation factor for the original year of construction. (BRAC Criteria II)

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OO-ALC-HILL

Conclusion: TIET is purely an administrative function and provides support in both the pervasive and product areas, but the preponderance of their support is to the aircraft and missile weapon systems. Therefore based upon the definition provided, we felt their main support lies in the product area. All major facilities and equipment, including replacement costs, that are necessary to support each Common Support Function(s) not listed below, are an integral part of the depot maintenance process and as such, are reported in the Depot Maintenance Data Call. Building 849 was not included in the depot maintenance questionnaire and is therefore depicted below:

Common Support Function	Major Facility or Equipment Description	DOD	Unique To Federal Gov't	U. S.	Replacement Cost ($K)
Air Vehicles, Fixed Structure Avionics Flight Subsystems **Weapons** ICBM Conventional Missiles Guided Projectiles Bombs Directed Energy **Space Systems** (All) **Pervasive** Electronic Devices Environ Sciences Environ Quality Advanced Mtls	Building 849 Administrative area Desks Personal Computer Files				$356.5K

Purpose: To document answer to **question number 3.5.1** Laboratory Facilities: Use facilities records as fourth-quarter FY93 in answering the following (in sq ft) for each CSF. (BRAC Criteria II) 3.5.1.1 Describe the capacity of your activity to absorb additional similar workyears categorized in the same common support function with minor facility modification. If major modifications is required, describe to what extent the facilities would have to be modified. (Use FY97 workyears as your requirement). (BRAC Criteria III)

Conclusion:

Common Support Function	Facility or Equipment Description	Type of Space	Space Capacity (KSF)		
				Used	Excess
Air Vehicles, Fixed		Administrative			
Structure		Technical		.224	
Avionics		Storage		.224	
Flight Subsystems		Utility		.224	
Weapons					
ICBM				.112	
Conventional Missiles				.112	
Guided Projectiles				.112	
Bombs				.112	
Directed Energy				.112	
Space Systems (All)				.112	
Pervasive					
Electronic Devices				.064	
Environ Sciences				.064	
Environ Quality				.064	
Advanced Mtls				.064	
	Bldg 849		7	1.6	5.4*
Same as above	Chemical Analysis Material Engineer, Non-Dest Inspect, Enviro Analysis, Form Measuremts	Technical	4.7	3.0	1.7
Same as above	Guided Weapon Development, Laser, Infra-red, Electro-Optic Tec	Technical	76.4	59.0	17.0
Same as above	Jamming System	Technical	18.0	13.0	5.0
Total			106.1	76.6	29.1

* Due to the nature of capacity any CSF could be placed in the 5.4 excess

Purpose: To document answer to **question number 3.5.1.1** Describe the capacity of your activity to absorb additional similar workyears categorized in the same common support function with minor facility modification. If major modifications is required, describe to what extent the facilities would have to be modified. (Use FY97 workyears as your requirement). (BRAC Criteria III)

Conclusion: Refer to question 3.5.1 for table. Analysis of manpower reports reflects 14 assigned personnel in May 1994 and these figures have been straightlined out through FY97. The facility plans reflect 7,171 square feet in the Engineering and Technologies Branch (TIET) area (rounded to 7K). The number of assigned personnel doing laboratoy workload is 14; therefore, 14 people times 115 square feet per person for administrative space equals 1610 square feet utilized (rounded to 1.6K). The difference between 7K minus 1.6K leaves an excess of 5.4K square feet.

Because TIET provides support in both the pervasive and product common support functional areas, any administrative laboratory workload could be absorbed within the facility and space identified above without major modification.

Purpose: To document answer to **question number 3.5.1.2.** If there is capacity to absorb additional workyears, how many additional workyears can be supported? (BRAC Criteria III).

CONCLUSION: Negative submission. Capacity workload was included in the Depot Maintenance questionnaire under Capacity Utilization, 1.3. Workyears could not be broken out separately without duplicating data calls.

Purpose: To document answer to **question number 3.5.1.3.** For 3.5.1 1 and 3.5.1.2 (above) describe the impact of military construction programs or other alteration projects programmed in the FY95 PBS. (BRAC Criteria II)

Conclusion: There are no MILCONs or alteration projects that affect the facilities in question.

Purpose: To document answer to question number 3.5.2 Land Use: Provide number of buildable acres for additional laboratory/administrative support construction at your installation. (BRAC Criteria II)

Conclusion: Hill AFB has 957,311 acres suitable for building.

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Purpose: To document answer to **question number 3.5.3** Utilities: Provide an estimate of your installation's capability to expand or procure additional utility services (electric, gas, water). Estimates should be provided in appropriate units -- e.g. KWH of electricity. (BRAC Criteria II)

Conclusion: Hill is currently at 70% water use. Maximum capacity is 7.9 million gallons per day. We therefore can increase usage by 30% at no cost. Our electrical system is currently at 42.2 MW. The system is rated for 82.2 MW (or 51% capacity). The capacity of our natural gas distribution system is 5400 MCF per hour. We currently use 54 MCF per hour at peak times of the season (10% usage). It should be noted that Hill is in an energy rich area. An abundance of relatively low cost energy is available immediately for expansion of current processes or additional workload. Utah Power and Light's Electric Distribution system can supply additional capacity of 45% above current Base requirements, and an additional 100% capacity with modifications to the Utility Company owned distribution system. Any Utility System expansion costs could be paid by Utah Power and Light Company. Mountain Fuel Supply Company Natural Gas Distribution system can supply an additional capacity of 54% above the current requirements without any modifications to the Utility Company owned distribution system.

94-09-20 12:37 RCVD

DATE: 6 July 94

MEMORANDUM FOR RECORD, AF/CEPP

AIR STAFF CORRECTION WORKSHEET

PURPOSE: To provide corrected answer to Question Number 3.5.3, OO-ALC, Hill AFB Joint Cross Service Group Data Call for Laboratories

SOURCE: Base utility contracts and records

METHOD: Telecon with MAJCOM & Base POCs

CONCLUSION: HQ USAF/CEPP distributed additional guidance on method of calculating percent current useage for sewage, electrical and high temperature water distribution systems. This guidance resulted in a change to the capacities and percent useage reported by the base. These changes were not relayed to the Labs.

Utilities:

	Capacity		Additional Capacity (%)	
	Change To	Instead Of	Change To	Instead Of
Water	13.6 MGD	7.9 MGD	64 %	30%
Electrical	73.9 MW	42.2 MW	55.6 %	45%
Gas	61.1 MCF	5400 MCF/H	83 %	90%

MAJCOM CONCURS: Mr Ron Piatt, HQ AFMC/CEPL, Wright-Patterson AFB, DSN: 787-2433

BASE CONCURS: Mr Dick Walter, OO-ALC/FMPC, DSN: 458-1127.

I certify that the above information is accurate and complete to the best of my knowledge and belief.

AIR STAFF REVIEWER: Steven K. Lillemon **DATE: 14 July 1994**
Steven K. Lillemon, Major, United States Air Force

Item 4

Attachment 2

SM-ALC.

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"LAB" JOINT CROSS-SERVICE GROUP GUIDANCE PACKAGE

Section I: Taskings
1.1 Guidelines
1.2 Standards
1.3 Assumptions
1.4 Measures of Merit
1.5 Activities
1.6 Common Support Functions

Section II: Capacity of DOD Components
2.1 Workload
2.2 Excess Capacity

Section III: Capability of Activities to Perform Common Support Functions
3.0 Mission
3.1 Location
3.2 Personnel
3.3 Workload
3.4 Facilities & Equipment
3.5 Expansion Potential

Section IV: Appendices
A. Macro Process/Schedule
B. List of Activities
C. Common Support Functions

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Item 1

SECTION I: TASKING

In accordance with the Deputy Secretary of Defense memorandum dated 7 Jan 94, the Laboratory Joint Cross-Service Group (LJCSG) with DOD components should, where operationally and cost effective, strive to: retain in only one Service militarily unique capabilities used by two or more Services; consolidate workload across the Service to reduce capacity; and assign operational units from more than one Service to a single base. Specifically, the purpose of the LJCSG is:

- Determine common support functions and bases to be addressed by LJCSG
- Establish guidelines, standards, assumptions, measures of merit, data elements and milestone schedules for DOD Component conduct of cross-service analysis of common support functions
- Review excess capacity analysis
- Develop closure or realignment alternatives
- Analyze cross-service trade-offs

The following information identifies to the Services common support functions and data element requirements necessary to support the cross-service analysis of these common support functions.

1.1 Guidelines

Because the DOD components are organized differently, "Lab" activities are considered to be those involved in the following life cycle efforts: Science and technology, and/or engineering development, and/or in-service engineering.

Service missions and force structure will be as stipulated in the FY1995-2000 Defense Planning Guidance and Interim Force Structure Plan.

The Military Departments will use the projected funding in the FY95 President's Budget Submission (Future Years Defense Plan – FYDP) and an estimate of funds that will be received from outside the military department for execution.

If "lab" excess capacity exists, the Military Departments will start to reduce it where operationally and cost effective through a combination of downsizing in place within the departments, internal service consolidation, and cross service alternatives.

The Military Departments will gather, exchange, and analyze data collected per this guidance call for Common Support Functions (Appendix C) at "lab" activities (Appendix B) in accordance with the milestones and schedule dates identified in Appendix A.

Cross-service alternatives will result in an aggregate reduction in the overall "lab" infrastructure across the Military Departments -- personnel/funding/facilities and equipment.

Common cross-service Measures of Merit will be consistently applied for all cross-service alternatives.

Integration of weapon systems/components into operational forces will remain with the individual Military Departments responsible for those forces.

1.2 Standards

Evaluation of cross-service alternatives will be consistent with PL 101-510 (as amended) and the eight BRAC criteria. Only certified data will be used.

The COBRA cost model will be used to calculate estimated costs, estimated savings, and Return on Investment (ROI) of alternatives leading to proposed closures and realignments. Common inputs will be used for Military COBRA runs incorporating cross-service alternatives.

Military value analysis will be conducted by the Military Departments IAW Title 10, USC responsibilities.

1.3 Assumptions

"Lab" Common Support Functions and activities identified herein represent the major opportunities for developing cross-service alternatives. The Military Departments are not precluded from proposing other cross-service alternatives to reduce excess capacity as they assess the full complement of "lab" functions.

Previous BRAC decisions will be factored into cross-service alternatives.

"Lab" capacity will be based on budgeted workyears. A workyear is considered to be 2080 hours adjusted for time not on the job (e.g. sick leave, annual leave, etc.)

1.4 Measures of Merit

The following Measures of Merit represent the outcome from the DOD component final realignment and closure recommendations that are supported by the capabilities data which will be gathered by activity and common support function in Section III of this guidance.

- Reduction of "lab" infrastructure
- Return on investment (COBRA)

- Military value (BRAC criteria 1-4) -- the composite assessment of the quality of the remaining "lab" infrastructure

1.5 Activities

The Military Departments will collect capacity data for each "lab" activity identified in Appendix B. The "lab" activities were selected by considering all individual aggregates of personnel and facilities located at one base, under the same commander, performing predominantly science and technology (S&T), engineering development, and/or in-service engineering work. Small subelements of these "lab" activities were included with the activity. Larger subelements were broken out and defined as separate activities. The list of activities was then narrowed down to the list in Appendix B based on a joint Military Department assessment of common support functions with cross-service potential.

1.6 Common Support Functions

The common support functions (CSFs) were selected as shown in Appendix C based on a joint Military Department assessment of commonalty and cross-servicing potential. Common support functions which were already consolidated and being cross serviced were not included.

Common Support Functions are divided into two categories: product and pervasive. Product functions include all S&T, engineering development, and in-service engineering efforts associated with a product from all funding sources. Pervasive functions only include those efforts that are S&T funded, i.e. Technology Base (6.1)/Exploratory Development (6.2)/Advanced Development (6.3).

94-09-26 18:16 RCVD

CONTROL NUMBER: LJCSWG-AF 020

PURPOSE: To provide SAF/AQX staff corrected answers to Questions 3.0, 3.2.1, 3.3.1.1, etc to the SM-ALC McClellan AFB response to the Laboratory Joint Data Call. There are wide discrepancies in reporting personnel/workyears in your response dated 19 Aug. 1994. For instance the totals in the respective tables are: 2.1 - 195; 3.2.1 - 160; 3.3.1.1 -171. There are even wider discrepancies between 3.2.1 and 3.3.1.1. Also, only four CSFs are reported in 3.2.1 while seven CSFs are reported in 3.3.1.1. Even in most of the CSFs reported in both 3.2.1 and 3.3.1.1 there are wide discrepancies in the data. For example Air Vehicle Fixed-Sructure has 19 reported in 3.2.1 and 74 in 3.3.1.1; Air Vehicle Fixed Avionics has 99 reported in 3.2.1 and 16 in 3.3.1.1. Lesser discrepancies exist in the other CSFs. There should be closer correlation between the tables since it is all FY 93 data. Additionally you list 13 CSFs in response to 3.0 and state you are reporting on these "... throughout the questionnaire:". However, as stated above only a few of the CSFs are mentioned in 3.2.4.1, patents and 3.2.4.2, papers but no workyears are booked against these CSFs All questions in Section 3 must be answered for each CSF. Request you review your data call response of 19 Aug 1994 and correct as necessary to provide close correlation and a common thread through Section 3 of your data call response.

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

MAJCOM REVIEWER: _____
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CONTROL NUMBER: LJCSWG-AF 020

PURPOSE: To provide SAF/AQX staff corrected answers to Questions 3.0, 3.2.1, 3.3.1.1, etc to the SM-ALC McClellan AFB response to the Laboratory Joint Data Call. There are wide discrepancies in reporting personnel/workyears in your response dated 19 Aug. 1994. For instance the totals in the respective tables are: 2.1 - 195; 3.2.1 - 160; 3.3.1.1 -171. There are even wider discrepancies between 3.2.1 and 3.3.1.1. Also, only four CSFs are reported in 3.2.1 while seven CSFs are reported in 3.3.1.1. Even in most of the CSFs reported in both 3.2.1 and 3.3.1.1 there are wide discrepancies in the data. For example Air Vehicle Fixed-Sructure has 19 reported in 3.2.1 and 74 in 3.3.1.1; Air Vehicle Fixed Avionics has 99 reported in 3.2.1 and 16 in 3.3.1.1. Lesser discrepancies exist in the other CSFs. There should be closer correlation between the tables since it is all FY 93 data. Additionally you list 13 CSFs in response to 3.0 and state you are reporting on these "... throughout the questionnaire:". However, as stated above only a few of the CSFs are mentioned in 3.2.4.1, patents and 3.2.4.2, papers but no workyears are booked against these CSFs All questions in Section 3 must be answered for each CSF. Request you review your data call response of 19 Aug 1994 and correct as necessary to provide close correlation and a common thread through Section 3 of your data call response.

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSO Guidance Package instructions

MAJCOM: (Concurs) Does not concur (explain:)

SEE ATTACHED.

Thomas L. Koepnick

MAJCOM REVIEWER: THOMAS L. KOEPNICK HQ AFMC/XPX 787-2622 23 SEP 94
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: SANDRA L. MCDONALD SM-ALC/FMPB 633-1280 14 SEP 94
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

REVISED 2.1, 3.0, 3.1.1, 3.1.2, 3.1.4, 3.1.5, 3.2.1, 3.2.2, 3.2.3, 3.2.4.1, 3.2.4.2, 3.3.1.1, 3.3.1.2 3.3.1.3, 3.3.2.2, 3.4.1

INSTALLATION WORK SHEET

MCCLELLAN AFB, CA

PURPOSE: To provide SAF/AQX corrected response (additional information) and to document answer for DOD Joint Cross-Service Working Group for Lab question number (2.1) **Workload. Use the following table to describe historic and projected workload at each activity in terms of funding and workyears. Assume previous BRAC closures and realignments are implemented on schedule. Projected funding will be derived from FY95 President's Budget Submission (Then year dollars). Past fiscal year data shall begin with FY86 or at the inception of the activity as it existed on 1 Oct 93. (BRAC Criteria I & IV)**

SOURCE: Information was obtained from various worksheets and consolidated by SM-ALC/FMPB, Sandra L. McDonald, DSN 633-1280. The source data is currently on file in SM-ALC/FMPB. Discussion between Jim Sellner, LHB, DSN 633-2550 and Sandra McDonald regarding the larger number of workyears versus personnel identified. (See note below table).

METHOD: Documentation extracted from various worksheets submitted to SM-ALC/FMPB and consolidated into an "overall" conclusion. Discussion between Jim Sellner, LHB, DSN 633-2550 regarding the number of workyears. There are 30 workyears for FY 93 that were funded by the customer and work was contracted with SM-ALC/TIS on a form 206 to perform this work. The personnel are DMIF funded in their perspective organization and are not listed in questions 3.2.1 - 3.2.3 in the personnel information.

CONCLUSION:

Information Required	Fiscal Years											
	86	87	88	89	90	91	92	93	94	95	96	97
Total Funds Programmed (SM)	12.5	18.5	18.2	31.7	51.6	50.6	43.1	46.1	57.4	58.4	60.1	61.6
Total Actual Funds (SM)	12.2	18.1	13.7	21	38.3	66.7	97.5	108.8				
Programmed Workyears	—	—	—	—	—	162	184	195	127.5	149.5	148.5	151
Actual Workyears	—	—	—	—	—	162	184	195				

NOTE: The workyears identified in actual workyears will differ throughout the questionnaire from the personnel assigned due to personnel performing work were SM-ALC DMIF funded personnel contracted on a Form 206 to perform in-servicing work. These individuals were counted in the Depot Questionnaire.

I certify that the above information is accurate and compete to the best of my knowledge and belief.

Preparer: Sandra L McDonald Date: (REVISED 14 Sep 94)

SANDRA L. MCDONALD, SM-ALC/FMPB, DSN: 633-1280

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: [illegible] Date: 23 Sep 94

[illegible] DSN [illegible]

WKSHT2.1 MAC/McClellan AFB
09/15/94 1:34 PM

SECTION II: CAPACITY OF DOD COMPONENTS

2.1 **Workload.** Use the following table to describe historic and projected workload at each activity in terms of funding and workyears. Assume previous BRAC closures and realignments are implemented on schedule. Projected funding will be derived from FY95 President's Budget Submission (Then year dollars). Past fiscal year data shall begin with FY86 or at the inception of the activity as it existed on 1 Oct 93. (BRAC Criteria I & IV)

Information Required	Fiscal Years											
	86	87	88	89	90	91	92	93	94	95	96	97
Total Funds Programmed ($M)	12.5	18.5	18.2	31.7	51.6	50.6	43.4	46.2	57.4	59.2	60.9	62.2
Total Actual Funds ($M)	12.2	18.1	13.7	21	38.3	66.7	97.5	107.1				
Programmed Workyears	----	----	-----	----	----	162	184	195	127.5	149.5	148.5	151
Actual Workyears	----	----	-----	----	----	162	184	195				

NOTE: The reason for the drop off in programmed workyears is due to the Electronic Combat Integrated Support Facility being funded on a "real-time as required basis". Funding is issued for the current year by the customer.

- Budgeted workyears are the selected indicator of the "lab" infrastructure's capacity at an aggregate level for each Military Department. They include both workyears funded directly by the Military Department and the workyears funded from organizations outside the Military Department.

Workyears = government personnel and on-site FFRDCs and SETAs

2.2 **Excess "Lab" Capacity -- Measured at the DOD Component Level**

- Excess "Lab" Capacity = Sum of the Peak Workyears - Sum of the Projected Workyears
  - Peak at each activity = Highest value between FY86 (or since inception of organization) and FY93
  - Projected at each activity = Estimated at FY97

FY 93 Programmed Workyears - Projected Workyear for FY 97 = Estimated at FY 97

195 - 151 = 44

INSTALLATION WORK SHEET

MCCLELLAN AFB, CA

PURPOSE: To document answer for DOD Joint Cross-Service Working Group for Lab question number (3.0) **Mission: Describe the major capabilities at your activity contributing to the common support function in bulletized format. Describe any relationship and interconnectivity with other functions (common or otherwise) in support of the overall activity mission.**

SOURCE: Information was obtained from various discussion between points of contact in the Product Directors and worksheets submitted. Points of contact include SM-ALC/TI (Dave Netherton, DSN 633-3672, ext 312), SM-ALC/LHB (Jim Sellner, DSN 633-2550) and Garry Gerick, DSN 633-1280) and consolidated by SM-ALC/FMPB, Sandra McDonald, DSN 633-1280. The source data is currently on file in SM-ALC/FMPB.

METHOD: Discussion between Directorate points of contact resulted in the decision to go with the preponderence of work being done in the following common support functions: TI Labs - Air Vehicles-Fixed-Avionics and Space Systems-Satellites. SM-ALC/LH common support functions prepoionderence of work fell in C4I Systems - Fixed Ground-Based C4I and Ground Mobile C4I.

CONCLUSION:

Major capabilities contributing to common support functions:

- SYSTEM TECHNOLOGY
- ENTENDABLE INTEGRATED SYSTEM ENVIRONMENT (EISE)
- ELECTRO-OPTICS TECHNOLOGY CENTER
- USAF ADVANCED COMPOSITES PROGRAM OFFICE
- ADVANCED MICROELECTRONICS TECHNOLOGY PROGRAM OFFICE
- GROUND THEATER AIR CONTROL SYSTEM
- COMMUNICATIONS NODAL CONTROL ELEMENT
- MODULAR CONTROL EQUIPMENT
- ELECTRONIC COMBAT INTEGRATED SUPPORT FACILITY
- OVER-THE-HORIZON-BACKSCATTER RADAR INTEGRATED SUPPORT FACILITY
- GROUND WAVE EMERGENCY NETWORK (GWEN)
- FPS-117 LOGSET
- NDI-NEUTRON RADIOGRAPHY

We will be reporting on the following common support functions (CSF) throughout the questionnaire:

Product Functions:

LAB\WK3.0 McClellan AFB
09/13/94(3:53 PM)

Air Vehicles
- Fixed/Avionics

Space Systems
- Satellites

C4I Systems
- Fixed Ground-Based C4I
- Ground Mobile C4I

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: Sandra L McDonald Date: (Revised 13 Sep 94)
SANDRA L. McDONALD, SM-ALC/FMPB, DSN 633-1280

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Donald L Lucht Date: 20 Sep 94
Donald L Lucht, AFAFMC/LGPG
BM-14, DSN 787-5610

LABWKS.0 McClellan AFB
09/15/94(3:06 PM)

INSTALLATION WORK SHEET

MCCLELLAN AFB, CA

PURPOSE: To document answer for DOD Joint Cross-Service Working Group Lab question number (3.1.1) **Geographic/Climatological Features: Describe any geographic/climatological features in and around your activity that are relevant to each CSF. Indicate and justify those that are required versus those that just serve to enhance accomplishing the mission of the activity. For example, clear air at high altitude that increases quality of atmospheric, ground-based laser experiments in support of the weapons CSF. (BRAC Criteria I)**

SOURCE: Information was obtained from discussion with points of contact in SM-ALC/TI (Dave Netherton, DSN 633-3672, ext 312) (Dan Marrujo, DSN 633-6617), SM-ALC/LHB (Bob Matt 633-2550) and SM-ALC/FMPB, (Garry Gerrick DSN 633-1280).

METHOD: Discussion with points of contact Dave Netherton, Dan Marrujo, Bob Matt and Garry Gerrick. Through professional judgment it was determined our activity does not warrant any special requirements for our common support functions performed.

CONCLUSION:

NONE

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: Sandra L McDonald Date: (Revised 13 Sep 94)
SANDRA L. McDONALD, SM-ALC/FMPB, DSN 633-1280

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: [illegible] Date: 20 SEP 94
Don Lucht, GM-14, HQ AFMC/LG [illegible] 787-5210

INSTALLATION WORKSHEET
MCCLELLAN AFB, CA

PURPOSE: To document answer for DOD Joint Cross-Service Working Group Lab Question Number (3.1.2) **Licenses & Permits: Describe and list the licenses or permits (e.g., environmental, safety, etc.) that your activity currently holds and justify why they are required to allow tests, experiments, or other special capabilities at your location for each CSF. For example, permit to store and use high explosives.**

SOURCE: Joseph A. Bishop, Atmospheric Early Warning Systems, SM-ALC/LHE, 633-5932
Dan Marrujo, Electrical Engineer, SM-ALC/TIEE, 633-3147
Charles J.D. Thorpe, Chief, SM-ALC/EMP, 633-2517, ext. "0"
Maj Robert Johnson, SM-ALC/EMP, DSN 633-4976
Radioactive Material Permit #04-10117-3 AFP, 22 Jul 94

METHOD: Above individuals performed a literature search and found that only Radioactive Material Permit #04-10117-3 AFP applied to this question.

CONCLUSION:

CSF - Air Vehicles - Fixed -- Avionics
CSF - Space Systems - Satellites

Radiation license for occupational health and safety and operational facilities pursuant to the use of 1) Cobalt 60 (19,100 Curies); 2) Cobalt 60 (100 Curies); and 3) Cesium 137 (100 Curies). These radioactive elements are used in the test and evaluation of Radiation Hardening Techniques. The Licenses are required to test and evaluate applications of Electro-optic technologies.

CSF - C4I Fixed Ground-Based C4I (NONE)
CSF - C4I Ground Mobile C4I (NONE)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

PREPARER: Sandra L McDonald Date: (Revised 13 Sep 94)
SANDRA L. McDONALD, SM-ALC/FMPB, 633-1280

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: [signature] Date: 20 SEP 94
Don Lewis, GM-14, HQ AFMC/LGFE, DSN 787-5762

AIR STAFF CORRECTION WORKSHEET

3.1.3 Environmental Constraints

PURPOSE: To provide corrected answer to **SACRAMENTO ALC, MCCLELLAN AFB, CA.**

SOURCE: **'95 BRAC Questionnaire**

CONCLUSION: **Update needed (~~no change~~)** see below

MAJCOM (CONCURS)(NONCONCURS): **CONCURS (Provided info VIA questionnaire)**

BASE (CONCURS) (DOES NOT CONCUR): -same-

I certify the above information is accurate and complete to the best of my knowledge and belief, based upon information provided by identified sources.

AIR STAFF REVIEWER: R. McCann (CEVP) **DATE:** 28 JUL 1994

McClellan AFB is located in an air quality non-attainment area for CO, particulates (PM-10) and ozone. Cultural and Natural resources associated with McClellan AFB and Reservation would have to be considered prior to any related construction activities.

INSTALLATION WORK SHEET

MCCLELLAN AFB, CA

PURPOSE: To document answer for DOD Joint Cross-Service Working Group Lab question number (3.L.4) **Special Support Infrastructure: List and describe the importance of any mission related special support infrastructure (e.g. utilities) present at your location for your activity. (BRAC Criteria I)**

SOURCE: McClellan AFB Base Comprehensive Plan (BCP), August 1987, Mr Gordon Jewell, 652 ABG/CERS, DSN 633-3336. Common Support Functions were identified by points of contact in SM-ALC/TI (Dave Netherton, DSN 633-3672, ext 312) and SM-ALC/LH (Jim Sellner, DSN 633-2550).

METHOD: The information to answer this question was extraced from the BCP, design drawings and via interview with the electrical systems engineer and appropriate Lab personnel.

CONCLUSION:

The following common support functions are affected by the infrastructure:

Air Vehicles
- Fixed
  - Avionics

Space Systems
- Satellites

C4I Systems
- Fixed Ground-Based C4I
- Ground Mobile C4I

The design of three newly constructed on-base substations affords full redundancy at each substation as well as providing emergency-generated power from the gas turbine (GT) generator via central switch station, thus allowing feeds to any facility from seven (7) different sources. As indicated in question 3.5.3, only 40 percent of capacity is currently being utilized.

CSF - C4I Systems - Fixed Ground Based C4I: Special support infrastructure includes a radar tower capable of supporting the FPS-117 and its radome . This structure is designed to carry 34,000 pounds and includes sufficient space for all operational equipment.

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: Sandra L. McDonald Date: (Revised 14 Sep 94)
SANDRA L. MCDONALD, SM-ALC/FMPB, DSN: 633-1280

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: [signature] Date: 20 SEP 94
Donald L Lock, GM-14
HQ AFMC/LGPE
DSN 787-5210

INSTALLATION WORK SHEET

MCCLELLAN AFB, CA

PURPOSE: To document answer for DOD Joint Cross-Service Working Group Lab question number (3.1.5). **Proximity to Mission-Related organizations: List and describe the importance and impact of not having nearby organizations which facilitate accomplishing or performing your mission -- e.g. operational units, FFRDCs, universities/colleges, other government organizations, and commercial activities. Restrict your response to the top five. Complete the following: (BRAC Criteria I)**

SOURCE: Information was obtained from worksheets and consolidated by SM-ALC/FMPB, Sandra McDonald, DSN 633-1280. The source data is currently on file in SM-ALC/FMPB.

METHOD: Documentation extracted from various worksheets submitted to SM-ALC/FMPB and consolidated into an "overall" conclusion.

CONCLUSION:

Common Support Functions	Name	Type of Organization	Distance	Workyears Performed by Your Activity	Workyears Funded by Your Activity
Air Vehicles Fixed/Avionics	CA State University	University	7 miles	1	1
Air Vehicles Fixed/Avionics	UC Davis	University	40 miles	1	1
Air Vehicles Fixed/Avionics	SM-ALC/TIEF	Electro-Optics	Adj	2	2
Air Vehicles Fixed/Avionics	SM-ALC/TIR	Nuclear	Adj	1	1
Air Vehicles Fixed/Avionics	SM-ALC	ALC	Adj	13	13

The activities outlined above relate intimately with the work performed in the LABS. The most important of these relationships is inherent in the fact that the Center itself, acting as a Depot, has resident item managers and the infrastructure that both drives and impacts the requirements placed on these activities. If the Center was elsewhere, the impact would be primarily inconvenience and level of service. These two impacts are definable in terms of monies. The Nuclear facility is the single facility that is not replaceable in any case. The Nuclear facility with the comprehensive testing and evaluations capabilities is simply not available elsewhere. The impact if that facility was not available is significant.

Common Support Functions	Name	Type of Organization	Distance	Workyears Performed by Your Activity	Workyears Funded by Your Activity
C4I/Ground Mobile	Unisys	commercial activity	on site	13	13

C4I/Ground Mobile	TIS	government	on site	14	14
C4I/Ground Mobile	MITRE	commercial	on site	5	5
C4I/Ground Mobile	LHRE	government	on site	2	2
C4I/Ground Mobile	LHRE	government	on site	15	15

The above table outlines the support to Various C4I lab functions. Interconnection of the labs with these organizations provides support for the following types of activities: Reengineering of non-commercially available parts, Fiber optic repair kit for field use. Extensive modifications to some of these type systems may need to be tailored for specific field applications. This has lead to many unique configurations of the hardware and software. The lab allows for evaluation of existing system operation without TDY to using locations. For modifications, only a final test has to be conducted at the field location.

Common Support Functions	Name	Type of Organization	Distance	Workyears Performed by Your Activity	Workyears Funded by Your Activity
C4I/Fixed Ground Based C4I	TISCA	government	on site	8	8
4I/Fixed Ground Based C4I	LHET	government	on site	2	2
C4I/Fixed Ground Based C4I	Horizons Technology	Contractor	on site	3	3
C4I/Fixed Ground Based C4I	Martin Marietta	Contractor	on site	1	1

Having on site access allows for the modification, test and evaluation of the software and hardware without extensive TDY to remote locations. In addition, depot repair of the FPS-117 is at SM-ALC which assures immediate access to qualified repair personnel.

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: Sandra L McDonald Date: (Revised 14 Sep 94)
SANDRA L. McDONALD, SM-ALC/FMPB, DSN: 633-1280

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: [signature] Date: 20 Sep 94
WWSHT3 1.5 McClellan AFB
09/14/94(9:44 AM)

Donald L Lucht, GM-14
HQ AFMC/LGPE
DSN 787-5610

INSTALLATION WORK SHEET

MCCLELLAN AFB, CA

PURPOSE: To document answer for DOD Joint Cross-Service Working Group question 3.2.1 Total Personnel: What is the total number of government (military and civilian), on-site federally funded research and development center (FFRDC), and on-site system engineering 13-Sep-94 technical assistance (SETA) personnel engaged in science and technology (S&T), engineering development and in-service engineering activities as of end FY93? For individuals that predominantly work in CSFs, involved in more than one CSF, account for those individuals in the CSF that represents the preponderance of their effort. (BRAC Criteria I)

SOURCE: Mike O'Conner, SM-ALC/DPCC, DSN 633-3181
Dave Netherton, SM-ALC/TICB, DSN 633-6617
Jim Sellner, SM-ALC/LHB, DSN 633-2550
Sandra L. McDonald, SM-ALC/FMPB, DSN 633-1280

METHOD: Specific names of individuals assigned to lab functions were submitted to SM-ALC/DPCC. A listing was established with relevant data on each employee (i.e.., Education, Service Computation Date, Supervisory Code, etc.). There was a need to clarify the definition of Technical. The questionnaire includes "Professional" series under the technical group as defined in the OPR Classification Guide (Ref Lab JCSG control number Army 4122-003). In determining the common support functions, the sources listed above determined by the individuals work area the preponderence of the workload and assigned individuals by name to the four main common support functions for this center. Through professional judgement it was determined that 85% of the workload falls within the Air Vehicles Fixed Avionics and 15% falls in the Space Systems Satellites. The C4I Systems were identified by name by common support function by the listing submitted by SM-ALC/LH and reviewed by Jim Sellner, SM-ALC/LH.

CONCLUSION:

Types of personnel	Number of Personnel			
	Government		On-Site FFRDC	On-Site SETA
CSF - Air Vehicle Fixed - Avionics	Civilian	Military		
Technical	81	0	N/A	N/A
Management (Supv)	11	0	N/A	N/A
Other	16	0	N/A	N/A
TOTAL	108	0	N/A	N/A

Types of personnel	Number of Personnel			
	Government		On-Site FFRDC	On-Site SETA
CSF - Space Systems Satellites	Civilian	Military		
Technical	18	0	N/A	N/A
Management (Supv)	1	0	N/A	N/A
Other	0	0	N/A	N/A
TOTAL	19	0	N/A	N/A

Types of personnel	Number of Personnel			
	Government		On-Site FFRDC	On-Site SETA
CSF - C4I Systems Fixed Ground-Based C4I	Civilian	Military		
Technical	2	0	N/A	N/A
Management (Supv)	0	0	N/A	N/A
Other	0	0	N/A	N/A
TOTAL	2	0	N/A	6

Types of personnel	Number of Personnel			
	Government		On-Site FFRDC	On-Site SETA
CSF - C4I Ground Mobile C4I	Civilian	Military		
Technical	12	1	N/A	N/A
Management (Supv)	1	0	N/A	N/A
Other	2	0	N/A	N/A
TOTAL	15	1	N/A	14

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: Sandra L McDonald Date: (Revised 13 Sep 94)
SANDRA L. MCDONALD, SM-ALC/FMPB, DSN: 633-1280

I certify that the above information is accurate and compete to the best of my knowledge and belief.

MAJCOM Reviewer: Peggy S. Rutter Date: 23 Sep 94
Peggy S. Rutter, GS-13, HQ AFMC/DPCF, DSN 787-4136

INSTALLATION WORK SHEET

MCCLELLAN AFB, CA

PURPOSE: To document answer for DOD Joint Cross-Service Working Group questions: 3.2.2 **Education: What is the number of government personnel actively engaged in S&T, engineering development and in-service engineering activities by highest degree and type of position? Provide the data in the following table: (BRAC Criteria I)**

SOURCE: Mike O'Conner, SM-ALC/DPCC, DSN 633-3181
Dave Netherton, SM-ALC/TICB, DSN 633-6617
Bob Matt, SM-ALC/LHB, DSN 633-2550
Sandra L. McDonald, SM-ALC/FMPB, DSN 633-1280

METHOD: Specific names of individuals assigned to lab functions were submitted to SM-ALC/DPCC. A listing was established with relevant data on each employee (i.e.., Education, Service Computation Date, Supervisory Code, etc.). There was a need to clarify the definition of Technical. The questionnaire includes "Professional" series under the technical group as defined in the OPR Classification Guide (Ref Lab JCSG control number Army 4122-003). In determining the common support functions, the sources listed above determined by the individuals work area the preponderence of the workload and assigned individuals by name to the four main common support functions for this center. Through professional judgement it was determined that 85% of the workload falls within the Air Vehicles Fixed Avionics and 15% falls in the Space Systems Satellites. The C4I Systems were identified by name by common support function by the listing submitted by SM-ALC/LH and reviewed by Jim Sellner, SM-ALC/LH.

CONCLUSION:

Type of Degree/ Diploma CSF Air Vehicles, Fixed - Avionics	Number of Government Personnel by Type of Position		
	Technical	Management (Supv)	Other
High School or Less	0	0	2
Some College	4	1	8
Associates	0	0	1
Bachelor	61	9	5
Masters	16	0	0
Doctorate (include Med/Vet/etc.)	0	1	0
TOTAL	81	11	16

Type of Degree/ Diploma CSF Space Systems Satellites	Number of Government Personnel by Type of Position		
	Technical	Management (Supv)	Other
High School or Less	0	0	0
Some College	0	0	0
Associates	0	0	0
Bachelor	13	1	0
Masters	6	0	0
Doctorate (include Med/Vet/etc.)	0	0	0
TOTAL	18	1	0

Type of Degree/ Diploma CSF C4I Systems Fixed Ground-Based C4I	Number of Government Personnel by Type of Position		
	Technical	Management (Supv)	Other
High School or Less	0	0	0
Some College	4	0	0
Associates	1	0	0
Bachelor	6	0	0
Masters	4	1	0
Doctorate (include Med/Vet/etc.)	0	0	0
TOTAL	15	1	0

Type of Degree/ Diploma CSF C4I Systems Ground Mobile	Number of Government Personnel by Type of Position		
	Technical	Management (Supv)	Other
High School or Less	0	0	0
Some College	0	0	0
Associates	0	0	0
Bachelor	2	0	0
Masters	0	0	0
Doctorate (include Med/Vet/etc.)	0	0	0
TOTAL	2	0	0

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: Sandra L McDonald Date (Revised 14 Sep 94)
SANDRA L. MCDONALD, SM-ALC/FMPB, DSN: 633-1280

I certify that the above information is accurate and compete to the best of my knowledge and belief.

MAJCOM Reviewer: Peggy S Rutter Date: 23 Sep 94
Peggy S. Rutter, GS-13, HQ AFMC/DPCF, DSN 787-4136

INSTALLATION WORK SHEET

MCCLELLAN AFB, CA

PURPOSE: To document answer for DOD Joint Cross-Service Working Group question 3.2.3 **Experience: What is the experience level of government personnel? Fill in the number of government personnel in the appropriate boxes of the following table. (BRAC Criteria I)**

SOURCE: Mike O'Conner, SM-ALC/DPCC, DSN 633-3181
Dave Netherton, SM-ALC/TICB, DSN 633-6617
Bob Matt, SM-ALC/LHB, DSN 633-2550
Sandra L. McDonald, SM-ALC/FMPB, DSN 633-1280

METHOD: Specific names of individuals assigned to lab functions were submitted to SM-ALC/DPCC. A listing was established with relevant data on each employee (i.e.., Education, Service Computation Date, Supervisory Code, etc.). There was a need to clarify the definition of Technical. The questionnaire includes "Professional" series under the technical group as defined in the OPR Classification Guide (Ref Lab JCSG control number Army 4122-003). In determining the common support functions, the sources listed above determined by the individuals work area the preponderence of the workload and assigned individuals by name to the four main common support functions for this center. Through professional judgement it was determined that 85% of the workload falls within the Air Vehicles Fixed Avionics and 15% falls in the Space Systems Satellites. The C4I Systems were identified by name by common support function by the listing submitted by SM-ALC/LH and reviewed by Jim Sellner, SM-ALC/LH.

CONCLUSION:

Type of Position CSF Air Vehicles Fixed - Avionics	Years of Government and/or Military Service				
	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Technical	5	47	18	2	9
Management (Supv)	0	0	7	2	2
Other	2	3	5	2	4
TOTAL	7	50	30	6	15

Type of Position CSF Space Systems Satellites	Years of Government and/or Military Service				
	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Technical	2	10	0	1	3
Management (Supv)	0	0	0	1	0
Other	0	0	0	0	0
TOTAL	2	10	2	2	3

Type of Position CSF C4I Systems Fixed Ground-Based C4I	Years of Government and/or Military Service				
	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Technical	0	7	4	2	2
Management (Supv)	0	0	1	0	0
Other	0	0	0	0	0
TOTAL	0	7	5	2	2

Type of Position CSF C4I Systems Ground Mobile	Years of Government and/or Military Service				
	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Technical	0	2	0	0	0
Management (Supv)	0	0	0	0	0
Other	0	0	0	0	0
TOTAL	0	2	0	0	0

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: Sandra L McDonald Date (Revised 14 Sep 94)
SANDRA L. MCDONALD, SM-ALC/FMPB, DSN: 633-1280

I certify that the above information is accurate and compete to the best of my knowledge and belief.

MAJCOM Reviewer: Peggy S. Rutter Date: 23 Sep 94
Peggy S. Rutter, GS-13, HQ AFMC/DPCF, DSN 787-4136

INSTALLATION WORK SHEET

MCCLELLAN AFB, CA

PURPOSE: To document answer for DOD Joint Cross-Service Working Group for Lab question number (3.2.4.1) **How many patents were awarded and patent disclosures (only count disclosures with issued disclosure numbers) were made? (BRAC Criteria I)**

SOURCE: Information was obtained from SM-ALC/JA Office; information maintained in the file drawers (paper copies). SM-ALC/JA point of contact is Mr Donald Weight, DSN 633-5123 or commercial 643-5123. Information was put together by SM-ALC/CN, Kimberly Chaves, DSN 633-1248. Discussion on common support functions between SM-ALC/TI personnel Dave Netherton, DSN 633-3672, ext 312 and Dan Marrujo, DSN 633-3147.

METHOD: Information obtained from SM-ALC/JA Office and put together by SM-ALC/CN office. The common support functions were determined by SM-ALC/TI points of contact based on the individuals who wrote the papers and the common support functions they work under.

CONCLUSION:

CSF	Disclosures No	Invention No	Patent Titles (List)
Air Vehicles Fixed Avionics	B91-59	19,984	Inductive Pressure/Temperature/Disbond Sensor
Air Vehicles Fixed Avionics	B91-60	19,198	Inductive Position/Proximity Sensor
Air Vehicles Fixed Avionics	B91-61	19,986	Inductive Strain Sensor
Air Vehicles Fixed Avionics		20,915	Cryogenic Removal Method of Epoxy Impregnated Coils from Rigid Outer Housings
Air Vehicles Fixed Avionics		20,674	Measuring Tool Pin
Air Vehicles Fixed Avionics		19,974	System and Method of Embedding Optical Fibers in Honeycomb Panels
Air Vehicles Fixed Avionics	Patent No #5,070,603	Date Awarded 10 Dec 93	Printer Circuit Wiring Boards
Air Vehicles Fixed Avionics	Patent No #5,163,005	Date Awarded 10 Nov 92	Method of Cloning Printed Wiring Boards

Air Vehicles Fixed Avionics	Patent No #5,199,159	Date Awarded 6 Apr 93	Method for Cryogenic Removal of Epoxy/Wire Field Windings and for Separating Multi-Layer Printed Circuit Wiring Boards
Air Vehicles Fixed Avionics	Patent No #5,227,798	Date Awarded 13 Jul 93	Passive Transmitting Sensor
Total	7	10	

Preparer: Sandra L McDonald Date: (Revised 14 Sep 94)
SANDRA L. MCDONALD, SM-ALC/FMPB, DSN: 633-1280

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Donald L Lucht Date: 20 Sep 94
Donald L Lucht, GM-14
HQ AFMC/LGDE
DSN 787-5670

INSTALLATION WORK SHEET

MCCLELLAN AFB, CA

PURPOSE: To document answer for DOD Joint Cross-Service Working Group for Lab question number (3.2.4.2) **How many papers were published in peer reviewed journals? (BRAC Criteria I)**

SOURCE: Gary Weiss, System Technology Lab, DSN 633-4590; Gus Kapandritis, Electro-Optics Lab, DSN 633-3293; Milt Swope, DSN 633-3810, Composites Lab; Ken Bollinger, DSN 633-0541, EISE; Dave Piotrkowski, DSN 633-6454, Microelectronics. SM-ALC/TI, Dave Netherton, DSN 633-3672, ext 312.

METHOD: Data for this element was developed via research throughout each of the Labs by personal discussion between the individuals mentioned in the source. The common support functions were identified by the SM-ALC/TI point of contact Dave Netherton based on the individuals who wrote the paper and the common support function they work under.

CONCLUSION:

CSF	Number Published	Paper Titles (List)
(Air Vehicle Fixed/Avionics/Space Sys/Satellites)	1	IDS/JCALS Integration
Air Vehicles Fixed Avionics	1	Real-time monitoring for environmental pollutants in the air
Air Vehicles Fixed Avionics	1	Integrated sensor real-time monitoring for environmental pollutants
Air Vehicles Fixed Avionics	1	Environmental Process Improvement Center
Air Vehicles Fixed Avionics	1	Cold Solution
Air Vehicles Fixed Avionics	1	Cryogenics: Air Force Engineer develops
Air Vehicles Fixed Avionics	1	Cryogenics: Solution to Pollution
Air Vehicles Fixed Avionics	1	Cryogenic Removal Technology
Air Vehicles Fixed Avionics	1	Fiber Optic Interphone System
Air Vehicles Fixed Avionics	1	Measurement of neutron irradiation on polarization maintaining fiber

Air Vehicles Fixed Avionics	1	Optoelectronic Processing Technology
Air Vehicles Fixed Avionics	1	Evaluation of One-Dimensional Mathematic Models of the Standard PRIZ
Air Vehicles Fixed Avionics	1	Stress Field Sensitivity of a Composite
Air Vehicles/Fixed Avionics	1	Optimization and Evaluation of Unidirectional Specimens for Tensile Testing
Air Vehicles/Fixed Avionics	1	F-15 APG-63 Hybird Emulation
Air Vehicles/Fixed Avionics	1	F-111 P524/525
Air Vehicles/Fixed Avionics	1	F-111 DCC VHSIC Insertion
Air Vehicles/Fixed Avionics	1	F-15 Lantirn Obs Evaluation
Air Vehicles/Fixed Avionics	1	F-15 APG-63 Radar Obs Evaluation
Air Vehicles Fixed Avionics	1	F-111 Stores Management Sys Upgrade
Air Vehicles Fixed Avionics	1	F-111 Weapons Select Indicator
Air Vehicles Fixed Avionics	1	F-111 Weapons Select Indicator
Air Vehicles Fixed Avionics	1	Multiple Launch Rocket Systems Redesign
Space Systems/Satellites	1	Cheyenne Mountain Complex T&E Module
Air Vehicles Fixed Avionics	1	Microelectronics Center of Excellence
Air Vehicles Fixed Avionics	1	Multiple Chip Module - Digital Transfer Memory
TOTAL	26	

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: Sandra L McDonald Date: (Revised 14 Sep 94)

SANDRA L. MCDONALD, SM-ALC/FMPB, DSN: 633-1280

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer [signature] Date: 20 SEP 94

WKSHT2.2.4 2 McChllan AFB

Donald L Lucht, GM-14
HQ AFLC/LFPE

INSTALLATION WORK SHEET

MCCLELLAN AFB, CA

PURPOSE: To document answer for DOD Joint Cross-Service Working Group question number (3.3.1.1) **Work Year and Lifecycle: Identify the number of actual workyears executed for each applicable CSF in FY93 for each of the following: government civilian; military; on-site FFRDCs; and on-site SETAs. (BRAC Criteria I)**

SOURCE: Information was obtained from worksheets and consolidated by SM-ALC/FMPB, Sandra McDonald, DSN 633-1280. Discussion verification of the number of workyears between SM-ALC/LHB, Jim Sellner, DSN 633-2550, and SM-ALC/TIE, Dan Marrujo, DSN 633-3147.

METHOD: Documentation extracted from various worksheets submitted to SM-ALC/FMPB and consolidated by LAB into an "overall" conclusion. Discussion between points of contact listed above to verify the number of workyears due to a discrepancy of 30 workyears. The 30 workyears are DMIF funded individuals who were contracted to perform in-servicing work.

CONCLUSION:

"LAB" CSF Air Vehicle/Fixed Avionics	Fiscal Year 1993 Actual			
	Civilian	Military	FFRDC	SETA
Science & Technology	None	None	None	None
Engineering Development	None	None	None	None
In-Service Engineering	108	None	None	None

"LAB" CSF Air Space Systems - Satellites	Fiscal Year 1993 Actual			
	Civilian	Military	FFRDC	SETA
Science & Technology	None	None	None	None
Engineering Development	None	None	None	None
In-Service Engineering	19	None	None	None

"LAB" CSF C4I Ground Mobile C4I	Fiscal Year 1993 Actual			
	Civilian	Military	FFRDC	SETA
Science & Technology	None	None	None	None
Engineering Development	None	None	None	None
In-Service Engineering	15	1	None	14

"LAB" CSF C4I Systems - Fixed Ground Based C4I	Fiscal Year 1993 Actual			
	Civilian	Military	FFRDC	SETA
Science & Technology	None	None	None	None
Engineering Development	None	None	None	None
In-Service Engineering	2	None	None	6

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: Sandra L. McDonald Date: (Revised 14 Sep 94)
SANDRA L. McDONALD, SM-ALC/FMPB, DSN: 633-1280

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Peggy S. Rutter Date: 23 Sep 94
Peggy S. Rutter, GS-13, HQ AFMC/DPCF, DSN 787-4136

WKSHT3.3.1.11 McClellan AFB
08/14/94(P 13 A4)

INSTALLATION WORK SHEET

MCCLELLAN AFB, CA

PURPOSE: To document answer for DOD Joint Cross-Service Working Group for Lab question number (3.3.1.2) **Engineering Development By ACAT: For each Common Support Function (e.g. airborne C4I) at each activity engaged in engineering development, provide:**

- **For each ACAT IC, ID, and II program (as defined in DODI 5000.2):**
  - **The name of the program**
  - **A brief program description**
- **For each ACAT III and IV programs:**
  - **The number of such programs**
  - **A list of program names**
- **For each program not an ACAT I, II, III, IV:**
  - **The number of such programs**
  - **A list of program names**
- **For the purpose of this question, any program between Milestone I and IV and containing demonstration and validation (Dem/Val 6.4)/Engineering and Manufacturing Development (EMD 6.5) funds in the FY95 PBS is considered to be engaged in engineering development (BRAC Criteria I).**

SOURCE: Information was obtained from Product Directorate and consolidated by SM-ALC/FMPB, Sandra McDonald, DSN 633-1280. The sourse data is currently on file in SM-ALC/FMPB.

METHOD: Documentation extracted from various worksheets submitted to SM-ALC/FMPB and consolidated into an "overall" conclusion.

CONCLUSION:
All CSFs Air Vehicles Fixed Avionics, Space Systems Satellites, C4I Systems Fixed Ground-Based C4I and C4I Systems Ground Mobile C4I do not have any ACAT funds against them. (Table is applicable for all CSF).

Engineering Development	Name or Number	Workyears (FY93 Actual)	FY93 Funds Received (Obligation Authority)	Narrative
ACAT IC	None	None	None	(Description)
ACAT ID	None	None	None	(Description)
ACAT II	None	None	None	(Description)
ACAT III/IV	None	None	None	(List)
Other:	None	None	None	(List)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: Sandra L McDonald Date (Revised 14 Sep 94)
SANDRA L. McDONALD, SM-ALC/FMPB, DSN: 633-1280

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Joe Brafford Date: 22 Sep 94
Joe Brafford, GM-14, AFMC/XRMP 787-5571

Document 3.3.1.2 McClellan AFB
09/15/94(1:57 PM)

INSTALLATION WORK SHEET

MCCLELLAN AFB, CA

PURPOSE: To document answer for DOD Joint Cross-Service Working Group for Lab question number (3.3.1.3) **In-Service Engineering: For each Common Support Function at each activity engaged in in-service engineering, list the in-service engineering efforts, the FY93 funds (from all sources) obligated for these efforts, the FY93 workyears for these efforts, and the weapon system(s) supported by these efforts. In-service engineering consists of all engineering support of fielded and/or out of production systems and includes efforts to improve cost, throughput, and schedule to support customer requirements as well as mods and upgrades for reliability, maintainability, and performance enhancements. (BRAC Criteria I)**

SOURCE: Information was obtained from worksheets submitted by Product Directorates and consolidated by SM-ALC/FMPB, Sandra McDonald, DSN 633-1280.

METHOD: Documentation extracted from various worksheets submitted to SM-ALC/FMPB and consolidated into an "overall" conclusion.

CONCLUSION:

Common Support Functions	In-Service Engineering Efforts (List)	FY93 Actual		Weapon System(s) Supported
		Funds Received (Obligation Authority)	Workyears	
Air Vehicles Fixed Avionics	Adv Composites AETC (Microelectronics) EISE Electro-Optics Sys Technology	93.4	108	C-17, B-2, F-22, F-15, F-16, F/A-18, F-15, SH-60, E-2C, F-14, B-52, F-111, COBRA Helicopter, A-10 SOF, F-4, LANTIRN, PAVE TACK, C-130, KC-135, C-140, C-141, RAH-66, AV-8B, TRU-2A GRYO, ISF, Tomohawk, MK26/74, Minuteman, Multiple Launch Rocket System Stores Mgt Set, MMST, Supsld, HMMWV, Legacy Systems Reverse Eng

Space Systems/ Satellites	Advanced Electronics Technologies Center (AETC) EISE Electro-Optics Sys Technology	20.25	19	Adv Space Borne Computer Module, MILSTAR, NORAD, STRATCOM, Cheyenne Mountain RICC, AF Titan & Delta Launch Facilities, AF Space & Missile Launch Facilities, Ballistic Missile Defense Org, Space Surveillance and Sensor Systems, GUPS
C4I/Ground Mobile	ECISF GTACS	3.7	60	Communication Nodal Control Element (CNCE), 806L, Modular Control Element (MCE)
C4I Fixed Ground-Based C4I	FPS-117, FPS-118, Software Support	1.15	8	FPS-117 FPS-118 GWEN

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: Sandra L. McDonald Date: (Revised 13 Sep 94)
SANDRA L. MCDONALD, SM-ALC/FMPB, DSN: 633-1280

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Donald L. Lucht Date: 20 Sep 94
Donald L. Lucht, GM-14
HQ AFMC/LGPE
DSN 787-5610

INSTALLATION WORK SHEET

MCCLELLAN AFB, CA

PURPOSE: To document answer for DOD Joint Cross-Service Working Group for Lab question number (3.3.2.1) **Direct Funding: For each applicable CSF, identify direct mission funding by appropriation from FY94 to FY97. Use FY95 PBS for FY95-FY97. (BRAC Criteria I)**

SOURCE: Information was obtained from various worksheets and consolidated by SM-ALC/FMPB, Sandra McDonald, DSN 633-1280. Data for these worksheets were derived from a combination of Program Authority (PA), Budget Authorization (BA), Fund Cite Authorizations (FCA, AF Form 616), and professional estimates of how programs will be funded in the outyears.

METHOD: Documentation extracted from various worksheets submitted to SM-ALC/FMPB and consolidated into an "overall" conclusion. Data were extracted from sources listed above.

CONCLUSION:

CSF	FY94	FY95	FY96	FY97
Air Vehicles Fixed Avionics 3010	1.65M	26.595M	26.71M	24.37M
Air Vehicles Fixed Avionics 3400	1.116M	11.089M	11.089M	11.089M
Air Vehicles Fixed Avionics 4930	2.187M	0	0	0
Air Vehicles Fixed Avionics 3080	1.6M	2.98M	2.8M	3.041M
Space Systems Satellites 3080	1.225M	2.82M	2.74M	2.815M
Space Systems Satellites 3400	0.779M	6.637M	6.637M	6.637M
Space Systems Satellites 4930	0.383	0	0	0
C4I Fixed Ground Based 3400	7.323M	13.186M	13.414M	13.914M
C4I Fixed Ground Based 4930	0.383	0	0	0

LABWK352.1McClellan AFB
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C4I Systems Ground Mobile 3400	0.455M	4.297M	4.297M	4.297M
C4I Systems Ground Mobile 4930	0.383M	0	0	0
C4I Systems Ground Mobile C4I 3400	0.455	4.297	4.297	4.297
C4I Systems Fixed Ground Based C4I 4930	0.383	0	0	0

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: Sandra L. McDonald Date: (Revised 15 SEP 94)
SANDRA L. MCDONALD, SM-ALC/FMPB, DSN: 633-1280

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Date: 22 Sep 94
ROY J. SANDERS, HQ AFMC/FMTC, DSN 787-5475

LASIWK352.1McClellan AFB
09/15/94(2:54 PM)

INSTALLATION WORK SHEET

MCCLELLAN AFB, CA

PURPOSE: To document answer for DOD Joint Cross-Service Working Group for Lab question number (3.3.2.2) **Other Obligation Authority: For each applicable CSF, identify reimbursable and direct-cite funding (other obligation authority expected) from FY94 to FY97. Funding allocation must be traceable to FY95 PBS. (BRAC Criteria I)**

SOURCE: Information was obtained from worksheets and consolidated by SM-ALC/FMPB, Sandra McDonald, DSN 633-1280. The SM-ALC/LH Labs did not have any future funding identified. Data for these worksheets were derived from a combination of Program Authority (PA), Budget Authorization (BA), Fund Cite Authorizations (FCA, AF Form 616), and professional estimates of how programs will be funded in the outyears.

METHOD: Documentation extracted from various worksheets submitted to SM-ALC/FMPB and consolidated into an "overall" conclusion. Data were extracted from sources listed above.

CONCLUSION:

CSF	FY94	FY95	FY96	FY97
Air Vehicles Fixed/Avionics	100.46	142M	167M	189.5M
C4I/Fixed Ground Based C4I	No Funding	No Funding	No Funding	No Funding
C4I/Ground Mobile C4I	No Funding	No Funding	No Funding	No Funding
Space Systems Satellites	No Funding	No Funding	No Funding	No Funding

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: Sandra L McDonald Date: (Revised 14 Sep 94)
J. Steve Bennett, SM-ALC/FMPB, DSN: 633-1280
SANDRA L. McDONALD

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: [signature] Date: 22 Sep 94
ROY J. SANDERS, Maj, HQ AFMC/FMTC, DSN787-5475

Document 3.3.2.2 McClellan AFB
09/14/94(11:21 AM)

INSTALLATION WORK SHEET

McCLELLAN AFB, CA

PURPOSE: To document answer to for DOD Joint Cross-Service Working Group (Lab) question number 3.4.1. **Major Equipment and Facilities: Describe major facilities and equipment necessary to support each Common Support Function (include SCIFs). If the facilities and equipment are shared with other functions, identify those functions and the percentage of total time used by each of the functions. Provide labeled photographs that picture the breadth and scope of the equipment and facilities described. If it is unique to DOD, to the Federal Government, or to the US, describe why it is unique. Insert the replacement cost. For this exercise, Replacement cost = (Initial cost + capital investment) multiplied by the inflation factor for the original year of construction. (BRAC Criteria II).**

SOURCE: WANG Information Management System (WIMS) real property records report dated 15 Feb 94. SM-ALC/CE, John Thompson, DSN 633-3336. Equipment information was obtained from various worksheets and consolidated by SM-ALC/FMPB, Sandra McDonald, DSN 633-1280. The source data is currently on file in SM-ALC/FMPB. Directorate Points of Contact: SM-ALC/TI, Dan Marrujo, DSN 633-3147 and SM-ALC/LHB, Jim Sellner, DSN 633-2550.

METHOD: Replacement cost of Lab support facilities have been calculated in accordance with BRAC Criteria II. (Replacement cost = (Initial cost + capital investment) multiplied by the inflation factor for the original year of construction.) Equipment information was extracted from various worksheets submitted to SM-ALC/FMPB and consolidated into an "overall" conclusion. The Common Support Functions were identified by SM-ALC/TI and LH points of contact and were based on the preponderence of the work accomplished within each Lab area.

CONCLUSION:

NOTE: The following buildings and equipment are used 100% by the common support functions identified.

Common Support Function	Major Facility or Equipment Description	Unique To			Replacement Cost ($K)
		DOD	Federal Gov't	U. S.	
C4I/Fixed Ground Based	GWEN ISF				117.2
	ECISF (Bldg 618)				491.6
	ECISF (Bldg 620)				433.9
	FPS-117 (Bldg 1210)				213.8
	FPS-117 (Bldg 250N)				273.5
	FPS-118 (Bldg 618)				85.5
	FPS-118 (Bldg 618)				1,389.2
Air Vehicles Fixed Avionics	Composites				912.7

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Air Vehicles Fixed Avionics	Tech Insertion Tech Systems Micro Facility Electronics Facility				2,072.5
Space Systems Satellites	Tech Insertion Tech Systems Micro Facility Electronics Facility				259
Space Systems Satellites	Tech Insertion Tech Systems Micro Facility Electronics Facility				259
C4I/Ground Mobile	CNCE MCE ISF				574.5 122

EQUIPMENT:

Common Support Function	Major Facility or Equipment Description	Unique To			Replacement Cost ($K)
		DOD	Federal Gov't	U. S.	
Air Vehicles/ Fixed Avionics	Fiber Optics Sensor Evaluation Test System	FO Sensors	FO Sensors	FO Sensors	$2,650
Air Vehicles/ Fixed Avionics	Fiber Optics Depolarizers Test System	Laser Gyro	Laser Gyro	Lasers	$1,450
Air Vehicles/ Fixed Avionics	Test & Evaluation Systems	Fiber Optics	Fiber Optics	Fiber Optics	$7,750
Air Vehicles/ Fixed Avionics	Customized Engineering Tools - Electro-Optical	Electro-Optics	Electro-Optics	Electro-Optics	$5,400
Air Vehicles/ Fixed Avionics	Other Capital Investments - Infrastructure	FO/EO Devices	FO/EO Devices	FO/EO Devices	$3,000
Space Systems Satellites	Optoelectronics Design Workstations - Infrared, Laser, Electro-Optical Components Models	Analog H/W Desp'n Lang	Analog H/W Desp'n Lang	Analog H/W Desp'n Lang	$2,600
Space Systems Satellites	Adjustable Class IV Laser Argon Source	Lasers	Argon Laser	DE Lasers	$/875
Space Systems / Satellites	SCIF to Control Classified Information as Related to Adverse Threats & Analysis	CAE & Test Matrix	CAE, CAD & CAM	CAE, CAD, & CAM	$1,000
Space Systems/ Satellites	Optoelectronics Design Workstations - Infrared, Laser, Electro-Optical Components Models	Analog H/W Desp'n Lang	Analog H/W Desp'n Lang	Analog H/W Desp'n Lang	$1,400

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Space Systems Satellites	SCIF to Control Classified Information as Related to Adverse Threats & Analysis	CAE & Test Matrix	CAW, CAD & CAM	CAE, CAD, & CAM	$750
Air Vehicles Fixed Avionics	Microelectronics Laboratory	X	X	X	$50,000
	Optical Microscopes				
	Field Emission Microscope				
	E-Beam Probers	X			
	Focused Ion Beam Milling	X			
	Computer Aided Engineering Environment				
	Credence IC Tester				
	GR 180 IC Tester	X	X		
	HP82000 Mixed Signal IC Evaluation System	X	X	X	
	GR2756 Module Tester	X			
	GR7300 Module Tester	X	X	X	
	ALCEDO MCM Substrate Tester	X	X	X	
Air Vehicles Fixed Avionics	Rapid Prototype Facility	X			$30M
	Reactive Ion Etch/Plasma Deposition System				
	Wire Bonding System				
	Lithography System				
Air Vehicles Fixed Avionics	Systems & Technology Integration Center				$27.2
Space Systems Satellites	Systems & Technology Integration Center				$3.4
Space Systems Satellites	Systems & Technology Integration Center				$3.4
Air Vehicles Fixed Avionics	Sys/Software Tech Insertion Ctr				.95M
Air Vehicles Fixed Avionics	Optical Measurement System	X	X	X	1.2M
Air Vehicles Fixed Avionics	Sys/Software Tech Insertion Ctr				.06M
Air Vehicles Fixed Avionics	Injection Molding Facility	X			2.8M
Air Vehicles Fixed Avionics	Ultra-sonic cutting Facility	X			1.4M
Air Vehicles Fixed Avionics	Adv Composite Structure Test Facility	X			1.7M
Air Vehicles Fixed Avionics	Adv Composite Computational Fac	X			1.1M

LABWIC34.1 McClellan AFB
09/16/94(3:05 PM)

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: Sandra L. McDonald Date: (Revised 14 Sep 94)

SANDRA L. MCDONALD, SM-ALC/FMPB, DSN 633-1280

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Donald L. Lockt Date: 20 Sep 94

Donald L. Lockt, GM-14
HQ AFMC/LGPB
DSN 787-5610

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09/13/94(3:05 PM)

3.5 Expansion Potential

3.5.1 **Laboratory Facilities:** Use facilities records as of fourth-quarter FY93 in answering the following (in sq ft) for each CSF: (BRAC Criteria II)

Common Support Function	Facility or Equipment Description	Type of Space*	Space Capacity (KSF)		
			Current	Used	Excess
Air Vehicles Fixed Avionics	Sys/Software Tech Insertion	Tech Admin	1.0 2.0	1.0 2.0	
	ElectroOptics Tech Center	Tech Admin Utility	2.9 1.3 1.0	2.6 1.2 1.0	0.3 0.1
	Systems & Tech Integ Ctr	Tech Admin	2.3 0.2	2.2 0.2	0.1
	Microelectronics Prototype	Admin	0.3	0.3	
Space Systems Satellites	Sys/Software Tech Insertion	Tech Admin	0.4 0.5	0.4 0.5	
	Satellite Classified Ctr	Tech	0.5	0.4	0.1
	Systems & Tech Integ Ctr	Tech	0.7	0.8	0.1
	Microelectronics Lab	Tech	1.2	1.2	
	Rapid Prototype Facility	Tech	0.7	0.7	

Weapons Guided Projectiles	Optoelectronics Design	Tech	0.9	0.9	
	Systems & Tech Integ Ctr	Tech	0.9	0.9	
	Microelectronics Lab	Tech	0.6	0.6	
	Rapid Prototype Facility	Tech	0.4	0.4	
C4I Systems Airborne C4I	Electro-Optics Tech Ctr	Tech	0.4	0.4	
	Systems & Tech Integ Ctr	Tech	0.6	0.5	0.1
	Microelectronics Lab	Tech	0.9	0.9	
	Rapid Prototype Facility	Tech	0.5	0.5	
Air Vehicle Fixed Structure	AF Comp Program Office	Tech Utility Admin	12.8 0.01 1.7	12.8 0.01 1.7	
	Microelectronics Lab	Tech	6.0	6.0	
	Rapid Prototype Facility	Tech	0.4	0.4	

* Administrative, Technical, Storage, Utility

3.5.1.1 Describe the capacity of your activity to absorb additional similar workyears categorized in the same common support function with minor facility modification. If major modification is required, describe to what extent the facilities would have to be modified. (Use FY97 workyears as your requirement) (BRAC Criteria III)

Any common support functions could be used for the following buildings:

Building Number	SQ Footage Available	Cost for Modification	Modification due to:
250J	10,000	$350K	Rennovation and Furniture
250K	29,000	$600K	Rennovation and Furniture
250L	8,000	$300K	Rennovation and Furniture
628	109,028	$4.5M	Rennovation, upgrade, air handlers, plumbing, carpets ceiling tiles, wall coverings, furniture, etc

3.5.1.2 If there is capacity to absorb additional workyears, how many additional workyears can be supported? (BRAC Criteria III)

1300 workyears

3.5.1.3 For 3.5.1.1 and 3.5.1.2 (above) describe the impact of military construction programs or other alteration projects programmed in the FY95 PBS. (BRAC Criteria II)

There are no military construction projects programmed at this time for any of the "LAB" facilities in the FY95 PBS.

3.5.2 **Land Use:** Provide number of buildable acres for additional laboratory/administrative support construction at your installation. (BRAC Criteria II)

There is approximately 20 acres of buildable property on the main base that could be made available for additional laboratory administrative support construction. At our Camp Kohler site, an administrative annex that is within a 10 minute drive from the main base, there is 23 acres suitable for new development.

3.5.3 **Utilities:** Provide an estimate of your installation's capability to expand or procure additional utility services (electric, gas, water). Estimates should be provided in appropriate units -- e.g. KWH of electricity. (BRAC Criteria II)

	System Capacity	% of Cap. Usage
Water	**Well 10 = 1.2 MG/D** **Well 18 = 1.7 MG/D** **Well 29 = 1.7 MG/D** **Northridge Water District = 7.2 MG/D**	
Total =	**11.8 MG/D**	**21**

Note: Additional emergency fire fighting capacity of 5.8 MG/D will be available 7/94.

Sewage (industrial waste + sanitary)	**2.0 MG/D**	**58**

Note: Capacity is limited by contract; physical capacity beyond this depends on Sacramento County regional treatment plant improvements.

Electrical Dist.	**110 MW**	**40**
Natural Gas	**1.091 Million Cubic Feet per hour**	**14**

NOTE: 39 percent of electrical power is supplied by WAPA at a rate substantially lower than the local utility company rates. The remainder is supplied by Sacramento Municipal Utility District. Gas is supplied by Pacific Gas and Electric at the interruptible rate, realizing a substantial savings over normal non-interruptible rates.

94-09-06 08:23 RCVD

PHILLIPS LABORATORY

KIRTLAND AFB NM

BRAC 1995 "LAB" JOINT CROSS-SERVICE DATA CALL

15 August 1994

MAINTAIN FILES OF ALL DATA RECEIVED INCLUDING DISPUTES AND RESOLUTIONS THEREOF FROM 1995 TO 2005

Item 3

SECTION II: CAPACITY OF DOD COMPONENTS

2.1 Workload

Information Required	Fiscal Years						
	91	92	93	94	95	96	97
Total Funds Programmed ($M)	256.2	396.0	376.8	302.7	215.4	210.5	223.5
Total Actual Funds ($M)	406.7	427.2	410.5				
Programmed Work years	1417	1360	1237	1413	1382	1340	1272
Actual Work years	1636	1592	1733				

2.2 Excess "Lab" Capacity -- Measured at the DOD Component Level

Excess Lab Capacity = Sum of the Peak Work years - Sum of Projected Work years = 1733 - 1272 = **461**

3.0 Mission

Phillips Laboratory leads, develops, focuses and transitions military space and missile technologies, with corporate responsibility for directed energy and geophysics technologies extending beyond their space applications. The following are mission areas executed at Kirtland AFB, NM:

Directed Energy Weapons Common Support Function
- Beam Control
- Imaging (including ground based surveillance of space assets)

- Laser Technology
- RF Weapons

Space Satellites Common Support Function
- Advanced Space Technology Integration and Demonstration
- Space Sensors and Satellite Communications
- Space Systems Survivability
- Space Vehicle and Missile Dynamics
- Space Vehicle Electronics and Software
- Space Vehicle Power and Thermal Management
- Space Vehicle Structures and Control

Additionally, Phillips Laboratory has Strategic Alliance agreements with the following local organization:

- University of New Mexico,
- Sandia National Laboratories
- Los Alamos National Laboratory.

The Strategic Alliance is a collaboration to conduct cost sharing and joint occupation of facilities to facilitate the exchange of information and expertise. The intent of the agreement is very clear -- to enhance the technological stature of our nation with new scientific "know how" through synergistic collaboration.

3.1 Location

3.1.1 Geographic/Climatological Features

<u>Geographical</u>

a. Directed Energy Weapons CSF
   1. Required Factors:
      a) Distance from large population centers/low population density

2. Enhancement Factors:
   a) Proximity to White Sands Missile Range/Ft. Bliss Range

b. Space Satellites CSF
   1. Required Factors: None
   2. Enhancement Factors
      a) Proximity to White Sands Missile Range
      b) Proximity to high altitude balloon launch facilities (Ft. Sumner and Holloman AFB)

Climatological

a. Directed Energy Weapons CSF
   1. Required Factors:
      a) comparatively little cloud cover and precipitation for laser propagation studies and weapons tests
   2. Enhancement Factors:
      a) comparatively good flying weather for airborne tests
      b) comparatively low relative humidity/salt aerosol reduces haze and delays facility deterioration
      c) high altitude (low air density) favorable for ground-to- space propagation tests
      d) low annual snowfall/rainfall and moderate annual temperatures favor outdoor testing activities

b. Space Satellites CSF

   1. Required Factors: None
   2. Enhancement Factors:
      a) little cloud cover and precipitation favor high altitude balloon launch track and recovery
      b) low relative humidity/salt aerosol delays facility deterioration

3.1.2 Licenses & Permits

Frequency Permits

The FAA requires that each frequency used must have an assignment number. These assignments allow the FAA to track all frequencies in the Albuquerque area. With laboratory facilities so close to the Albuquerque Airport, it is extremely important that the laboratory does not interfere with air traffic. Phillips Laboratory has approximately 35 permanent radio frequency assignments. These assignments are listed in the Electro-Magnetic-Compatibility Assignments document, Radio Frequency Assignments (RFA) Listing. The RFA is maintained by the 377 CS/SCLH. The Laboratory also has temporary and permanent RFAs used for Research and Development. The frequencies are shown in the following table.

	ASSIGNMENT #	FREQUENCY	DIRECTORATE
Space Satellites			
(Permanent)	AFMC 93-625	2215.5 MHz	SXO
	"	2233.5 MHz	"
	"	2241.5 MHz	"
	"	2258.5 MHz	"
	"	2275.5 MHz	"
	"	2251.5 MHz	"
	SSD 91-007	242.0 MHz	"
	GL 89-001	423.6 MHz	"
	AFGL 87-001	430.0 MHz	"
	SSD 91-002	437.5 MHz	"
Directed Energy Weapons			
	NTIA	1.25 - 1.35 GHz	WSM
	PL89-001	101.5 KHz - 225 MHz	"
	PL89-002	115.7 MHz	"
		126 MHz	
	NTIA	1200 - 2100 MHz	WSMM
	PL89-001	130 - 9995 KHz	"
	NTIA	2.7 - 2.9 GHz	"

	NTIA	400 MHz - 8 GHz	WSMM
	NTIA	5.5 GHz	WSM
	NTIA	550 MHz	"
	ASSIGNMENT #	FREQUENCY	DIRECTORATE
	NTIA	8.6 - 9.6 GHz	WSM
	PL89-008	9385 MHz	LITE
(Temporary)	AFMC 94-516	130 KHz to 1000 MHz	WSM
		130 KHz to 6000 MHz	"
	AFMC 94-517	7910 MHz	WSR

Environmental requirements The Phillips Laboratory does not have any separate environmental permits. 377 ABW/EM holds all environmental permits for Kirtland AFB to include Phillips Laboratory. All federal facilities must comply with these regulations. Kirtland's permits are listed below:

Resource Conservation and Recovery Act (RCRA)
- Part B State and EPA version
- Part A State (for EOD Range)

National Pollutant Discharge Elimination System (NPDES)
- Permit for Storm water

Clean Air Act
- TITLE V - Operating Air Permit (In development)

Numerous Air Permits - From the Air Quality Control District (City and County)
- For open burning and detonation.

Nuclear Regulatory Commission (NRC) requirements: 377MG/SGPB holds all NRC Licenses for Kirtland AFB. Phillips Laboratory does hold a license for one facility only. Without these licenses the Lab would not be able to carry out certain Directed Energy

Weapons CSF experiments and tests.

General license for Kirtland (Include Phillips Lab): USAF Radio Active Material Permit # 30-03110-1AFP

Phillips Lab (Cobalt 60 Facility): Materials License #30-27448-01 (Storage Only)

3.1.3 Environmental Constraints

The City of Albuquerque and the County of Bernalillo are an Air Quality District. Kirtland AFB is included in this district. In the winter months, Albuquerque is susceptible to inversions. These inversions tend to trap pollutants. As a result of the Clean Air Act, the county and city require air emission testing of vehicles, and restrict fire place burning certain days in the winter. The Albuquerque Air Quality District is Non-Attainment for Carbon Monoxide. Neither the Space Satellites not the Directed Energy CSFs are constrained by environmental or land use requirements at Kirtland AFB. All PL activities, regardless of CSF, must, nevertheless, undergo an environmental analysis during their planning stages. See Page 7A

3.1.4 Special Support Infrastructure

Phillips Laboratory has no special support infrastructure.

3.1.5 Proximity to Mission-Related Organizations

Common Support Functions	Name	Type of Organization	Distance	Work years Performed by Your Activity	Work years Funded by Your Activity
Satellites & Directed Energy Weapons	Sandia	National Lab	co-located	9	45

AIR STAFF CORRECTION WORKSHEET

PURPOSE: To provide corrected answer to **KIRTLAND AFB, NM**.

SOURCE: **'95 BRAC Questionnaire**

CONCLUSION: **Update needed (~~no change~~)** See below

MAJCOM (CONCURS)(NONCONCURS): **CONCURS (Provided info VIA questionnaire)**

BASE (CONCURS) (DOES NOT CONCUR): -same-

I certify the above information is accurate and complete to the best of my knowledge and belief, based upon information provided by identified sources.

AIR STAFF REVIEWER: J. Bush (CEVP) **DATE:** 19 AUG 1994

Air Quality
-- Non-attainment for Carbon Monoxide (moderate)

Groundwater
-- Contaminated potable water source

Other
-- 18,675 acres of U.S. Forest Service withdrawal land adjacent to base. Constraints to activities taking place on the Forest Service land. Usage Requires Forest Supervisor approval.

Satellites & Directed Energy Weapons	UNM	University	5 miles	4.5	22.5
Satellites & Directed Energy Weapons	Los Alamos	National Lab	100 miles	2	4
Satellites	State of NM	Government Org.	co-located	3	15
Satellites & Directed Energy Weapons	NM Tech	University	75 miles	1	11

IMPACT

SANDIA NATIONAL LABORATORIES - We leverage over $1 billion in resources in satellite integration, optics and imaging, microelectronics, propulsion and unique testing and instrumentation for all space applications. The quality of research in the above areas is tremendously enhanced by daily collaboration by large numbers of researchers. Being in close proximity adds incalculable benefits in research efficiency. Savings in travel funds including per diem is realized due to not having to fly between organizations.

UNIVERSITY OF NEW MEXICO - We leverage $150 million of people, facilities, and unique equipment in space nuclear power, lasers and imaging, photonics, and electronic sensors for space application. The quality of research in the above areas is tremendously enhanced by daily collaboration by large numbers of researchers. Being in close proximity adds incalculable benefits in research efficiency. Savings in travel funds including per diem is realized due to not having to fly between organizations.

LOS ALAMOS NATIONAL LABORATORIES - We leverage over $800 million in resources in satellite integration, optics and imaging, microelectronics, propulsion and unique testing and instrumentation for all space applications. The quality of research in the above areas is tremendously enhanced by daily collaboration by large numbers of researchers. Being in close proximity adds incalculable benefits in research efficiency. Savings in travel funds including per diem is realized due to not having to fly between organizations.

STATE OF NEW MEXICO - We leverage $2 million per year of people and programs in Dual Use applications and Technology Transfer. The quality of research and collaboration in Dual Use Technology and Technology Transfer is tremendously enhanced by daily collaboration by large numbers of researchers. Being in close proximity adds incalculable benefits in research efficiency. Savings in travel funds including per diem is realized due to not having to fly between organizations.

NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY - We leverage over $100M of people, facilities, and unique

equipment in energetic materials, propulsion, and testing & instrumentation for space applications. The university has over 2,000 acres available for testing weapons and space related propulsion systems and is licensed by the EPA for most hazardous materials, including radioactive materials.

Direct contact between personnel from Phillips Laboratory and the above organizations is essential for synergism to occur. The quality of research is tremendously enhanced by daily collaboration by large numbers of researchers. Being in close proximity adds incalculable benefits to research efficiency. There is no way of quantifying the lost capabilities if these relationships are broken. How may an efficiency rating be determined on the humanistic effect of working side by side compared to working by phone from 1000 miles away.

DATE: 23 Aug 94

MEMORANDUM FOR RECORD, SAF/AQT

AIR STAFF CORRECTION WORKSHEET

PURPOSE: To provide corrected answer to Question Number 3.2.1 Total Personnel, Phillips Laboratory, Kirtland Air Force Base, NM, Data Call.

SOURCE: Installation worksheets (Lauren Frost, PL/CP, DSN 246-4709 for civilian personnel data; Lt. Jones, PL-OL-AC/CCQ, DSN 525-5120 for military personnel data).

METHOD: Review of Installation Worksheets submitted for Air Force data call, telecon, and FAX communications with MAJCOM and Base POCs.

CONCLUSION: The correct personnel data is shown in attached table 3.2.1 Total Personnel.

MAJCOM CONCURS: (See attached FAX copies)
Mr. Timothy L. Dues, HQ AFMC/STP, Wright-Patterson AFB, DSN 787-7850.

BASE CONCURS: (See attached Installation Worksheets)
Colonel Thomas E. Bretz, Jr., PL/DE, Kirtland AFB, DSN 246-0239.

I certify that the above information is accurate and complete to the best of my knowledge and belief.

AIR STAFF REVIEWER: Paul D. Copp **DATE:** 23 Aug 94
Paul D. Copp, Lieutenant Colonel, USAF

3.2 Personnel

3.2.1 Total Personnel

SATELLITES Types of Personnel	Number of Personnel			
	Government		On-Site FFRDC	On-Site SETA
	Civilian	Military		
Technical	45	105	14	130
Management (Supv)	44	32	2	14
Other	151	49	3	26

DIRECTED ENERGY WEAPONS Types of Personnel	Number of Personnel			
	Government		On-Site FFRDC	On-Site SETA
	Civilian	Military		
Technical	168	124	22	195
Management (Supv)	81	63	2	22
Other	303	103	4	40

SETA" refers to all on-site contractors involved with S&T. This is not the traditional definition we use.

PL KIRTLAND CHANCE 18 AUG 94

SETA" refers to all on-site contractors involved with S&T. This is not the traditional definition we use.

3.2.2 Education

DATE: 23 Aug 94

MEMORANDUM FOR RECORD, SAF/AQT

AIR STAFF CORRECTION WORKSHEET

PURPOSE: To provide corrected answer to Question Number 3.2.2 Education, Phillips Laboratory, Kirtland Air Force Base, NM, Data Call.

SOURCE: Installation worksheets (Lauren Frost, PL/CP, DSN 246-4709 for civilian personnel data; Lt. Jones, PL-OL-AC/CCQ, DSN 525-5120 for military personnel data).

METHOD: Review of Installation Worksheets submitted for Air Force data call, telecon, and FAX communications with MAJCOM and Base POCs.

CONCLUSION: The correct personnel data is shown in attached table 3.2.2 Education.

MAJCOM CONCURS: (See attached FAX copies)
Mr. Timothy L. Dues, HQ AFMC/STP, Wright-Patterson AFB, DSN 787-7850.

BASE CONCURS: (See attached Installation Worksheets)
Colonel Thomas E. Bretz, Jr., PL/DE, Kirtland AFB, DSN 246-0239.

I certify that the above information is accurate and complete to the best of my knowledge and belief.

AIR STAFF REVIEWER: Paul D. Copp **DATE:** 23 Aug 94
Paul D. Copp, Lieutenant Colonel, USAF

3.2.2 Education

SATELLITES	Number of Government Personnel by Position		
Type of Degree/Diploma	Technical	Mgmt/Supv	Other
High School or Less	0	10	137
Associates	0	2	15
Bachelor	89	13	33
Masters	51	44	15
Doctorate	10	7	0

DIRECTED ENERGY	Number of Government Personnel by Position		
Type of Degree/ Diploma	Technical	Mgmt/Supv	Other
High School or Less	3	8	278
Associates	0	0	29
Bachelor	112	13	51
Masters	104	87	46
Doctorate	73	36	2

PL KIRTLAND CHANGE 18 AUG 94

DATE: 23 Aug 94

MEMORANDUM FOR RECORD, SAF/AQT

AIR STAFF CORRECTION WORKSHEET

PURPOSE: To provide corrected answer to Question Number 3.2.3 Experience, Phillips Laboratory, Kirtland Air Force Base, NM, Data Call.

SOURCE: Installation worksheets (Lauren Frost, PL/CP, DSN 246-4709 for civilian personnel data; Lt. Jones, PL-OL-AC/CCQ, DSN 525-5120 for military personnel data).

METHOD: Review of Installation Worksheets submitted for Air Force data call, telecon, and FAX communications with MAJCOM and Base POCs.

CONCLUSION: The correct personnel data is shown in attached table 3.2.3 Experience.

MAJCOM CONCURS: (See attached FAX copies)
Mr. Timothy L. Dues, HQ AFMC/STP, Wright-Patterson AFB, DSN 787-7850.

BASE CONCURS: (See attached Installation Worksheets)
Colonel Thomas E. Bretz, Jr., PL/DE, Kirtland AFB, DSN 246-0239.

I certify that the above information is accurate and complete to the best of my knowledge and belief.

AIR STAFF REVIEWER: Paul D. Copp **DATE:** 23 Aug 94
Paul D. Copp, Lieutenant Colonel, USAF

3.2.3 Experience

SATELLITES

Type of Position	Years of Government Service and/or Military Service				
	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Technic	36	94	10	4	6
Management	0	10	20	27	19
Total	36	104	30	31	25

DIRECTED ENERGY WEAPONS

Type of Position	Years of Government Service and/or Military Service				
	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Technical	55	159	20	20	38
Management	3	12	37	36	56
Total	58	171	57	56	94

PL-KIRTLAND CHANGE 18 AUG 94

3.2.4 Accomplishments During FY91-93
3.2.4.1 Number of Patents Awarded and Patent Disclosures

CSF	Disclosures	Awarded	Patent Titles (List)
Directed Energy Weapons (FY91)	5	9	see below
Directed Energy Weapons (FY92)	14	2	see below
Directed Energy Weapons (FY93)	8	1	see below
Total	27	12	

CSF	Disclosures (AF Inv. No.)	Patent Application Serial Numbers and Filing Dates	Awarded (U.S. Patent No.)	Invention Titles (List)
FY 91				
Weapons	9911 10/11/90	#019,958 2/19/93	Pending	Angle of Arrival Laser Detection System
Weapons	Unknown 11/14/90	#743,470 8/09/91	Pending Tubes	Hydraulic Fluid Cooling of High Power Microwave Plasma
Weapons	20098 4/17/91	#868,600 Unknown	Pending	Process for Controlling Oil Well Fires

Weapons	20288 8/26/91	#222,348 3/08/94	Pending	Fire Suppression Technique
Weapons	20406	Pending	Pending	Elliptical to Cylindrical 9/14/91 Waveguide TM01 Mode Converter
Weapons	17,986 6/15/87	#311,688 Unknown	#4,963,799 10/16/90	Acoustic Enhancement of Multichannel Spark Gap
Weapons	18,030 Unknown	#403,210 Unknown	#4,980,658 12/25/90	Gigahertz Bandpass Passive Integrator
Weapons	18,035 6/30/87	Unknown 1/1/91	#4,981,354	Optical Differential Tilt Sensor
Weapons	Unknown	Unknown	#4,999,591 3/12/91	Circular TM01 to TE11 Wave-guide Mode Converter
Weapons	17383 1/27/86	#493,257 3/14/91	#4,987,293	Digital Position Monitor
Weapons	18519 5/11/88	Unknown 4/16/91	#5,008,770	Filter Pin Integrated Circuit Socket Kit
Weapons	18159 10/27/87	#312,533 Unknown	#5,015,844 5/14/91	Optical Surveillance Sensor Apparatus
Weapons	17384 1/28/86	#500,614 Unknown	#5,021,643 6/4/91	Pointer/Gracker for a Phased Array Laser System
Weapons	18299	#366,944	#4,996,494	Droop Compensated PFN Driven

	1/19/88	2/26/91		Transformer for Generating High Voltage, High Energy Pulses
FY 92				
Weapons	20378 11/4/91	#003,065 1/11/93	Pending	Spectral Mode Suppressor for Diode Lasers
Weapons	20488 12/19/91	#949,615 9/23/92	Pending	Turbo-Molecular Blower Foreign Int'l Application PCT/US93/02317 3/22/93
Weapons	20489 12/19/91	#949615 9/23/92	Pending	Repetitively Pulsed, Closed Cycle, Photolytic Atomic Iodine Laser
Weapons	20490 12/19/91	#949617 9/23/92	Pending	Scalable and Stable, CW Photolytic Atomic Iodine Laser
Weapons	20587 3/19/92	#029,844 3/11/93	Pending	Pocket Laser Communicator
Weapons	20588 3/19/92	#054,934 4/27/93	Pending	Compact Pulse Generator
Weapons	20599 3/19/92	Pending	Pending	Capacitors Electromagnetic
Weapons	20625 4/28/92	#072,621 6/4/93	Pending	Nanosecond Transmission Line Charging
Weapons	20630	#027046	Pending	Electronic Mode Stirring

	4/28/92	3/4/93		
Weapons	20826 4/28/92	Pending	Pending	Integrated Semiconductor Laser Oscillator and Off-Axis Amplifier
Weapons	19566 5/21/92	#891100 6/1/92	Pending 11/9/93	N-Port Wide Bandwidth Crosslink Register
Weapons	19353 5/28/92	#896064 6/8/92	Pending	High Energy CathodeDevice With Elongated Operating Cycle Time
Weapons	20809 Unknown	#048,606 4/15/93	Pending	Solid-State Laser
Weapons	20769 9/17/92	#986,420 12/7/9	Pending	Compact Efficient Solid-State Laser
Weapons	Unknown	#142,094 Unknown	#5,130,881 7/14/92	IC Socket Having Overvoltage Protection
Weapons	Unknown	#133,988 Unknown	#5,140,602 8/18/92	Pulsed Power Modulator Circuit for a Q-Switched Chemical Laser
Weapons	19395 2/8/90	#940,147 9/3/92	Pending	Space Debris Clearing Device

<u>FY93</u>

Weapons	20917 2/24/93	Pending	Pending	Multi Winding Generator

Weapons	20766 3/2/93	#031257 3/11/93	Pending	Portable Medical Laser
Weapons	20906 3/8/93	Pending	Pending	Carbonaceous Particles Containing Fissile Materials
Weapons	20962 3/8/93	#115364 8/31/93	Pending	Improved Formation of Basic Hydrogen Peroxide
Weapons	21060 7/9/93	#106025 8/13/93	Pending	Phase-Conjugate-Coupled Multimode Optical Fiber Geometry for Optical Coupling of Lasers
Weapons	21072 7/19/93	Pending	Pending	Phased Cascading of Multiple Nonlinear Optical Elements for Frequency C
Weapons	21071 8/6/93	Pending	Pending	A Method for Microbeam Ion Radiation
Weapons	19586 3/23/93	Unknown	#5,196,097	Field Induced Transparency Device
Weapons	20927 4/6/93	Pending	Pending	Graphic Display Digitizer

3.2.4.2 Papers Published in Peer Review Journals

FY91 - Phillips Laboratory was established during FY91. Therefore, due to the time lag in papers submitted for publication and the publication date, there are no significant number of papers published during FY91 which are attributable to "Phillips Laboratory" government personnel. There were publications during FY91 by personnel at PL, but their articles reflected the name of their pre-PL organization (e.g., Air Force Weapons Laboratory, etc.). The remaining records reflecting publications by these predecessor organizations are incomplete; therefore, no reliable data can be provided for PL at Kirtland AFB NM for FY91.

PL-EDWARDS, HANSCOM

KIRTLAND

CONTROL NUMBER: LJCSWG-AF 023

PURPOSE: To provide SAF/AQX staff corrected answers to Question 3.2.4.2 Papers published in peer reviewed journals, of the (see Distribution List) response to the Laboratory Joint Data Call. For each CSF in which you perform work, provide a list of papers published in peer reviewed journals by your government personnel during FY 1991 through FY 1993. The papers listed must directly support the CSF. For each paper listed provide both the title of the article and the journal in which it was published, and the month and year of publication. Do not list papers prepared by non-government personnel or other personnel who were not employed by your activity, even if the paper was prepared in support of a contractual requirement. Do not list papers published in non-peer reviewed journals; technical, letter, test, and other reports; manuals and handbooks; presentations at symposiums; etc.

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

2 papers were deleted since they were not published during FY91-93.

MAJCOM REVIEWER: _____
(print name, organization, DSN)
Edward C Kong, MAJ, HQ AFMC/ST, 787-5368

BASE: Concurs Does not concur (explain:)

SEE ATTACHED

BASE REVIEWER: _____
(print name, organization, DSN)
JAMES R. ALBERT, MAJ, USAF, PL/XPB, 246-0241

I certify the information above is accurate and complete to the best of my knowledge and belief.

3.2.4.2 Papers Published in Peer Review Journals

FY91 - Phillips Laboratory was established during FY91. Therefore, due to the time lag in papers submitted for publication and the publication date, there are no significant number of papers published during FY91 which are attributable to "Phillips Laboratory" government personnel. There were publications during FY91 by personnel at PL, but their articles reflected the name of their pre-PL organization (e.g., Air Force Weapons Laboratory, etc.). The remaining records reflecting publications by these predecessor organizations are incomplete; therefore, no reliable data can be provided for PL at Kirtland AFB NM for FY91.

3.2.4.2 PL Kirtland

FY92 - Phillips Laboratory - Kirtland AFB NM

CSF	Number Published	Paper Titles (List)
Space - satellite	14	See Below
Weapons - Directed Energy	70	See Below
TOTAL	84	

Space: satellite

Annealing Characteristics of Hot Carrier Induced Damage in n-channel MOSFETs - International Journal of Electronics, Vol 73, No. 6, 92

Radiation Effects on Gate-Induced Drain Leakage Current in Metal Oxide Semiconductor Transistors - Journal of Applied Physics, Vol 72, No. 10, 92

Field Dependent Ionizing Radiation Effects in LDD-MOSFETs - International Journal of Electronics, Vol 73, No. 4, 92

Transconductance Technique for Measurement of Interface State Density and Oxide Charge in LDD-MOSFETs - Physica Status Solidi A, Sep, 92

Two-Photon Absorption in HgCdTe - Applied Optics, Sep, 92

TALON and CRADLE - Systems for the Rescue of Tumbling Spacecraft and Astronauts - - Advances in the Astronautical Sciences, Vol 76, 92

Atmospheric Structure Function Measurements with a Shack-Hartmann Wave-Front Sensor - Optics Letters, Vol 17, No. 24, 92

Determining the Effects of Space Debris Impacts on Spacecraft Structures - Acta Astronautica, Jul, 92

Radiation Effects on Gate-Induced Drain Leakage Current in Metal Oxide Semiconductor Transistors - Journal of Applied Physics, Vol 72, No. 10, 92

Interferometry of the Compact Toroid Formation Experiments at Phillips Laboratory - Physics of Fluids B Plasma Physics, PASCAL No.: 92-0429819, 1992

Adaptive-Control of a Subaperture Tilt in a Phased-Array Telescope-Theory and Experiment - Computers & Electrical Enginering, Vol 18, No. 6, 92

Modal Control for an Adaptive Optics System Using LQG Compensation - Computers & Electrical Engineering, Vol 18, No. 6, 92

Annealing Characteristics of Hot Carrier Induced Damage in n-channel MOSFETs - International Journal of Electronics, Vol 72, No. 6, 92

Adaptive Optical Signal-Processing and Control - Editorial - Computers & Electrical Engineering, Vol 18, No. 6, 92

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CSF	Number Published	Paper Titles (List)
Space satellite	41 ~~40~~ 50 alc	See Below
Weapons Directed Energy	44 43 alc	See Below
TOTAL	85 ~~83~~ 93 alc	

Space: satellite

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3.3 Workload

3.3.1 FY93 Workload

3.3.1.1 Work Year and Lifecycle

Directed Energy Weapons

"LAB"	Fiscal Year 1993 Actual			
	Civilian	• Military	• FFRDC	SETA
• Science and Technology	565	302	• 3	294
• Engineering Development	11	3	• 0	0

Space Satellites

"LAB"	Fiscal Year 1993 Actual			
	Civilian	• Military	• FFRDC	SETA
• Science and Technology	202	171	• 44	133

Note: "SETA" refers to all on-site contractors involved with S&T. This is not the traditional definition we use.

3.3.1.2 Engineering Development By ACAT

Phillips Laboratory performs no ACAT I, II, III or IV activities

3.3.1.3 In-Service Engineering

Phillips Laboratory performs no in-service engineering efforts

3.3.2 Project Funding

3.3.2.1 Direct Funding

CSF	FY94 ($M)	FY95 ($M)	FY96 ($M)	FY97 ($M)
Directed Energy Weapons	101.226	96.405	90.274	93.245
Space Satellites	118.336	61.097	63.292	75.529

3.3.2.2 Other Obligation Authority

CSF	FY94 ($M)	FY95 ($M)	FY96 ($M)	FY97 ($M)
Directed Energy Weapons	77.416	19.896	19.847	19.748
Space Satellites	41.839	37.975	37.125	35.025

pl 2Sep 94
3.4.1, 3.5.1, 3.5.1.
Reference 2Sep 94
Mr Boutright/mm

3.4 Facilities and Equipment
3.4.1 Major Equipment and Facilities

Common Support Function	Major Facility or Equipment Description	Unique to			Replacement Cost ($K)
		DOD	Federal Gov't	US	
Directed Energy Weapons	Bldg 322 - PLASMA Research Lab Major Equipment - Large Capacitor Bank Misc Equipment - Support Equipment	X			4,000 12,600 41,000
	Bldg 323 - High Energy Microwave Major Equipment - Large Chamber Misc Equipment - Support Equipment		X		7,000 8,000 8,000
	Bldg 400 - Optics Development Lab Misc Equipment - Optics Equipment				8,000 8,000
	Bldg 405 - Special Studies Vault Misc Equipment - Various				3,000 4,300
	Bldg 422 - Laser/Optics Integration Misc Equipment - Laser/Optics Devices				5,000 12,900
	600 Area - Chemical Laser Lab Major Equipment - Large Chemical Laser Misc Equipment - Laser/Optics Equipment				4,400 18,000 9,600
	Bldg 760 - Airborne Laser Lab Major Equipment - 707 Aircraft Misc Equipment - Instruments and Lasers			X	7,500 25,600
	Bldg 909 - Electro-Magnetic Energy Misc Equipment - Pulsers/Chambers				7,000 6,000

	66000 Area - Advanced Optical Telescope Major Equipment - 3.5 Telescope 1.5 Telescope Misc Equipment - Laser Devices and etc.			X	15,000 18,000 9,000 39,500
	Bldg 66071 - High Energy Radiation Test Facility Misc Equipment - Pulsers/Chambers	X			8,000 1,500
	Bldg 413/914 - Advanced Weapons Support Misc Equipment - Small Equipment				7,000 25,000

Common Support Function	Major Facility or Equipment Description	DOD	Federal Gov't	US	Replacement Cost ($K)
Space Satellites	Bldg 402- Tempest Computer Vault				6,000
	Bldg 410 - Payload Operations Center Misc Equipment - Computers/Controllers				2,000 600
	Bldg 592 - Space Experiments Facility Misc Equipment - Computers/Controllers				3,000 5,693
	Bldg 765 - Space Structures Laboratory Major Equipment - "SPICE" Space Structure Misc Equipment - Instruments and Computers			X	1,000 5,000 20,000
	Bldg 914 - Space Electronics Laboratory Misc Equipment - Chambers, etc.				3,000 9,200
	Major Equipment High Altitude Balloon Experiment Device 'TEAL RUBY' Satellite 'GPS' Satellite Cryocooler 'STARLAB' Satellite Misc Equipment	X			 33,000 180,000 169,000 15,000 75,000 86,800

Major Facility or Equipment Description and Uniqueness Justification

Bldg 322 HIGH ENERGY PLASMA RESEARCH LABORATORY
40' High Bay Laboratory, special radiation shielding, bridge crane, controlled climate
UNIQUE - The high energy plasma capacitor bank performs exploratory experimental and computational research on military applications of high-energy pulsed power systems. This capacitor bank is the largest and only one performing this work in the DOD. The plasma is heated until its atoms decompose into electrons and ions, becoming an extremely hot, electrically conducting, cloud mixture similar to the matter found in the sun. This plasma is then controlled by electric and magnetic fields.

Bldg 323 HIGH ENERGY MICROWAVE LABORATORY (HEML)
40' High Bay Laboratory, large anechoic chamber, aircraft access doors, 20 ton bridge crane, runway access, controlled climate
UNIQUE - The HEML contains a shielded (100 db attenuation in the RF spectrum) chamber, measuring 76 feet by 74 feet by 42 feet high, designed for high power microwave tests of military systems to the size of a fighter aircraft and main battle tanks. Both single-pulse and multiple-pulse high power microwave sources can be used in this facility, which will support not only Air Force needs but can also support those of the other military services for large area laboratory tests. This is the only facility in DOD capable of testing large weapon systems.

Bldg 400 OPTICS DEVELOPMENT LABORATORY
Special vault laboratories, isolated slabs, under ground laser progration tunnel, special optics environmental laboratories

Bldg 402 ADVANCED "TEMPEST" COMPUTER VAULT
Large "Tempest" security vault with special communication/ electrical filters, raised flooring and precise climate control.
Miscellaneous equipment - future satellite control center ($10M)

Bldg 405 SPECIAL STUDIES VAULT
Vault construction, filter communication/electrical filters, divided into many tempest vaults and classified study areas

Bldg 410 PAYLOAD OPERATIONS CENTER
12' high ceiling, clean room, raised floor, secure area, special HVAC/electrical systems.
Miscellaneous equipment - satellite payload operations center ($2M)
Note: the Payload Operations Center's function is to maximize the ability for satellite researchers at the Phillips Laboratory to interact with their experiments.

Bldg 422 LASER/OPTICS INTEGRATION
10 large laser/optics labs with isolated slabs, special climate control and electrical, 14' high ceilings, bridge cranes and chilled water plant for special lasers.

Bldg 419 TECHNICAL LIBRARY/VAULT
Building constructed as a class "A" vault.
Miscellaneous equipment ($2M)

600 Area CHEMICAL LASER LABORATORY
Remote locations, special bunkers, hazardous chemical storage, special plumbing, specialized high volume, high vacuum pumping system, electrical, etc.

Bldg 909 ELECTRO-MAGNETIC ENERGY
20' high ceilings, heavy concrete shielded control room, test cell and device area, large anechoic chambers

Bldg 760 AIRBORNE LASER LABORATORY
60' high, climate control assembly building with large bridge crane, laboratories, and special climate/electrical systems. One mile progration range and special aircraft pads
UNIQUE - The Airborne Laser (ABL) Demonstrator program is an Air Force Advanced Technology Transition Demonstrator program to develop and then demonstrate the nexessary technologies to acquire, track, and kill theater ballistic missiles during boost phase. The ABL Weapons System will provide a surgical, high payoff, boost phase destruction of multiple tactical ballistic missiles launched from random, previously unidentified sites at long ranges while staying well within friendly airspace. This is the only Airborn Laser System in the world with this capability.

Bldg 66000 ADVANCED OPTICAL TELESCOPE
Isolated mountain top with two large telescopes with associated laser/optics laboratories
UNIQUE - The 66000 area (Starfire Optical Range, SOR) has installed the world's largest telescope capable of tracking low earth-orbiting satellites. The telescope has a 3.5-meter (11.5 ft.) diameter primary mirror and is protected by a unique retracting cylindrical enclosure that allows the telescope to poerate in the open air. Equipped with adaptive optics, the telescope will be capable of resolving basketball-sized objects 1,000 miles in space.

Bldg 66071 HIGH ENERGY RADIATION TEST FACILITY
Large isolated laboratory, 2' thick blast walls, bridge crane, 40' high ceiling, located in a remote mountain valley
UNIQUE - This is the only blast/radiation shielded facility (1000 lbs of 1.1 explosives) in DoD of this size and unique capabilities.

Bldg 765 SPACE STRUCTURES LABORATORY
Full spectrum, large scale, high precision structural dynamics experimentation facility. Contains large scale, large angle, 3 axis motion equipment.
UNIQUE - This is one of a kind capability. No other similar capability in the world. Function cannot currently perform elsewhere.

Equipment MAJOR EQUIPMENT
This equipment described in the table and located at Kirtland AFB is one-of-a-kind equipment items.

3.5 Expansion Potential

Answers for specified questions in Section 3.5 are provided below. A significant situation that does not appear in these answers is the SECAF-directed partial consolidation of Phillips Laboratory directorates that are split amongst the three Laboratory locations at Hanscom AFB, Edwards AFB, and Kirtland AFB. The direction was to consolidate the split directorates by moving personnel and equipment from Hanscom and Edwards AFBs to Kirtland AFB. To comply with the direction, Phillips Laboratory MILCON was approved for three projects that will provide 78,000 square feet of new laboratories at Kirtland AFB. The 78000 square feet is broken into 57,000 square feet for technology and 21,000 for administration. One project will be completed by Jan 95 and the others by Dec 95. The laboratories were designed to support Space Satellites CSF technical activities of 119 Hanscom and Edwards personnel, of whom 14 have already transferred to Kirtland and are reflected in the Phillips Laboratory - Kirtland data.

3.5.1 Laboratory Facilities

Common Support Function	Facility or Equipment Description	Type of Space	Current (KSF)	Used (KSF)	Excess (KSF)
Directed Energy Weapons	Weapons Research and Development Facilities	Administrative	116.82	85.12	31.71
"	(98 separate facilities)	Technical	633.87	494.42	139.45
"		Storage	31.82	31.82	0

"		Utility	12.91	12.91	0
Space Satellites	Space Research and Development Facilities	Administrative	202.77	103.24	99.53
"	(29 separate facilities)	Technical	114.49	89.30	25.19
"		Storage	3.68	3.68	0
"		Utility	10.21	10.21	0

3.5.1.1

PL Kirtland has capacity to absorb additional similar workyears in both the Space Satellites and the Directed Energy Weapons CSFs. In 1990 the Phillips Laboratory was created by merging the Air Force Space Technology Center's three Laboratories - Geophysics Laboratory at Hanscom AFB, Astronautics Laboratory at Edwards AFB, Weapons Laboratory at Kirtland AFB. Within this new Phillips Laboratory, six technical directorates were formed, four headquartered at Kirtland AFB, one at Hanscom AFB and one at Edwards AFB. The Kirtland contingent, which reflects the PL Kirtland capacity, includes a Space and Missiles Technology Directorate, a Space Experiments Directorate, a Lasers and Imaging Directorate, and an Advanced Weapons and Survivability Directorate. Two of these directorates are dedicated to the Space Satellite CSF and the other two to the Directed Energy Weapons CSF, and each directorate has technical laboratory facilities designed to support their respective CSFs. Specifically, in the Space Satellite CSF at PL Kirtland there are 29 buildings containing heavy, medium and light laboratories, and office space. In the Directed Energy Weapons CSF there are 98 buildings containing heavy, medium, and light laboratories, and office space.

Due to the generic nature of laboratory space and offices, work in other CSFs could be accommodated. If additional similar workyears are assigned to PL Kirtland, the laboratory space will, for the most part, be ready without significant modification. The lives of research projects vary from a few months to many years. A successful Laboratory must deal with this very dynamic environment with the resources that it has available, including facilities. It is the nature of R&D that new projects are continuously assigned to Laboratories, and these projects are frequently quite diverse and require differing equipment. A laboratory that can support Space Satellite or Directed Energy Weapons CSF work can also support other CSF work. Basically, a laboratory is a laboratory - it's the equipment and people in a laboratory that is dedicated to a CSF.

The bottom line is that the Phillips Laboratory at Kirtland AFB should be able to absorb similar CSF workload with minimum minor

facility modifications and no major facility modifications.

3.5.1.2

If there is capacity to absorb additional workyears, how many additional workyears can be supported? (BRAC Criteria III)? PL Kirtland can accommodate an additional 222 workyears in the Directed Energy Weapons CSF and 870 workyears in the Space Satellite CSF (of which 600 are planned already). No major modifications to facilities are required.

3.5.1.3

Not applicable - no programs in FY95 MILCON; however, three FY94 MILCON projects are underway at PL Kirtland to add Space Satellite CSF laboratories. These MILCON projects will provide 78,000 square feet of new laboratories at Kirtland AFB. The 78000 square feet is broken into 57,000 square feet for technology and 21,000 for administration. One project will be completed by Jan 95 and the others by Dec 95. The laboratories were designed to support satellite technical activities of 119 Hanscom and Edwards personnel, of whom 14 have already transferred to Kirtland and are reflected in the Phillips Laboratory - Kirtland data.

3.5.2 Land Use: Acreage suitable for new development: **10,420**

3.5.3 Utilities: Capability to expand or procure additional utility services are:

Water: **10.46 Mgal/Day**
Sewage: **11.89 Mgal/day**
Electrical distribution: **44.00 Mwatts**
Natural gas: **0.866 Mcubic feet/hour**
High temperature water/steam generation/distribution: **511.73 MBtu/hour**

94-09-06 08:12 RCVD

94-0

PHILLIPS LABORATORY
HANSCOM AFB

BRAC 1995 "LAB" JOINT CROSS-SERVICE DATA CALL

15 Aug 94

Item 1

SECTION II: CAPACITY OF DOD COMPONENTS

2.1 Workload

Information Required	Fiscal Years						
	91	92	93	94	95	96	97
Total Funds Programmed ($M)	60.0	79.7	91.4	67.2	60.6	58.9	55.4
Total Actual Funds ($M)	120.5	105.4	105.1				
Programmed Workyears	535	506	466	432	430	430	430
Actual Workyears	534	514	556				

2.2 Excess "Lab" Capacity -- Measured at the DOD Component Level

Excess Lab Capacity = Sum of the Peak Workyears - Sum of Projected Workyears = 556 - 430 = **126**

3.0 Mission

The mission of the Phillips Laboratory at Hnscom AFB, MA supports the Common Support Function of Environmental Sciences. The misson is as follows: Phillips Laboratory leads, develops, focuses and transitions military space and missile technologies, with corporate responsibility for directed energy and geophysics technologies extending beyond their space applications.

The following are mission areas executed at Hanscom AFB, MA:

- Geophysics for Environmental Quality
- Geophysics for Synthetic Environments
- Ionospheric Effects on Air Force Systems
- Optical/IR Technology
- Space Effects on Air Force Systems
- Terrestrial Effects on Air Force Systems
- Weather Impact on Air Force Systems
- See Page 3R

3.1 Location

3.1.1 Geographic/Climatological Features: None

3.1.2 Licenses & Permits: None

3.1.3 Environmental constraints: ~~None~~ See Page 3A

3.1.4 Special Support Infrastructure: None

3.1.5 Proximity to Mission-Related organizations:

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.1.5, 3.2.4.1, 3.3.2.1, 3.4.1 of the Philips Laboratory – Hanscom response to the LJCSG guidance package. The note says "Space is an equally applicable CSF; but due to data call limitations, multiple CSFs cannot be shown." Does this mean you would shown some effort in "Space" CSF but were restricted to the pervasive functions? If so, did you include all of your efforts in "Environmental Science" or are there some efforts you are performing that do not fit in a pervasive CSF, but more appropriately in "space" so you didn't report them at all? Also, question 3.0 should more specifically address the Environmental Science CSF.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

MAJCOM REVIEWER: _____
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

PURPOSE: To provide SAFAQX staff recorded answers to question 3.1.5, 3.2.4.1, 3.2.2.1, 3.4.1 of the Phillips Laboratory – Hanscom response to the LJCSG guidance package. The note says "Space is an equally applicable CSF, but due to data call limitations, multiple CSFs cannot be shown." Does this mean you would shown some effort in "Space" CSF but were restricted to the pervasive functions? If so, did you include all of your efforts in "Environmental Science" or are there some efforts you are performing that do not fit in a pervasive CSF, but more appropriately in "space" so you didn't report them at all? Also, question 3.6 should more specifically address the Environmental Science CSF.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-9850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs — Does not concur (explain)

ALL OF THE GEOPHYSICS, HANSCOM SUPPORTS THE PERVASIVE FUNCTION OF ENVIRONMENTAL SCIENCES. GIVEN THE PERVASIVENESS, EQUAL SEGMENTS SUPPORT SPACE, AIR VEHICLES, C4I, etc. TO BREAK IT OUT WOULD BE A JUDGEMENT CALL AND WOULD PROVIDE NO ADDED VALUE. ALL OF GEOPHYSICS HANSCOM HAS BEEN REPORTED IN THE ENVIRONMENTAL SCIENCES CSF, SEE ATTACHED MISSION STATEMENT.

MAJCOM REVIEWER: [signature] 14 AUGUST 1994
(print name, organization, DSN) TIMOTHY L. DUES, GM-15, AFMC/LGTP DSN 787-2650

BASE: Concurs — Does not concur (explain)

SEE ATTACHED MISSION STATEMENT.

BASE REVIEWER: [signature] 12 Aug 94
RICHARD G. HENDL, PL/GP 478-3604
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

DATE

62

PHILLIPS LABORATORY
GEOPHYSICS LABORATORY

3.0 MISSION

- Understand the environment
- Mitigate or exploit the interaction of the environment and military systems
- Capabilities of the directorate contributing to the Common Support Function of "Environmental Sciences" include:
  - Modelling and sensing interplanetary radiation
  - Modelling and sensing the plasma forming the ionosphere
  - Developing techniques to observe and forecast the weather
  - Measure and model naturally occurring optical backgrounds
  - Applying seismic techniques to Comprehensive Test Ban Activities
  - Develop remote sensing capabilities for atmospheric parameters
  - Forecasting conditions in the environment for military operations
  - Developing weather impact decision aids for mission planning and operations

AIR STAFF CORRECTION WORKSHEET

PURPOSE: To provide corrected answer to **HANSCOM AFB, MA**.

SOURCE: **'95 BRAC Questionnaire**

CONCLUSION: **Update needed (~~no change~~ SEE BELOW)**

MAJCOM (CONCURS)(NONCONCURS): **CONCURS (Provided info VIA questionnaire)**

BASE (CONCURS) (DOES NOT CONCUR): -same-

I certify the above information is accurate and complete to the best of my knowledge and belief, based upon information provided by identified sources.

AIR STAFF REVIEWER: J. BUSH (CEVP) **DATE:** 19 AUG 1994

Air Quality
-- Area is in non-attainment for Ozone (serious). The base has implemented carpooling; does not restrict on/off-base activities at this time.

Groundwater/IRP
-- Potable groundwater contaminated. 22 IRP sites constrain future activities.

Other
-- 27 Acres of wetlands constrain future construction.
-- Grassland community (habitat), north of base is a verified site for breeding Upland Sand Pipers & Grasshopper Sparrows (both sensitive species).

Common Support Functions	Name	Type of Organization	Distance	Workyears Performed by Your Activity	Workyears Funded by Your Activity
Environmental Sciences	Consortium for Weather Modeling & Simulation Research	Consortium of Academic, Research, FFRDC, Commercial	26 mile radius	5.5	7.5
Environmental Sciences	University of Mass/ Lowell	University	12 miles	17	5
Environmental Sciences	Boston University	University	15 miles	7	5
Environmental Sciences	Atmospheric & Environmental Research, Inc	Commercial	10 miles	7	19
Environmental Sciences	Boston College	University	25 miles	25	11

Note: Space is an equally applicable CSF; but due to data call limitations, multiple CSFs cannot be shown.

Impact:

The Consortium for Weather Modeling and Simulation Research: The Geophysics Directorate's Simulation Laboratory carries out research for projects that very much depend on the active interaction of the following local institutions making up the Consortium: Massachusets Institute of Technology, Brandeis University, Linclon Laboratory, Salem State College, The Analystic Sciences Corpration (TASC), and Hughes STX. There is a new FY95 AFOSR initiative for basic research in Lattice Gas Automata, an exciting new field of physics, which may hold revolutionary advances in modeling and simulating atmospheric dynamics. Several academic institutions on the forefront of this field are located in the local area and PL active research requires interaction with this group of investigators several times a week.

In another Sim Lab project, we have a CRADA with Salem State College, a nationally recognized leader in geographic research, specifically in developing Geographic Information Systems (GIS). We have arranged to use their Masters degree candidates to develop theses in support of our field studies for Air Combat Targeting/Electro-optical Simulation projects. These students conduct their research in our Sim Lab several times weekly.

A third project is developing a 3-d cloud scene simulation capability in support of the Defense Modeling and Simulation Office (DMSO). The model incorporates microphysical properties of cloud dynamics and visualizes the scenses at rates suitable for distributed interactive simulation (DIS). TASC is renown for their capabilities of weather visualization capabilitieis.

The **UMSS/Lowell** Center for Atmospheric Research conducts basic and applied research in the areas of ionospheric structure and dynamics, with special emphasis on remote sensing of the ionosphere using Digital Ionospheric Sounders.

- New sensors are jointly tested and validated at the UMASS field site in Westford, MA.

- Measurements from these sensors distributed over a worldwide network provide critical real-time input to Operational Ionospheric Models.

- Weekly consultation with PL Model developers are required for correct interpretation of the data.

- Graduate students participate in the research, and they require close supervision.

- PL scientists serve as thesis advisors to some of these students.

- Co-authorship of scientific papers is facilitated by frequent visits

- On-site contractor support is only possible with closely located institutions

- On-site contractor support is only possible with closely located institutions

The **BU** scientists and engineers working on-site are an integral part of the research community in space physics. They work jointly on an entire range of theoretical and experimental problems from the solar wind to the inner magnetosphere. The AF and BU scientists have complimentary skills, making for a strong R&D team. As a consequence, the group effort has been extremely productive scientifically, and has accelerated the transfer of technology to the commercial sector. The impact of not having this support available would be to delay the understanding of the radiation environment near the earth and in interplanetary space and delay the design improvements necessary to prolong the operational lifetimes of DoD satellite systems.

The scientific relationship between the Atmospheric Sciences Division and **Atmospheric & Environmental Commercial Research, Inc. (AER),** has matured over the past 5-8 years to the point where there are presently some 8 separate projects underway. They are funded from several different sources (62101F, 63707F, 63371F (SERDP), 35160F (DMSP SPO), 65502F (SBIR), and cooperatively (CRADA)). Collectively, they amount to some $2.5M in FY94. Most individuals from AER contributing to the projects work on-site at Hanscom AFB, MA (13), others (6) work off-site at AER headquarters in Cambridge, MA, and typically interact in person with PL scientists on a weekly basis. The two sites are linked via Internet, and through Internet have co-equal access to USAF computer systems and shared data bases.
The impact of not having the geographically co-mingled working relationship would be substantial (negative). PL would not have been able to respond in a timely and effective manner that it did to the recently completed SERCAA global analysis project that provided a totally new set of algorithm specifications for the USAF Cloud Depiction and Forecasting System (CDFS) 6.4 funded source selection process, were it not for this tightly coupled relationship. AER's ability to respond effectively was predicated on the close geographic proximity, the availability of on-site work space, shared data bases and access to the USAF AIMS facility. This is but one example, albeit an important one, of the

importance to the USAF of a nearby scientifically outstanding R&D group.

The Institute for Space Research at **Boston College** conducts basic and applied research in the areas of cosmic ray specification and modeling, analysis and prediction of solar activity and its effects of the earth, and ionospheric structure and dynamics, with special emphasis on the physics of disturbed ionospheric regions which cause outages on Satellite Communications Systems. The Institute provides research which is critical to the PL mission of AF System outage specification and prediction.

- In order to conduct the scientific research, access is required to unique ionospheric data bases residing at PL as well as PL computer resources.

- Daily discussions of analysis techniques and reviews of results are conducted.

- Graduate students participate in the research, and they require close supervision.

- PL scientists serve as thesis advisors to some of these students.

- Co-authorship of scientific papers is facilitated by frequent visits

3.2 Personnel:

3.2.1 Total Personnel:

Types of Personnel	Number of Personnel		
	Government	On-Site FFRDC	On-Site SETA

	Civilian	• Military		
• Technical	209	51	• 0	85
• Management (Supv)	48	6	• 0	9
• Other	107	18	• 0	23

"SETA" refers to all on-site contractors involved with S&T. This definition is not the traditional definition we use.

DATE: 23 Aug 94

MEMORANDUM FOR RECORD, SAF/AQT

AIR STAFF CORRECTION WORKSHEET

PURPOSE: To provide corrected answer to Question Number 3.2.3 Experience, Phillips Laboratory, Hanscom Air Force Base, MA, Data Call

SOURCE: Installation worksheets (Anne L. Lambert, PL/CP, DSN 478-2824).

METHOD: Review of Installation Worksheets submitted for Air Force data call, telecon, and FAX communications with MAJCOM and Base POCs.

CONCLUSION: The correct personnel data is shown in attached table 3.2.3 Experience, Phillips Laboratory, Hanscom Air Force Base, MA.

MAJCOM CONCURS: (See attached FAX copies)
Mr. Timothy L. Dues, HQ AFMC/STP, Wright-Patterson AFB, DSN 787-7850.

BASE CONCURS: (See attached Installation Worksheets)
Colonel Thomas E. Bretz, Jr., PL/DE, Kirtland AFB, DSN 246-0239.
Ms. Anne L. Lambert, PL/CP, Hanscom AFB, DSN 478-2824.

I certify that the above information is accurate and complete to the best of my knowledge and belief.

AIR STAFF REVIEWER: Paul D. Copp **DATE:** 23 Aug 94
Paul D. Copp, Lieutenant Colonel, USAF

3.2.2 Education:

Type of Degree/Diploma	Number of Government Personnel by Position		
	Technical	Management (Supv)	Other
High School or Less	24	8	101
Associates	12	2	7
Bachelor	72	10	12
Masters	67	16	5
Doctorate	85	18	0

3.2.3 Experience:

Type of Position	Years of Government Service and/or Military Service				
	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Technical	16	76	30	19	119
Management	0	5	6	9	34
Total	16	81	36	28	153

PL- HANSCOM

PAGES 11-14 REMOVED DUE TO CHANGES IN DATA

3.2.4 Accomplishments During FY91-93:

3.2.4.1 Patents awarded and patents disclosures

CSF	Disclosures	Awarded	Patent Titles (List)
Environm. Science	24 Jul 90	3 Nov 92	Process and Apparatus for Preventing the Pulse Discharge of Insulators in Ionizing Radiation
Environm. Science	2 Jul 91	10 Nov 92	Tilt/Shear Immune Tunable Fabry-Perot Interformer
Environm. Science	30 Sep 91/ 23 Nov 93	23 Feb 93	Telescope Baffle Scope System for Modeling Moderate Resolution Atmospheric Propagation
Environm. Science	20 Jun 91	30 Mar 93	Payload Attitude Control Tester
Environm. Science	2 Jul 93		Schemes to Form Silicon-On-Diamond Structure
Total	6	4	

Note: Space is an equally applicable CSF; but due to data call limitations, multiple CSFs cannot be shown.

94-09-26 17:24 RCVD

CONTROL NUMBER: LJCSWG-AF 023

PURPOSE: To provide SAF/AQX staff corrected answers to Question 3.2.4.2 Papers published in peer reviewed journels, of the (see Distribution List) response to the Laboratory Joint Data Call. For each CSF in which you perform work, provide a list of papers published in peer reviewed journals by your government personnel during FY 1991 through FY 1993. The papers listed must directly support the CSF. For each paper listed provide both the title of the article and the journal in which it was published, and the month and year of publication. Do not list papers prepared by non-government personnel or other personnel who were not employed by your activity, even if the paper was prepared in support of a contractual requirement. Do not list papers published in non-peer reviewed journals; technical, letter, test, and other reports; manuals and handbooks; presentations at symposiums; etc.

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

MAJCOM REVIEWER: _____
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

PAPERS RFC DISTRIBUTION LIST

1. ARMSTRONG LAB, BROOKS AFB
2. ARMSTRONG LAB, WRIGHT-PATTERSON AFB
3. WRIGHT LAB, WRIGHT-PATTERSON AFB
4. WRIGHT LAB, EGLIN AFB
5. PHILLIPS LAB, KIRTLAND AFB
6. PHILLIPS LAB, EDWARDS AFB
7. PHILLIPS LAB, HANSCOM AFB
8. ROME LAB, GRIFFIS AFB
9. ROME LAB, HANSCOM AFB
10. ARMSTRONG LAB, HANSCOM AFB
11. ARMSTRONG LAB, WILLIAMS AFB

PL-EDWARDS, HANSCOM, KIRTLAND

CONTROL NUMBER: LJCSWG-AF 023

PURPOSE: To provide SAF/AQX staff corrected answers to Question 3.2.4.2 Papers published in peer reviewed journals, of the (see Distribution List) response to the Laboratory Joint Data Call. For each CSF in which you perform work, provide a list of papers published in peer reviewed journals by your government personnel during FY 1991 through FY 1993. The papers listed must directly support the CSF. For each paper listed provide both the title of the article and the journal in which it was published, and the month and year of publication. Do not list papers prepared by non-government personnel or other personnel who were not employed by your activity, even if the paper was prepared in support of a contractual requirement. Do not list papers published in non-peer reviewed journals; technical, letter, test, and other reports; manuals and handbooks; presentations at symposiums; etc.

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

See Attached. 1 paper deleted because it had no back up data & 6 new papers were deleted due to duplication in FY92.

MAJCOM REVIEWER: C. King 25 Sep 94
(print name, organization, DSN)
Gerry C. King, HQ, HQ AFMC/ST, 787-5368

BASE: Concurs Does not concur (explain:)

SEE ATTACHED

BASE REVIEWER: James R. Albert
(print name, organization, DSN)
JAMES R. ALBERT, MAJ USAF, PL/XPB, 246-0241

I certify the information above is accurate and complete to the best of my knowledge and belief.

3.2.4.2. How many papers were published in peer-reviewed journals?

FY91 - Phillips Laboratory - Hanscom AFB MA

CSF	Number Published	Paper Titles (List)
Environmental Sciences	48	See Below
TOTAL	48	

A New Look at the Sun - Memorie Della Societa Astronomica Italiana, Jun, 91

~~A Statistical Study on the Effects of IMF Bz and Solar Wind Speed on Auroral Ion and Electron Precipitation - Journal of Geophysical Research~~, Mar, 91

A Study of the Chamaeleon I Dark Cloud and T-Association - IV. Infrared Objects Near Cederblad 110* - Mon. Not. R. Soc., Vol 251, 91

Amplification of Critical Velocity Ionization by Associative-Ionization - Geophysical Research Letters, Mar, 91

Analysis of Ion Densities in the Vicinity of Space Vehicles: Ion-Neutral Chemical Kinetics - Journal of Geophysical Research, May, 91

Analysis of the Optical Spectra of the Solar Flares vs. Velocity Fields in the 13 Jun 80 Flare Area - Astronomy and Astrophysics Journal, Fall 91

Are Sunspot-Weather Correlations Real? - Journal of Atmospheric and Terrestrial Physics, Vol 53, No. 1/2, 91

Convective Structures in the Sun - Monthly Notices of Royal Astronomical Society, Fall 91

Coronal Photometry and Analysis of the Eclipse Corona of Jul 22, 90 - Astrophysical Journal, Jul, 91

Critical Points in the 16-Moment Approximation - Journal of Geophysical Research, Vol 96, No. A2, Feb, 91

Distributed 2-D Regions 1 & 2 Currents: Model Results and Data Comparisons - Journal of Geophysical Research, 96, 91

Dust and Molecular Properties of the Low-opacity Cloud Lynds 1563 - The Astrophysical Journal, Vol 370, Mar, 91

Effect of Altitude on Civ Experiments in Space - Planetary and Space Sciences, Mar, 91

Effects of Absorption on High-Latitude Meteor Scatter Communication Systems - Radio Science, Vol 26, No. 4, Jul-Aug 91

Effects of Hydration on Reactions of $O_2O)_n(n=0-2)$. 2. Reactions with H_2 and D_2 - Journal of Physical Chemistry, Vol 95, 91

Energy-Gap Dependence for Inelastic Collision-Induced Electronic Transitions in 2^+ - Physical Review A, Vol 43, No. 3, Feb, 91

Evaluation of Six Ionospheric Models as Predictors of Total Electron Content - Radio Science, Vol 26, No. 4, Jul-Aug 91

Fluxgate Magnetometer Instrument on the CRRES - Journal of Spacecraft and Rockets, Aug, 91

Gas-Phase Acidities of HPO_3 and HPO_2: Enthalpies of Deprotonation - Journal of Physical Chemistry, Vol 95, 91

High Coronal Flares and Impulsive Acceleration of Solar Energentic Particles - The Astrophysical Journal, Vol 366, Jan, 91

High-Resolution Solar Spectrum Between 2000 and 3100 A - Journal of Geophysical Research, Vol 96, No. D7, Jul, 91

Impulse Formalism for Atom-Diatom Collisions - Physical Review A, Vol 43, No. 1, Jan, 91

Interplanetary Magnetic Field Control of Drifts and Anisotropy of High-Latitude Irregularities - Radio Science, Vol 26, No. 4, Jul-Aug 91

IRAS Detection of Very Cold Dust in the Lynds 134 Cloud Complex - The Astrophysical Journal, May, 91

Measurement of High-Voltage and Radiation-Damage Limitations to Advanced Solar Array Performance - Space Photovoltaic Research and Technology, Aug 91

Model Studies of the Latitudinal Extent of the Equatorial Anomaly during Equinoctial Conditions - Radio Science, Vol 26, No. 4, Jul-Aug 91

NH(X^3 -, v=1-3) Formation and Vibrational Relaxation in Electron-Irradiated $Ar/N_2/H_2$ Mixtures - The Journal of Chemical Physics, Vol 94, No. 6, Mar 91

On Cosmic-Ray Cut-Off Terminology - Il Nuovo Cimento, Vol 14 C, No. 3, 91

On the Nonlinear Response of Airglow to Linear Gravity Waves - Journal of Geophysical Research, Vol 96, No. A8, Aug, 91

Operation of an Ion Calibration Source Over for Orders of Magnitude in Energy - Review of Scientific Instruments, Jun, 91

Pre-Breakup Arcs - A Comparison between Theory and Experiment - Journal of Geophysical Research, Mar, 91

Radiative-Recombination Cross Sections and Rate Coefficients of Atomic Oxygen - Physical Review A, Vol 43, No. 7, Apr, 91

Reaction of Br- with WF6: Competition Between Charge Transfer and Association; Influence of Temperature, Pressure, and Vibrational Energy - Journal of Physical Chemistry, Vol 95, 91

Reactions of $CH_3OH_2^+$, $CH_3OH_2^+ \cdot CH_3OH$, and $(CH_3)OH^+$ with Methanol: Effect of Solvation - Journal of the American Chemical Society, Vol 113, 91

Repres...iations of Currents and Magnetic Fields in Anisotropic Magnetohydrostatic Plasma - Journal Geophysical Research, 96, 17, 609-17, 626, 91

Representations of Currents and Magnetic Fields in Steady-State Isostropic Plasma - Journal Geophysical Research, 91

Rotational Analysis of the Nonthermal $NO(A^{2+}, v'=0)$ Distribution Observed in the $N_2(A^{3+}{}_u, v'=0)NO(X^2\Pi, v''=0)$ Energy Transfer Reaction - Journal of Chemical Physics, Vol 94, No. 7, Apr, 91

Similitude Modeling of Internal Gravity Wave Spectra - Geophysical Research Letters, Vol 18, No. 8, Aug, 91

Space Radiation Effects Program - Journal of Spacecraft & Rockets

Structure and Oscillations in Quiescent Filaments from Observations in He I 10830A - Solar Physics, Jul, 91

Suprathermal N+ H20, D20 Reaction Cross Section and Product Ion Time-Off-Flight Measurements - Chemical Physics Letters, May, 91

The 0 + CO_2 Reaction: New Results and Atmospheric Implications - Journal of Geophysical Research, Vol 96, No. A8, Aug, 91

The CRRES Microelectronics Test Package (MEP) - Journal of Spacecraft and Rockets, May, 91

The Cusp/Cleft Review of Geophysics – Review of Geophysics, Supplement, Apr, 91

The Electrodynamic, Thermal, and Energentic Character of Intense Sun-Aligned Arcs in the Polar Cap - Journal of Geophysical Research, Vol 96, No. A2, Feb, 91

The Temperature of Large Dust Grains in Molecular Clouds - The Astrophysical Journal, Vol 371, Apr, 91

Young Stellar Objects Detected by IRAS - The Astrophysical Journal Supplement Series, Vol 75, Feb, 91

Zonal Irregularity Drifts and Neutral Winds Measured Near the Magnetic Equator in Peru - Journal of Atmospheric and Terrestrial Physics, Vol 53, No. 8, 91

FY92 - Phillips Laboratory - Hanscom AFB MA

CSF	Number Published	Paper Titles (List)
Environmental Sciences	~~182~~ 175	See Below
TOTAL	~~182~~ 175	

8-14 Micron Spectroscopy of Carbon Stars Associated with Silicate Dust - Astrophysical Journal, Jun, 92

A Description of the Air Force Real-Time Nephanalysis Model - Weather & Forecasting, Jun, 92

A Mechanism Responsible for the Observation of Symmetric Lower Hybrid Sidebands and a Low Frequency Mode in the Upper Ionosphere - Journal of Geophysical Research, Vol 97, No. A11, 92

A Proposal to Produce Velocity-Selected and State-Selected Molecular-Beams Using the Ballistic Effect - Journal of Chemical Physics Jul 92

A Search for Polarization in Ellerman Bombs (Transient Brightenings in Lower Solar Chromosphere) - Solar Physics, Jul, 92

Absorption Parameters of Very Dense Molecular Spectra for the HITRAN Compilation - The Journal of Quantitative Spectroscopy & Radiative Transfer, Vol 48, 92

Amplification of Critical Velocity Ionization by Associative Ionization - Journal of Geophysical Research, Apr, 92

An Analysis of the Kinetics for the N2(A3-SIGMA-U+, UPSILON') +CO(X1-SIGMA+,UPSILON' =0) Energy Transfer Reaction and an Upper Limit for the Rate Constants of the Reactions CO(A3-PI,UPSILON'=0 and 1)+CF4 - Journal of Physical Chemistry, Vol 96, No. 21, 92

An Annotated Bibliography on the Greenhouse Effect and Climatic Change - Climatic Change, Jun, 92

An Efficient Algorithm to Process NOAA-AVHRR Data in Real-Time - Remote Sensing of Environment, Jan, 92

An Experimental Investigation of Thermospheric Structure Near an Auroral Arc - Journal of Geophysical Research, Jul, 92

An IRAS Study of Pre-Main Sequence Stars in B209 - Astronomy & Astrophysics, Jun, 92

Analysis of Shallow Microearthquakes in the South Sebec Seismic Zone, Maine - Seismological Research Letters, Vol 63, 1992

Applying an 8-bit Multispectral Color-Composite Image Simulation Technique to Operational Real-Time AVHRR Data - Bulletin of the American Meteorological Society, Jun 92

Atmospheric 60-GHz Oxygen Spectrum: New Laboratory Measurements and Line Parameters - The Journal of Quantitative Spectroscopy & Radiative Transfer, Vol 48, 92

Atmospheric Propagation of Radiation: Microwave Through Visible - L' Onde Electrique, May-Jun 92

Automatic Tornado Prediction with an Improved Mesocyclone-Detection Algorithm - Weather & Forecasting, Jun, 92

Banded Electrostatic Emissions Observed by the CRRES Plasma Wave Experiment - Journal of Geophysical Research, Sep, 92

Biennial Conference on Molecular Spectroscopic Databases - Journal of Quantitative Spectroscopy & Radiative Transfer, Vol 48, 92

Branching Ratios from Infrared Vibrational Emission from NO(X2Pi,v-prime = 2-13) - Journal of Chemical Physics, May, 92

Carrier Removal and Defect Behavior in p-Type InP - Journal of Applied Physics, Vol 72, No. 11, 92

Change of Confinement Properties and Transition from Absolute to Non-Normal Mode Microinstabilities - Physics of Fluids B (Plasma Physics), Sep, 92

per uplicate ~~Change of Confinement Properties and Transition from Absolute to Nonnormal Mode Microinstabilities - Physics of Fluids B - Plasma Physics, Sep, 92~~

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NOTE: Space is an equally applicable CSF for each of the above articles; but due to data call limitations, multiple CSFs cannot be shown in the summary table for each applicable fiscal year.

~~Highly Rotational Excited Nitric Oxide in the Terrestrial Thermosphere~~

3.3 Workload
3.3.1 FY93 Workload
3.3.1.1 Work Year and Lifecycle:

"LAB"	Fiscal Year 1993 Actual			
	Civilian	• Military	• FFRDC	SETA
• Science and Technology	364	75	• 0	117

"SETA" refers to all on-site contractors involved with S&T. This definition is not the traditional definition we use.

3.3.1.2 Engineering Development By ACAT:

Phillips Laboratory performs on ACAT I,II,III, or IV activities

3.3.1.3 In-Service Engineering:

Phillips Laboratory performs no in-service engineering efforts

3.3.2 Project Funding

3.3.2.1 Direct Funding:

CSF	FY94 ($M)	FY95 ($M)	FY96 ($M)	FY97 ($M)
Envir. Sciences	40.128	39.700	39.140	39.551

Note: Space is an equally applicable CSF; but due to data call limitations, multiple CSFs cannot be shown.

3.3.2.2 Other Obligation Authority:

CSF	FY94 ($M)	FY95 ($M)	FY96 ($M)	FY97 ($M)
Envir. Sciences	28.509	24.070	22.950	19.000

Note: Space is an equally applicable CSF; but due to data call limitations, multiple CSFs cannot be shown.

pulled Sep 94.
3.4.1, 3.5.1, 3.5.1.1
Reference 29 Sep 94
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3.4 Facilities and Equipment

3.4.1 Major Equipment and Facilities:

Environmental Sciences

	Major Facility or Equipment Description	Unique To			Replacement Cost ($K)
		DOD	Federal Gov't	U. S.	
	Spacecraft Interactions Laboratory (WSSI)		X		1,500
	Space Physics Laboratories (GPS)				
	Space Radiation Effects		X		4,426
	Space Plasmas & Fields	X			730
	Space Environmental Effects		X		866
	Ionospheric Physics Laboratories (GPI)				
	Ionspheric Applications	X			4,426
	Ionspheric Modifications		X		1,723
	Ionspheric Modeling & Remote Sensing		X		927
	Atmospheric Sciences Laboratories (GPA)				
	Air Force Interactive Meteorological System				2,300
	Atmospheric Prediction				300
	Weather Characterization & Advanced Weather Systems				103
	Otis Weather Test Facility				747

	Optical & Infrared Technology Laboratories (GPO)				
	Visible & Infrared Backgrounds			X	10,733
	Remote Sensing			X	11,300
	Infrared Signatures (including SAR - $750K)	X			5,150
	Earth Sciences Laboratories				
	Solid Earth Geophysics		X		1,429
	Inertial Sensors & Gravity		X		3,338
	Geophysics Data Systems Laboratories (GPD)				
	Geophysics Data Systems		X		38
	Telemetry Data Processing/Simulation		X		3,787
	Data Systems Implementation				43
	Analysis & Modeling		X		81
	Data/Video Analysis				216
	Classified Data Analysis				162
	MSX Data Analysis				271
	SPREE Data Analysis				27
	Technical Research Labrary (TL)		X		32,463
	Aerospace Engineering Laboratories				
	Electronics Design & Fabrication				65
	Mechanical & Aeronautical Design				232
	Aerospace Payload Integration Facility	X			6,017
	Technical Operations - Shops				1,731

	Computer Center (SC)				2,752
	Facilities				64,534
	Radiation Hard Electronics Tech				18,816
	Facilities				3,336
	TOTAL				184,324

Note: Space is an equally applicable CSF; but due to data call limitations, multiple CSFs cannot be shown.

Uniqueness of Facilities/Equipment

Spacecraft Interactions (WSSI) Laboratory: The WSSI program comprises three closely related efforts: (1) development of computer models of spacecraft interactions, which are validated by (2) space and ground-based observations of the actual interactions and (3) laboratory experiments involving the chemical processes involved; the modeling cannot be completed without the validation by observation and experiment. The first-floor laboratory facility includes three principal experimental systems that have been constructed over a period of several years; they are of special design, are very complex, have large physical dimensions, are permanently installed, and required building modifications to accommodate them.

Space Physics (GPS) Laboratories:

- Space Radiation Effects: World expertise in space radiation measurements. Only Air Force agency responsible for establishing the most advanced data-base on space radiation and its potentially damaging effects on spacecraft, their support subsystems, and control electronics.

- Space Plasmas and Fields: Only DoD group providing solar and space weather and forecast specification models and data for the solar interplanetary and magnetospheric regions.

- Space Environmental Effects: This laboratory designs, develops, tests, and supports the calibration of leading-edge, advanced instrumentation used for space environmental diagnostics on-board major space flight experiments. It has facilities to simulate and measure how systems behave and operate while in space and is used to validate both space and ground-based observations of the actual and simulated interactions. In addition to providing support for our own experiments, these facilities are used by other space experimenters from around the world for space simulations and sensor calibrations. This unique facility is one of the main reasons for the high success rate of flight experiments; it has provided critical data for understanding spacecraft systems anomalies and plays a vital role in helping insure mission success. The laboratory facility includes four principal experimental systems that have been constructed over a period of several years; they are of special design, very complex, have large physical dimensions, and require building modifications to accommodate them. The facilities are used to ensure readiness and reliability of experimental space systems and only available in the Space Physics Division.

Ionospheric Physics (GPI) Laboratories:

- Ionospheric Applications: The strength of this laboratory is in the quality and skill of the world class scientific team that conducts the research. This team is the Air Force expertise for ionospheric effects on C3I systems, and density and satellite drag. It has the strength to explore new research opportunities in space debris and space based radar. The team involved, including on site contractors, represents about 600 manyears (ROM) of experience. The team has also assembled a collection of unique instruments that allow measurements of the atmosphere and ionosphere by ground aircraft and satellite based sensors. This collection of people, their capability and instrumentation is not available anywhere else.

  -- Satellite Communications Facility (Special Needs Space): Performs continuous measurements of ionospheric disturbance level on AFSATCOM, FLTSATCOM and MARECS satellite transmissions in this special subauroral location; Controls down link transmissions of AFSATCOM satellites to the polar stations in Thule and Sondrestrom; Resident experts interpret measurements to support SAC and AWS. Measurements performed by this facility are dictated by its special location, namely, sub-auroral and eastern longitude sector.

-- Lidar Penthouse Facility (Special Needs Space): This facility is the only Air Force Lidar system designed to measure absolute density and temperature from the ground to 105 km. This facility has the only Air Force mobile facility capable of being used anywhere in the world in support of DoD or civilian needs for high altitude density and temperature measurements. This facility represents a remote sensing capability for density and temperature measurements that would be very expensive to acquire by any rocket borne technique.

- Ionospheric Modifications: The scientists at GPI involved in research in plasma chemistry and in applying their results to reduction of radar signatures of aerospace vehicles have developed expertise, techniques, and instrumentation which cannot be matched, either in the DoD or elsewhere. This expertise extends from the synthesis of candidate chemicals used in modification of plasmas, through measurement of reaction rate constants and testing of the chemicals in flames and plasma arc experiments, to ballistic range and flight tests. The variable temperature selected ion flow drift tube (SIFDT) apparatus, the high temperature flowing afterglow apparatus, and the flowing afterglow Langmuir probe apparatus at GPI are unique. Such a combination of experimental systems for plasma chemistry exists nowhere else in the world. The HAARP and the USAF/VOA programs at PL/ GPI are the only DoD programs assessing the effects of high power radio waves in modifying the ionosphere for possible DoD applications in communications and surveillance.

- Ionospheric Modeling & Remote Sensing--This Sub-thrust is where the Air Force expertise for modeling, specifying and predicting the state of the ionosphere resides. It also is the Air Force resource for exploiting ultraviolet technology for remote sensing of the atmosphere, for collection of ultraviolet missile plume imagery and spectral information and for developing models of ultraviolet background radiation. The Laboratory maintains the Air Force facility for calibrating ultraviolet sensors destined for space flight. It also operates a state of the art laser fluorescence laboratory which is the Air force resource for determining rate constants of chemical reactions emitting ultraviolet radiation.

Atmospheric Sciences (GPA) Laboratories:

- Air Force Interactive Meteorological System: The AIMS system is the largest computer complex within DoD dedicated to research and development of algorithms to utilize satellite data.

- Atmospheric Prediction: Numerical weather prediction(NWP) models for cloud forecasting. Other NWP R&D centers aren't focussed on clouds, which are the highest priority requirement of Air Weather Service.

- Weather Characterization & Advanced Weather Systems: Only AF Laboratory developing simulation models to describe impact of clouds and weather on the design and operation of weapons, surveillance and communications systems. Lead Laboratory for applied climatology for DoD. Only DoD laboratory measuring electric fields aloft to aid with prediction of lightning for space launches. Only Tactical Weather Support Program in AF. Only DoD Capability for environmental and Smart Weapon Performance prediction.

- Otis Weather Test Facility: This is a unique meteorological site with high incidents of fog, high humidity, and sea breezes which is not duplicated elsewhere in the U.S.

Optical & Infrared Tech (GPO) Laboratories:

- Visible & Infrared Backgrounds:

  -- Upper Atmosphere Simulation Facility
    --- COCHISE - Large scale, cryogenic simulation facility used to simulate and characterize IR emissions in the quiescent, auroral, and nuclear-disturbed atmosphere. COCHISE is the only ultra-low IR background chamber in the US instrumented to perform simulation studies of upper atmospheric chemistry initiated by thermo-chemical excitation; it is the most sensitive facility for measuring the IR emissions generated by these processes. This work is not being performed elsewhere in the US and there are no alternative facilities available.
    --- LABCEDE - Large scale, cryogenic facility in which IR emissions in the aurora and nuclear-disturbed atmosphere are characterized. LABCEDE is the only ultra-low background chamber in the US for observing electron-excited IR emissions from

simulated aurora land nuclear-disturbed atmospheres; it is the most sensitive facility for measuring the IR emissions from this class of atmospheric processes. These measurements are not being performed elsewhere and there are no alternative facilities available. -- HOT LABCEDE - Atmospheric simulation facility in which IR emissions from auroral disturbances are characterized. HOT LABCEDE is only low background chamber in the US for simulating electron-excited IR emissions at low altitudes. These measurements are not being performed elsewhere and there are no alternative facilities.

--- FTMS - Fourier transform mass spectrometer in which electron bombardment is used to generate ions which react with other molecules in an ion trap to generate new ionic species. The unique feature of this facility is its application to studies of specialized ion-chemistry with the resolution and sensitivity required to investigate ion-molecule reactions in the upper atmosphere. These measurements are not being performed elsewhere in the US.

--- HIRES - Fourier transform spectrometer with absorption cell used to provide molecular IR absorption data which are required inputs to the standard HITRAN and HITEMP data bases accessed by optical background predictive codes. HIRES is the only high resolution FTS facility in the US for experimentally determining spectroscopic parameters for long path transmission, weak atmospheric absorptions, and hot or plume sources. This work is not being performed elsewhere in the US and there are no alternative facilities available.

-- Laser Facility:

--- LINUS: Plasma simulation facility in which nuclear-produced and nuclear-enhanced IR backgrounds in the upper atmosphere are characterized. This facility is the only laser facility in the US which is instrumented for performing simulations of upper atmospheric IR plasma emissions; it is the most sensitive facility for measuring the IR emissions from recombining, nuclear plasmas. These measurements are not being performed elsewhere in the US.

--- TEL: Tunable diode laser system used to characterize molecular spectroscopic properties required to model optical backgrounds in quiescent and disturbed atmospheres. The uniqueness of this facility is the laboratory capability to determine numerous molecular absorption parameters of atmospheric species with the high spectral resolution required to calculate atmospheric calculate atmospheric transmission and radiance.

--- FACELIF: Laser-based spectroscopic techniques are used with a flow tube kinetics apparatus to investigate atomic and molecular processes of formation, excitation, and relaxation for the dominant atmospheric IR radiators. The uniqueness of this facility is the application to the determination of atomic and molecular emission process data (for example, reaction rate constants and initial state population distributions) for chemical kinetics data bases used by optical backgrounds codes.

-- IR Detection Facility:

--- SSPM: Test and design facility for the development and demonstration of ultra-sensitive solid-state photomultiplier (SSPM) spectrometer systems. The SSPM facility is the only center in the US dedicated to the detailed characterization of the electronic properties of SSPM's and the application of this new technology to upper atmospheric simulation experiments (e.g., COCHISE) and rocket-borne measurements (e.g., Small Rockets Program). This work is not being performed elsewhere in the US and there are no alternative facilities available which have the unique combination of performing both laboratory and field measurements.

--- AEROSOL: Spectroscopy facility used to characterize the optical properties of pure and mixed aerosols which are critical to the modeling of transmission in the lower atmosphere. The special features of this facility are a variety of ultraviolet, visible, and IR spectroscopy instruments having the capabilities to derive optical constants and extinction spectra.

-- Field Experiment Development Center: This facility for performing field experiment development is uniquely equipped and staffed to provide technical guidance for current and future upper atmosphere field investigations. The center is unique in the synergy provided by in-house laboratory, modeling and field programs.

-- Field Experiment Design Center: This facility is uniquely equipped with work station, drafting stations, and CAD/CAM stations to plan and design field experiment instrument payloads, particularly spectrometer systems. A unique feature of this center is the electronics design which is performed to support in-house laboratory programs and field experiments.

-- Field Experiment Preparation Center: This facility is uniquely equipped with state-of-the-art

electronic and detection equipment, and a clean room area for the fielding of upper atmosphere probes. This center is unique in the use of very exacting methods to prepare and support cryogenic sensors for space-borne experiments; the center supports exceptionally delicate techniques for the handling of highly sensitive sensors. Two unique features of the center are the clean room and a sensor integration/payload testing area. The center supports a Class 100 clean room and Class 1000-100 clean room services. The center is, thus, capable of preparing, testing, and integrating highly sophisticated optical systems, such as focal plane arrays. The center is also equipped with cryogenic storage and transport facilities which are required for working with many space-borne sensors.

-- CIRRIS 1A Data Analysis Center: This facility is uniquely equipped and staffed to perform data reduction, verification, validation, and analysis of the recently acquired CIRRIS 1A quiescent and auroral measurements. This data center will also include IBSS, MSX, SPIRIT II, and selected data sets of previous field missions for analysis and distribution to interested DoD agencies. This center will form the basis of a Center of Excellence for upper atmospheric and celestial data analysis. There is no similar center in the US with this level of expertise and synergetic laboratory, field, and modeling programs.

- Remote Sensing: Only Atmospheric Laser Radar or Lidar facility in the Air Force. Capability for active remote sensing with four mobile or transportable systems (CO2 LIDAR, Raman LIDAR, Nd: YAG LIDAR, 2 micron eye-safe LIDARs); can provide rapid response at remote sites as in support of Desert Shield; national leader in the development of solid-state, eyesafe, diode-pumped lasers operating at or near 2 micron.
- Infrared Signatures. FISTA (Flying Infrared Signature Technology Aircraft) provides calibrated spatial, spectral, and temporal data on targets (aircraft, ships, missiles, tanks, etc.) and backgrounds; is only aircraft platform capable of high resolution spectral measurements.

Earth Sciences (GPE) Laboratories

- Haskell Observatory. This facility is located in a geological area that is quite similar to one of the Soviet's test sites making it an optimum location to evaluate new seismic instruments and techniques. Its stability and status as a principal standard site in the International Gravity Standardization Network make it a key site for testing and evaluating advanced inertial

instrumentation.

- Solid Earth Geophysics. The Solid Earth Geophysics Laboratory is the only AF Lab with expertise in seismology to support AF requirements in nuclear test ban treaty monitoring, ballistic missile ground motion studies, and seismic/acoustic vibrations in structures.

- Inertial Sensors & Gravity. This is the only Air Force Laboratory actively pursuing research with in-house expertise in gravity modeling and associated requirements for inertial navigation. This laboratory is uniquely qualified to support cutting-edge cryogenic technology for super-sensitive inertial instruments and rotation sensors.

Geophysics Data Systems (GPD) Laboratories

- Geophysics Data Systems. Systems are designed and developed to meet the specific needs of researchers involved in complex space science projects.

- Telemetry Data Processing/Simulation. The Telemetry Data Processing Laboratory provides a full spectrum of telemetry data processing instrumentation to meet the needs of multiple AF Geophysics scientific sensors. All instrumentation is capable of being readily interconnected in unique configurations to recover sensor data from various types of digital and analog media.

- Analysis & Modeling. Special processing systems to partition, bin, and model space phenomena from space flight measurements.

Technical Research Library

- Books. The PL Research Library book collection totals more than 9,000 volumes, with approximately 3,000 volumes added each year. The collection is extensive in scope and intensive in coverage, encompassing the fields of geophysics, electronics, physics, mathematics, general science, meteorology, aeronomy, astronomy, astrophysics, geodesy, metallurgy, chemistry and environmental sciences.

- Special Collections. The Research Library has a number of materials that, because of age, value,

or fragility, are not in the open stacks. Special Collection material includes early books on ballooning, works on Arctic exploration, 17th and 18th century editions of classic scientific treatises, and the original notebooks of the third and fourth Lords Rayleigh.

- Technical Reports. The Research Library serves as the official archive for technical reports produced by the Geophysics Directorate, its predecessor organizations, and Geophysics Directorate contractors. The Library also archives the technical reports of the Electronic Systems Center and of Rome Laboratory's Electromagnetic and Reliability Division, both located at Hanscom AFB.

- Journals. The Research Library subscribes to about 800 journals. Titles include leading journals for both foreign countries and the United States. The Library's comprehensive collection of Asian scientific periodicals is the only one of its kind in New England. The library has complete sets of most of the classic scientific periodicals, including the Philosophical Transactions of the Royal Society of London, beginning with volume one published in 1665, Newton's London Journal of Arts and Sciences published from 1820-1866, and the Transactions of the Russian Academy of Science dating back to 1726. Currently, journal holdings number approximately 350,000 volumes.

Aerospace Engineering (SXA) Laboratories

- Aerospace Payload Integration Facility. This building is equipped for development, Integration and testing of components and complete space-flight payloads. It is equipped to measure the response of payloads to mechanical vibration and shock, acceleration thermal and thermal-vacuum tests. Using the telemetry station and data-viewing room, the experimenters, technical staff and their contractors can operate the completely integrated payload in a dress rehearsal of the sounding rocket, balloon, or orbiting spacecraft flight. The aerospace engineering division needs it to fulfill their mission, to provide cost effective, timely response to PL and other customer's needs.

Radiation Hard Electronic Devices: The radiation effects facility is an in-house experimental facility used primarily to support the 6.1 and 6.2 research efforts. It offers a unique combination of sources for the simulation of the space and weapon radiation environments. The ability to simulate both long term

radiation effects in space systems and intense transient radiation within the same dedicated laboratory environment is invaluable for Air Force research efforts. The ability to operate systems in the harsh radiation environment of space is a unique Air Force requirement. If new electronic technology is to be applied to these systems it is essential that in house simulation facilities exist within the Air Force laboratories.

3.5 Expansion Potential

3.5.1 Laboratory Facilities:

Common Support Function	Facility or Equipment Description	Type of Space*	Space Capacity (KSF)		
			Current	Used	Excess
Environmental Sciences	Facilities	Adminstrative	51.5	51.5	0
		Technical	326.0	326.0	0
		Storage	5.0	5.0	0
		Utility	0	0	0

Note: Space is an equally applicable CSF; but due to data call limitations, multiple CSFs cannot be shown.

3.5.1.1

No major modifications would be required to enable the facility to house government scientists and support staff to its design capacity. However, it would be necessary to complete the planned Military Construction projects by refurbishing the two remaining wings of the original buildings which involves upgrades to the utilities, energy envelopes, etc.

3.5.1.2

The laboratory is capable of increasing approximately 300 workyears

3.5.1.3

There are no FY95projects impacting work year capacity unless inserts are made which also provide timely design funds, in that case the impact would be $5.75M to the FY95 PBS.

3.5.2 Land Use:

There are a total of 41.32 buildable acres on Hanscom AFB to accommodate expansion of Electronic Systems Center, Phillips Lab, and Rome Lab.

3.5.3 Utilities: Estimate of Hanscom AFB's capability to expand or procure additional utility services

Water:	2,304.2	Kgal/day
Natural Gas:	202.8	MCF/day
Electricity:	8.9	KWH

PHILLIPS LABORATORY

EDWARDS AFB CA

BRAC 1995 "LAB" JOINT CROSS-SERVICE DATA CALL

15 August 1994

MAINTAIN FILES OF ALL DATA RECEIVED INCLUDING DISPUTES
AND RESOLUTIONS THEREOF FROM 1995 TO 2005

Item 2

SECTION II: CAPACITY OF DOD COMPONENTS

2.1 Workload

Information Required	Fiscal Years						
	91	92	93	94	95	96	97
Total Funds Programmed ($M)	138.6	172.8	116.9	107.1	52.1	54.1	52.5
Total Actual Funds ($M)	125.8	120.2	176.0				
Programmed Workyears	530	630	566	623	540	309	287
Actual Workyears	739	660	646				

2.2 Excess "Lab" Capacity -- Measured at the DOD Component Level

Excess Lab Capacity = Sum of the Peak Workyears - Sum of Projected Workyears = 739 - 287 = **452**

3.0 Mission

Phillips Laboratory leads, develops, focuses and transitions military space and missile technologies, with corporate responsibility for directed energy and geophysics technologies extending beyond their space applications.

The following are mission areas executed at Edwards AFB, CA:

Space Launch Vehicles

- Missile Propulsion Technology
- Space Systems Propulsion Technology

Space Satellites
- Space Vehicle Structures and Control

3.1 Location

3.1.1 Geographic/Climatological Features

Geographic/Climatological features: The Phillips Laboratory Operating Location AC is located in the northeast portion of Edwards AFB. Approximately 40 miles from the cities of Palmdale and Lancaster, and 100 miles from Los Angeles, the Mojave Desert facility is far enough from population centers for safety, yet close enough for interface with major aerospace developers and manufacturer. Despite its remote location, the laboratory is easily accessible from either Los Angeles international (LAX) or Burbank Airports. The abundant open space, lack of inhabited areas around the laboratory, and practically year round clear weather conditions are required to permit a variety of outdoor rocket motor tests such as the TITAN IV SOLID ROCKET MOTOR UPGRADE. Tests such as this are only ran when the predominant wind meets the direction requirement which allows the rocket exhaust to travel over uninhabited area while it is dispersing into the atmosphere.

3.1.2 Licenses & Permits

Safety: Department of Defense Explosive Safety Board, Explosive Site Approvals for all Test facilities and storage areas with no existing waivers.

LAUNCH VEHICLES

a. Propellant Sample Preparation Area 1-21

(1) Bldg 8582, reinforced concrete cells with open front, used for cutting, machining and storing small solid propellant samples. Sited for 425 lbs Class/Division 1.1 in cell 7 and 100 lbs Class/Division 1.1 in cell 12.

b. Propellant Laboratory Area 1-30

(1) Bldg 8466, a 7' X8' earth covered concrete magazine used for storage of igniter materials. Sited for 20,000 lbs Class/Division 1.1.

(2) Bldg 8467, a 7' X 8' earth covered concrete magazine used for storage of solid propellant ingredients. Sited for 20,000 lbs Class/Division 1.1.

(3) Bldg 8468, a 7' X 8' earth covered concrete magazine used for storage of solid propellant ingredients. Sited for 20,000 lbs Class/Division 1.1.

(4) Bldg 8469, a 7' X 15' metal building on a concrete slab, unbarricaded used for propellant ingredient storage and conditioning. Sited for 1,000 lbs Class/Division 1.1.

(5) Bldg 8470, a 7' X 15' metal building on a concrete slab, unbarricaded, used for propellant ingredient storage and conditioning. Sited for 1,000 Class/Division 1.1.

(6) Bldg 8480, 12' X 15' earth covered igloo used for storage of solid propellant samples. Sited for 10,000 lbs Class/Division 1.1.

(7) Bldg 8481, 12' X 15' earth covered igloo used for storage of solid propellant samples. Sited for 7,000 lbs Class/Division 1.1.

(8) Propellant Storage and Conditioning Complex, eight barricaded concrete slabs with environmental chambers and metal buildings or sunshades. Each pair of pads is sited for 600 lbs Class/Division 1.1.

(9) Bldg 8488, reinforced concrete cells (5) with open front, unbarricaded, designed for solid propellant processing. Sited for 50 lbs Class/Division 1.1 each cell.

(10) Bldg 8490, metal building, unbarricaded, designed as a propellant cutting facility, but is being used as storage for propellant ingredients. Sited for 8,000 lbs Class/Division 1.1.

(11) Bldg 8492, reinforced concrete cells (3) with open front, unbarricaded, designed for propellant ingredient and motor

preparation. Sited for 8,000 lbs Class/Division 1.1.

(12) Bldg 8493, metal building, barricaded on three sides with an open front, designed to store propellant ingredients. Sited for 2,000 lbs Class/Division 1.1.

(13) Bldg 8494, metal building, barricaded on three sides with an open front, designed to store propellant ingredients. Sited for 1,000 lbs Class/Division 1.1.

(14) Bldg 8495, masonry building, barricaded on three sides with an open front, designed to store propellant ingredients and drying oven. Sited for 500 lbs Class/Division 1.1.

(15) Bldg 8496, masonry building, unbarricaded, designed for a propellant cure oven. Sited for 2,000 lbs Class/Division 1.1.

(16) Bldg 8497, metal building, unbarricaded, designed for propellant processing. Sited for 2,000 lbs Class Division 1.1.

(17) Bldg 8499, reinforced concrete cells (3) with open front, unbarricaded, designed for solid propellant ingredient preparation. Sited for 2,000 lbs Class/Division 1.1.

c. Solid Propellant Component Complex, Area 1-32

(1) Bldg 8914, a 7' X 8' earth covered magazine used to store igniters and igniter materials. Sited for 6,000 lbs Class/Division 1.1.

(2) Bldg 8915, a 15' X 40 earth covered steel arch magazine used to store Class/Division 1.1 and 1.3 solid propellant rocked motors. Sited for 50,000 lbs Class/Division 1.1.

(3) Bldg 8916, a 15' X 40' earth covered steel arch magazine used to store Class/Division 1.1 and 1.3 solid propellant rocked motors. Sited for 100,000 lbs Class/Division 1.1.

(4) Bldg 9250, a 80' X 120' metal building, on a concrete slab, unbarricaded, used for rocket motor build-up and inspection. Sited for 250,000 lbs Class/Division 1.1.

d. Environmental Storage Area 1-38: ten above ground, unbarricaded, sheet metal buildings on a 24' X 34' concrete slab, used to store solid propellant and ingredients at ambient and controlled environmental conditions. Each facility is sited for 50,000 lbs of Class/Division 1.1 or 200,000 lbs of Class/Division 1.3. Building 9404 is a replacement currently in final acceptance for use.

e. Liquid Propellant (oxidizer) Storability Complex: Approved for 36,000 lbs Liq Gp I or II.

f. High Altitude Test Area 1-46

(1) Bldg 9635, a 26' X 60' sheet metal building, unbarricaded, used for storage of solid propellant rocket motors. Sited for 8,000 lbs Class/Division 1.1.

g. Solid Propellant Thermal Treatment Site Area 1-100

(1) Bldg 8955, reinforced concrete walls, used for storage of scrap solid propellant generated from operations of mixing and cutting done at this laboratory. Sited for 600 lbs Class/Division 1.1.

Environmental: State and local environmental approvals have been obtained for all current operations.

LAUNCH VEHICLES

a. Interim Status Subpart A Permit for Thermal Treatment of Solid Propellant and propellant ingredient waste. Subpart B permit being prepared by AFFTC will consolidate all Edwards AFB Open Burn-Open Detonations sites. With activation of the EAFB site the PL site will be closed.

b. Locally (EAFB) permitted Consolidated 90 Day Hazardous Waste Accumulation Facility

c. Air Quality Permits

(1). Rule 202.1, Research and Development Exemption for experimental and test facilities located in Kern County. Test Areas, 1-14, 1-21, 1-30, 1-32, 1-36, 1-40, 1-42, 1-46, and 1- 100.
(2). Rule 202.1 Exemption for Test Stand 1-A

(3). Mojave Desert Air Quality Management District Permits to Operate for experimental and test facilities in San Bernardino County.

(a). High Thrust Test Facility, Area 1-56 - # B000745

(b). Large Motor/Component Facility, Area 1-52 - #B000744

(c). High Hazard Test Facility, Area 1-36D - # B000743

d. EA FONSI for TS 2A, Area 1-120

e. EA FONSI for TS 1A, Area 1-120

f. EA TS 1C, Area 1-125

SATELLITES

a. Rule 202.1 Exemption for National Hover Test Facility at Test Stand 1-E, Area 1-125

b. Rule 202.1, Exemption for Bldg 8417 to be used in support of Electric Propulsion Laboratory (EPL) as Part of 1-14 Area Exemption.

c. Rule 202.1, Exemption for Hover Intercepter Tests at Area 1-B.

LAUNCH VEHICLES AND SATELLITES

a. Institutional Environmental Assessment (1979). Replacement Programmatic EA in process. Estimated completion 1995.

b. AF Form 813, CATEXs for all current active programs within the scope of the Institutional EA. File documents located in PL/SEH Bldg 8255.

3.1.3 Environmental constraints

LAUNCH VEHICLES

The downwind range of the Phillips Laboratory has been designated as critical habitat for the endangered species Desert Tortoise but has not adversely affected experimental and test operations. The only constraint to increased operational scope is the base boundary, Explosive Quantity Distance and ever changing environmental regulations. SEE PAGES 8A & 8b & 8c

3.1.4 Special Support Infrastructure

Special Support Infrastructure: Railroad spurs and major highways support all transportation requirements into the laboratory. Abundant electrical power is provided to the laboratory by an incoming 115KV three phase line to a substation with a 25,000 KVA capacity. Adiquate water is available from existing wells with pumping capacity of 3150 GPM. Current contract agreement signed November 1993 provides a 460 GPM source of water through the Antelope Valley East Kern (AVEK) Water District resources. A 6000 PSI GASEOUS NITROGEN distribution line runs throughout the laboratory to provide high pressure operating medium for test system fuel and oxidizer tanks and valves. A MICROMET system at the laboratory permits real time monitoring of wind speed and direction, temperature, and temperature inversions in the areas of test facilities.

3.1.5 Proximity to Mission-Related organizations

Common Support Functions	Name	Type of Organization	Distance	Workyears Performed by Your Activity	Workyears Funded by Your Activity
Space*	Space and Missile Systems Center	Air Force Product Center	130 miles	121	262
Space*	Air Force Space Command	User	900 miles	30	65
Space*	Air Combat Command	User	2400 miles	5	11

AIR STAFF CORRECTION WORKSHEET

PURPOSE: To provide corrected answer to ~~PHILIPS LAB, HANSCOM AFB, MASS~~ Edwards AFB, CA (includes Phillips Lab).

SOURCE: **'95 BRAC Questionnaire**

CONCLUSION: **Update needed (~~no change~~ SEE below)**

MAJCOM (CONCURS)(NONCONCURS): **CONCURS (Provided info VIA questionnaire)**

BASE (CONCURS) (DOES NOT CONCUR): -same-

I certify the above information is accurate and complete to the best of my knowledge and belief, based upon information provided by identified sources.

AIR STAFF REVIEWER: R. McCann (CEVP) **DATE:** 28 JUL 1994

Delete "ever changing" from the last line of the existing text. Edwards AFB is located within a air quality non-attainment area for particulates (PM-10) and ozone.

94-09-06 08:31 RCVD

AIR STAFF CORRECTION WORKSHEET

PURPOSE: To provide corrected answer to **EDWARDS AFB, CA**.

SOURCE: **'95 BRAC Questionnaire**

CONCLUSION: **Update needed** ~~(no change)~~ see below

MAJCOM (CONCURS)(NONCONCURS): **CONCURS (Provided info VIA questionnaire)**

BASE (CONCURS) (DOES NOT CONCUR): -same-

I certify the above information is accurate and complete to the best of my knowledge and belief, based upon information provided by identified sources.

AIR STAFF REVIEWER: J. Bush (CEVP) **DATE:** 19 AUG 1994

Air Quality
-- non-attainment for Ozone (serious). Must comply with Kern County Air Pollution Control District rule for air permits. New equipment must have achievable control technology.

Ecologically Sensitive/Wildlife Management Areas
-- Rosamond Lake (Piute Ponds)
-- Sagebrush/Salt Brush/Mesquite plant assemblage
-- Habitat for Desert tortoise (65,000 acres)
-- Numerous other state/Federal species of concern
-- Cooperative management program with USF&WS

8A

Item b

PL-EDWARDS
015

94-09-21 11:23 RCVD

CONTROL NUMBER: LJCSWG-AF015

PURPOSE: To provide SAF/AQX staff clarified answers to Question 3.1.3 of the (see Distribution List) response to the Laboratory Joint Data Call. The response indicated you were in a non-attainment area.

1. Can you return to the Peak Programmed Workyears level Question 2.1 response) without either a Permit modification or a new Permit?

2. If a Permit modification or a new Permit is required, will mitigation be required?

2a. If mitigation is required, describe the nature of the mitigation required.

METHOD: Comparison of answers to questions.

CONCLUSION: Answers must be complete.

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions.

MAJCOM: Concurs Does not concur (Explain:)

See PL's comment below.

MAJCOM REVIEWER: _____ 8 SEP 1994
(print name, organization, DSN)
Chung C Kang, 1Lt, HQ AFMC/ST, 787-5361

BASE: (Concurs) Does not concur (Explain:)

Yes, we can return to the Peak Programmed Workyears Level of FY92 without either a Permit modification or a new Permit.

BASE REVIEWER: _____
REGINALD K.Y. CHING, OLAC PL/SEH, DSN 526-5318

I certify the information above is accurate and complete to the best of my knowledge and belief.

8c

Space*	8 Major Universities	Academic	1 1/2 hour drive	10	10
Space*	Naval Air Warfare Center	Laboratory	75 miles	9	20

* Note: both Launch Vehicles and Satellite sub-categories of the Space CSF are applicable

Impact: The PL mission at Edwards is to develop rocket propulsion technology; therefore, open, isolated spaces are required to test rockets. The present location at Edwards AFB was selected to minimize interference with local communities due to noise, toxic propellant exhausts, and possible hazards.

Regarding proximity to SMC, there would be approximately a 30 percent drop in productivity if SMC and Edwards AFB were not within a 2 hour drives. Many people live between the two locations and are able to conduct business readily at either location. SMC is the product center for PL Edwards and there is considerable interaction between the two.

The eight universities provide a necessary academic capability that is essential for any credible laboratory to do science and technology development. The universities perform basic research projects sponsored by PL Edwards, and the PL personnel are able to visit the principal investigators frequently to assure appropriate results are being achieved. University professors are assigned from these universities as summer faculty members at PL Edwards to provide an academic expertise not available at PL. This ready access to quality academics is vital to the success of the laboratory.

The impact of being further separated from the NAWC is that there are Navy researchers assigned to PL Edwards and there are AF researchers assigned to NAWC in support of Project Reliance agreements. These agreements have improved development efficiency, and without this nearness, PL could not effectively participate in the Project Reliance agreements and efficiency would be negatively affected.

94-09-06 08:29 RCVD

DATE: 23 Aug 94

MEMORANDUM FOR RECORD, SAF/AQT

AIR STAFF CORRECTION WORKSHEET

PURPOSE: To provide corrected answer to Question Number 3.2.1 Total Personnel, Phillips Laboratory, Edwards Air Force Base, CA, Data Call.

SOURCE: Installation worksheets (Lauren Frost, PL/CP, DSN 246-4709 for civilian personnel data; Lt. Jones, PL-OL-AC/CCQ, DSN 525-5120 for military personnel data).

METHOD: Review of Installation Worksheets submitted for Air Force data call, telecon, and FAX communications with MAJCOM and Base POCs.

CONCLUSION: The correct personnel data is shown in attached table 3.2.1 Total Personnel.

MAJCOM CONCURS: (See attached FAX copies)
Mr. Timothy L. Dues, HQ AFMC/STP, Wright-Patterson AFB, DSN 787-7850.

BASE CONCURS: (See attached Installation Worksheets)
Colonel Thomas E. Bretz, Jr., PL/DE, Kirtland AFB, DSN 246-0239.

I certify that the above information is accurate and complete to the best of my knowledge and belief.

AIR STAFF REVIEWER: Paul D. Copp **DATE:** 23 Aug 94
Paul D. Copp, Lieutenant Colonel, USAF

Ltr 5

3.2 Personnel

3.2.1 Total Personnel

LAUNCH VEHICLES Types of Personnel	Number of Personnel			
	Government		On-Site FFRDC	On-Site SETA
	Civilian	Military		
Technical	106	16	0	201
Management (Supv)	40	18	0	22
Other	70	44	0	20

"SETA" refers to all on-site contractors involved with S&T. This is not the traditional definition we use.

SATELLITES Types of Personnel	Number of Personnel			
	Government		On-Site FFRDC	On-Site SETA
	Civilian	Military		
Technical	18	4	0	40
Management (Supv)	11	4	0	5
Other	23	19	0	4

"SETA" refers to all on-site contractors involved with S&T. This is not the traditional definition we use.

PL EDWARDS CHANGE 18 AUG 94

DATE: 23 Aug 94

MEMORANDUM FOR RECORD, SAF/AQT

AIR STAFF CORRECTION WORKSHEET

PURPOSE: To provide corrected answer to Question Number 3.2.2 Education, Phillips Laboratory, Edwards Air Force Base, CA, Data Call.

SOURCE: Installation worksheets (Lauren Frost, PL/CP, DSN 246-4709 for civilian personnel data; Lt. Jones, PL-OL-AC/CCQ, DSN 525-5120 for military personnel data).

METHOD: Review of Installation Worksheets submitted for Air Force data call, telecon, and FAX communications with MAJCOM and Base POCs.

CONCLUSION: The correct personnel data is shown in attached table 3.2.2 Education.

MAJCOM CONCURS: (See attached FAX copies)
Mr. Timothy L. Dues, HQ AFMC/STP, Wright-Patterson AFB, DSN 787-7850.

BASE CONCURS: (See attached Installation Worksheets)
Colonel Thomas E. Bretz, Jr., PL/DE, Kirtland AFB, DSN 246-0239.

I certify that the above information is accurate and complete to the best of my knowledge and belief.

AIR STAFF REVIEWER: Paul D. Copp **DATE:** 23 Aug 94
Paul D. Copp, Lieutenant Colonel, USAF

3.2.2 Education

LAUNCH VEHICLES

Type of Degree/Diploma	Number of Government Personnel by Position		
	Technical	Mgmt/Supv	Other
High School or Less	0	16	90
Associates	0	5	13
Bachelor	64	15	8
Masters	38	16	3
Doctorate	20	6	0

SATELLITES

Type of Degree/Diploma	Number of Government Personnel by Position		
	Technical	Mgmt/Supv	Other
High School or Less	0	4	36
Associates	0	1	3
Bachelor	12	7	2
Masters	9	3	1
Doctorate	1	0	0

AL EDWARDS CHANGE 18 AUG 94

DATE: 23 Aug 94

MEMORANDUM FOR RECORD, SAF/AQT

AIR STAFF CORRECTION WORKSHEET

PURPOSE: To provide corrected answer to Question Number 3.2.3 Experience, Phillips Laboratory, Edwards Air Force Base, CA, Data Call.

SOURCE: Installation worksheets (Lauren Frost, PL/CP, DSN 246-4709 for civilian personnel data; Lt. Jones, PL-OL-AC/CCQ, DSN 525-5120 for military personnel data).

METHOD: Review of Installation Worksheets submitted for Air Force data call, telecon, and FAX communications with MAJCOM and Base POCs.

CONCLUSION: The correct personnel data is shown in attached table 3.2.3 Experience.

MAJCOM CONCURS: (See attached FAX copies)
Mr. Timothy L. Dues, HQ AFMC/STP, Wright-Patterson AFB, DSN 787-7850.

BASE CONCURS: (See attached Installation Worksheets)
Colonel Thomas E. Bretz, Jr., PL/DE, Kirtland AFB, DSN 246-0239.

I certify that the above information is accurate and complete to the best of my knowledge and belief.

AIR STAFF REVIEWER: Paul D. Copp **DATE:** 23 Aug 94
Paul D. Copp, Lieutenant Colonel, USAF

3.2.3 Experience

LAUNCH VEHICLES

Type of Position	Years of Government Service and/or Military Service				
	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Technical	22	63	14	5	18
Management	2	18	9	9	20
Total	24	81	23	14	38

SATELLITES

Type of Position	Years of Government Service and/or Military Service				
	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Technical	7	9	1	2	3
Management	0	3	2	6	4
Total	7	12	3	8	7

PL EDWARDS CHANGE 18 AUG94

3.2.4.1 Patents awarded and patent disclosures

CSF	Disclosures	Awarded	Patent Titles (List)
Launch Vehicles		1991	Method of Manufacturing Microscopic Tube Material
Launch Vehicles		1992	Universal Aircraft Rocket/Missile Launcher, etc
Launch Vehicles		1992	Personnel Capsule Extraction Apparatus
Launch Vehicles	1992		Carbonaceous Particles Containing Fissile Materials
TOTALS	1	3	

CSF	FY94 ($M)	FY95 ($M)	FY96 ($M)	FY97 ($M)
LAUNCH VEHICLES	40.86	45.8	68.2	66.2
SATELLITES	0.99	0.5	0	0

3.3.2.2 Other Obligation Authority

CSF	FY94 ($M)	FY95 ($M)	FY96 ($M)	FY97 ($M)
LAUNCH VEHICLES	27.0	8.0	8.0	8.0
SATELLITES	27.3	4.8	5.3	4.8

pulled 94 –
3.4.1, 3.5.1, 3.5.1.1
reference 2 Sep 94
M/ Baldright memo

3.4 Facilities and Equipment
3.4.1 Major Equipment and Facilities

Common Support Function	Major Facility or Equipment Description	Unique To DOD	Unique To Federal Gov't	Unique To U.S.	Replacement Cost ($K)
Space Systems Sastellites	**AREA 1-14:** Satellite Propulsion Complex - A component evaluation complex used in research and evaluation of throttling and altitude control engines, components, subsystems, and propellants. The complex contains several altitude chambers located in test cells and bldgs, mechanical vacuum pumps and a steam system for producing vacuum, a water flow lab producing 2800 GPM at 750 psi, a centrifuge, and solar laboratory. The following buildings make up this complex: 8620, 8622, 8623, 8624, 8626, 8627, 8628, 8632, 8633, 8634, 8635.				50,190

Space Systems Launch Vehicles	**AREA 1-21:** Propellant Preparation Laboratory Complex - This facility was converted from a test stand that now provides a control room, two cells to cut and mill solid propellant, a room to do basic propellant properties classification, and environmental storage. The following buildings make up this complex: 8580, 8581, 8582, 8583, 8584, 8585, 8586.				12,140
Space Systems Launch Vehicles	**AREA 1-30:** Propellant Laboratory Complex - This complex is comprised of several bldgs housing laboratories for formulating and mixing high energy propellants to study the chemical synthesis and physical properties of the propellants. Ingredient preparation and propellant mixing is batch mixed in quantity sizes from grams to 50 gallons. All of the processes are remotely controlled. Cast propellants are stored in environmental chambers for aging and period evaluation. The following buildings make up this complex: 8465, 8466, 8467, 8468, 8469, 8470, 8471, 8472, 8473, 8474, 8475, 8476, 8477, 8478, 8479, 8480, 8481, 8482, 8483, 8484, 8485, 8486, 8487, 8490, 8491, 8493, 8494, 9495, 9896, 8497, 8498, 8499, 8500, 8506.				27,150

Space Systems Launch Vehicles	**AREA 1-32:** Solid Propellant/Component Complex - Solid rocket propellants, motors, interior ballistics, propellant combustion, motor ignition, motor nozzle performance and motor thrust vector control are evaluated in this complex. Motor firings range in thrust from 10,000 lbs to 1,000,000 lbs. The following buildings make up this complex: 8910, 8911, 8912, 8914, 8915, 8916, 8917, 8918, 8919, 8920.				12,510
Space Systems Launch Vehicles	**AREA 1-36:** Motor Behavior Complex - Designed for evaluation of large segmented solid propellant motors (Mx is an example) firing horizontal and vertically up. Complex is used to verify explosive classifications. The following buildings make up this complex: 9002, 9005, 9006, 9007, 9012, 9014, 9018, 9020, 9025, 9100, 9250, 9251, 9260.				31,160
Space Systems Launch Vehicles	**AREA 1-38:** Environment Storage Complex - Nine buildings environmentally controlled to condition solid propellant ingredients, motors, segments, and ignitors. The following buildings make up this complex: 9406, 9408, 9410, 9412, 9414, 9416, 9418, 9420, 9422.				3,990

Space Systems Launch Vehicles	**AREA 1-42:** Space Environment Propulsion Complex - This complex consists of three horizontal altitude chambers for evaluating solid rocket motors and their components in simulated space, one vertical altitude chamber for evaluating either solid rocket or liquid rocket engine and their respective components in simulated space, and one spherical chamber to evaluate satellite components in a deep space simulated environment. The following buildings make up this complex: 9620, 9621, 9622, 9623, 9624, 9625, 9626, 9627, 9628, 9629, 9630, 9631, 9632, 9633, 9634.				63,570
Space Systems Launch Vehicles	**AREA 1-46:** Chemical Handling Research Facility - This facility provides two horizontally firing positions for liquid, solids, and hybrid rockets up to 50,000 lbs thrust. Recently used by private concern to develop liquid rocket engine. The following building make up this complex: 9635, 9640, 9641, 9645, 9650.				6,390

Space Systems Launch Vehicles	**AREA 1-52:** Rocket Motor/Engine Complex - This facility consists of three firing pads capable of evaluating liquid, solid, and hybrid rockets up to 100,000 lbs thrust, and a control, instrumentation, and shop building. The following buildings make up this complex: 9659, 9660, 9661, 9662, 9664, 9665, 9666, 9667, 9700, 9705.				19,520
Space Systems Launch Vehicles	**AREA 1-56:** High Thrust Complex - This facility is capable of firing either liquid or solid rockets vertically upward or horizontally to 15 degrees down. Thrust up to 10M lbs can be managed. The following buildings make up this complex: 9800, 9804, 9820, 9824, 9826, 9828, 9840, 9845, 9850.				43,050

Space Systems Launch Vehicles	**AREA 1-60:** Chemical & Materials Laboratory/Physical Science Laboratory/Combustion Research Laboratory - This facility consists of lab space to develop methodology for chemical analysis and to conduct physico-chemical studies of liquid and solid propellants under development to determine properties, provide engineering data, conduct feasibility studies in propellant synthesis, metallurgical studies and physical, environmental, and chemical compatibility. Physical experiments in propellant research are done to determine interactions in the given species. Combustion properties of propellant are evaluated user lasers as the diagnostic tools. The following buildings make up this complex: 8450, 8451, 8453, 8454, 8455, 8456, 8457.				54,800
Space Systems Launch Vehicles	**AREA 1-70:** Rocket Component Laboratory Complex - This laboratory is established to develop and evaluate composite forms and formulations and to investigate their physical properties. Material used and their respective lay-up techniques are rigorously investigated. The following building makes up this complex: 8424.				1,640

Space Systems Satellites	**AREA 1-80:** ASTREX Complex - This laboratory conducts experiments on satellite structural components to define and develop their structural dynamics and controls. The following building makes up this complex: 8423.				2,580
Space Systems Satellites	**AREA 1-90:** Integration Testing Complex - This facility was converted from a hazardous test area to a complex for development testing of space vehicles and components to validate new design concepts and the application of proven concepts and techniques to a new configuration. The following buildings make up this complex: 8900, 8902, 8903, 8904, 8905.				11,540
Space Systems Launch Vehicles	**AREA 1-120:** Advanced Launch System Complex - This complex has three multi-position test stands with supporting buildings and structures to develop liquid engine components and complete engines up to thrust 1.5M lbs. The following buildings make up this complex: 8750, 8752, 8753, 8755, 8756, 8759, 8761, 8762, 8763, 8764, 8765, 8770, 8771, 8775, 8778, 8779, 8780, 8781.				87,230

Space Systems Launch Vehicles	**AREA 1-125:** Large Systems Complex - This facility consists of three large test stands that have utility to be used as either a solid rocket or liquid engine development complex. Recently used to demonstrate the Titan IV SMRU Project. The following buildings make up this complex: 8783, 8785, 8786, 8787, 8788, 8789, 8791, 8792, 8793, 8794, 8799, 8800, 8802, 8804, 8810, 8812, 8814, 8816, 8818, 8820, 8822, 8824, 8826, 8832, 8834, 8836, 8838, 8840, 8842, 8844, 8850, 8851.				428,630
Space Systems Launch Vehicles	**AREA 2-5:** Science and Engineering Center - This center houses the majority of scientists and engineers accomplishing the OL-AC PL mission. OL-AC PL management and administration functions are done here. The OL-AC PL technical library, vault, computer and information complex, and cafeteria are part of this center. The following buildings make up this complex: 8349, 8350, 8351, 8352, 8353, 8354, 8355, 8356.				12,890

Space Systems Launch Vehicles	**AREA 2-10:** Fabrication Center - Fabricates prototype propulsion and specialized support hardware through machining and metal processing. Provides welding and electrical services consisting of modifications, maintenance and build-up of rocket propulsion support systems. Provides OL-AC PL facility program management, performs detailed design of red facility, hardware and systems modifications and construction, and provides engineering services to In-House development engineers and project managers. Does plant engineering. The following buildings make up this complex: 8414, 8415, 8416, 8419, 8420, 8421, 8425.				19,394
Space Systems Launch Vehicles	**AREA 2-15:** Material Center - Manages the OL-AC PL supply and equipment resources which includes buying, storing, distributing, shipping, accounting, and inventorying. The building that makes up this complex is: 8460.				2,383

Space Systems Launch Vehicles	**AREA 2-20:** General Support Area - Contains the following functions: Base Civil Engineer real property maintenance; OL-AC PL gym; Safety and Health; Weather; Operations(aural alert); Electronic equipment maintenance Component processing; Material/Equipment storage; Motor Pool. The following buildings make up this complex: 8250, 8251, 8252, 8254, 8255, 8358, 8359, 8360, 8369, 8370, 8371, 8372, 8373, 8374, 8375, 8377, 8378, 8379, 8380, 8381, 8382, 8400, 8401, 8402, 8403, 8404, 8405, 8406, 8407, 8408, 8409, 8410, 8411, 8412, 8413, 8417, 8418, 8422, 8426, 8427, 8430, 8431, 8432, 8461, 8462, 8463, 8464, 8595.				72,988
Space Systems Launch Vehicles	5. General Utilities - Consists of roads, main line water distribution, main line sewer systems, primary electrical distribution to buildings, and rail line.				55,695

3.5 Expansion Potential

3.5.1 Laboratory Facilities

Common Support Function	Facility or Equipment Description	Type of Space	Current	Used	Excess
Launch Vehicles	Phillips Lab, Operating Location AC, Edwards AFB, Areas 1-21, 1-30, 1-32, 1-36, 1-38, 1-42, 1-46, 1-52, 1-56, 1-60, 1-70, 1-120, 1-125, 2-5, 2-10, 2-15, 2-20, 5.	Administrative Technical Storage Utility	83.2 663.0 49.3 0	83.2 663.0 49.3 0	0 21 7 0
Satellites	Phillips Lab, Operating Location AC, Edwards AFB, Areas: 1-14, 1-80, 1-90.	Administrative Technical Storage Utility	0 153.3 0 0	0 0 0 0	0 0 0 0

3.5.1.1

Launch Vehicles

Operating Location AC, Phillips Laboratory, Edwards AFB CA has a full range of facilities for both research and development, as well as test and evaluation. Presently most of these facilities are manned, but at a much lower level than in the early 1970's, when the site (then called the Air Force Rocket Propulsion Laboratory) was at a historic peak of utilization. All those facilities not currently manned and not designated for demolition are generally available for reactivation with only minor facility modification. To bring the launch vehicles facilities currently manned back to a condition where they could accommodate peak capacity (approximately six times

current utilization) would require a modest amount of money, about $2 million. The infrastructure, such as power, water, roads, dining facilities, shops are all in place and would require only minor upgrades, depending on the nature of a new activity. In addition, the environmental situation is reasonably good here, as there has been no urban encroachment in the vicinity over the years and the site basically has no near neighbors and favorable test siting conditions. Extra capacity could be absorbed by repopulating our launch vehicle experimental facilities, both solids and liquids (which cover the entire range of launch vehicle rocket propulsion facility requirements) to make maximum use of individual pads and cells within each experimental area and by adding on additional shifts if needed to further increase facility utilization.

Satellites

Operating Location AC, Phillips Laboratory, Edwards AFB CA has a full range of facilities for both research and development, as well as test and evaluation. Presently most of these facilities are manned, but at a much lower level than in the early 1970's, when the site (then called the Air Force Rocket Propulsion Laboratory) was at a historic peak of utilization. All those facilities not currently manned and not designated for demolition are generally available for reactivation with only minor facility modification. To bring the satellite facilities currently manned back to a condition where they could accommodate peak capacity (approximately six times current utilization) would require a small amount of money, about $1 million. The infrastructure, such as power, water, roads, dining facilities, shops are all in place and would require only minor upgrades, depending on the nature of a new activity. In addition, the environmental situation is reasonably good here, as there has been no urban encroachment in the vicinity over the years and the site basically has no near neighbors and favorable test siting conditions. In addition, satellite systems testing is usually at a small enough scale that environmetal impact is minor. Extra capacity could be absorbed by repopulating our satellite systems experimental facilities (which cover the entire range of satellite systems rocket propulsion and integration facility requirements) to make maximum use of individual pads and cells within each experimental area and by adding on additional shifts if needed to further increase facility utilization.

3.5.1.2

Launch Vehicles

If absorption of additional capacity is based on repopulating experimental areas to their historic peak level, there is the capacity to expand from 60 workyears at currently populated areas (1-30, 1-32, 1-42, 1-52) to 135 workyears on a one-shift basis. The workyears capacity would rise from 60 to 405 workyears if three shifts were employed. In addition, if experimental/test areas which are not

currently populated were reactivated, an additional 200 workyears could be absorbed on a one-shift basis (600 on a three-shift basis). In summary, if all areas were utilized, an additional 275 workyears could be absorbed on a one-shift basis or 945 on a three-shift basis (1005 total) without straining the infrastructure.

Satellites

If absorption of additional capacity is based on repopulating experimental areas to their historic peak level, there is the capacity to expand from 80 workyears at currently populated areas (1-14, 1-90, and the ASTREX facility) to 140 workyears on a one-shift basis. The workyears capacity would rise from 80 (current one shift) to 420 workyears (340 additional workyears) without straining the infrastructure if three shifts were employed.

3.5.1.3

There are no current MCP or other alteration projects programmed in the FY95 PBS.

3.5.2 Land Use

The Phillips Laboratory Operating Location AC has a possible 5,440 acres suitable for other research and development projects.

3.5.3 Utilities

Electricity: Estimated annual consumption is 40 million KWH/YR. Peak demand estimate is 7,500 KW. The main delivery point transformer capacity is 25,000 KVA. We estimate electrical consumption at OL-AC PL could increase by 20 million KWH/YR. without having to increase the main delivery point transformer capacity. OL-AC PL is fed by an incoming 115KV three phase line which transforms down to 34.5 KV for primary distribution. Primary substations throughout the OL-AC PL have been recently renovated. Based on the above considerations, it is concluded that power consumption growth is excellent.

Water: Annual water consumption is estimated to be 150 million gal/yr. OL-AC PL water is presently provided from a series of water wells here at EAFB with pumping capacity of 3150 GPM. Current contract agreement signed in November 1993 provides 460 GPM source of water through Antelope Valley East Kern (AVEK) Water District. After the AVEK connection it is estimated that OL-AC PL water consumption could expand to 240 million gal/yr if necessary.

Gas: OL-AC PL is currently served by a combination of fuel oil and propane. A project has recently been completed to convert a portion of OL-AC PL facilities to natural gas. No firm date available for when actual cut over would take place, but probably during

FY95. Follow-on project phases will gradually add the outlying test areas to natural gas distribution system. Annual consumption estimates as follows:

Fuel Oil Usage:	195,000	Gal
Propane Usage:	54,000	Gal

When conversion to natural gas is made, the above breakdown will change and is estimated to be:

Natural Gas Usage:	37,000	Therms
Fuel Oil Usage:	168,000	Gal
Propane Usage:	54,000	Gal

Potential to increase the above total fuel consumption (i.e. oil, gas, propane) is estimated to be +50%.

Note: Above estimates based on data obtained from 650 CE Squadron.

94-09-26 17:31 RCVD

CONTROL NUMBER: LJCSWG-AF 023

PURPOSE: To provide SAF/AQX staff corrected answers to Question 3.2.4.2 Papers published in peer reviewed journals, of the (see Distribution List) response to the Laboratory Joint Data Call. For each CSF in which you perform work, provide a list of papers published in peer reviewed journals by your government personnel during FY 1991 through FY 1993. The papers listed must directly support the CSF. For each paper listed provide both the title of the article and the journal in which it was published, and the month and year of publication. Do not list papers prepared by non-government personnel or other personnel who were not employed by your activity, even if the paper was prepared in support of a contractual requirement. Do not list papers published in non-peer reviewed journals; technical, letter, test, and other reports; manuals and handbooks; presentations at symposiums; etc.

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

MAJCOM REVIEWER: _____
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

PAPERS RFC DISTRIBUTION LIST

1. ARMSTRONG LAB, BROOKS AFB
2. ARMSTRONG LAB, WRIGHT-PATTERSON AFB
3. WRIGHT LAB, WRIGHT-PATTERSON AFB
4. WRIGHT LAB, EGLIN AFB
5. PHILLIPS LAB, KIRTLAND AFB
6. PHILLIPS LAB, EDWARDS AFB
7. PHILLIPS LAB, HANSCOM AFB
8. ROME LAB, GRIFFIS AFB
9. ROME LAB, HANSCOM AFB
10. ARMSTRONG LAB, HANSCOM AFB
11. ARMSTRONG LAB, WILLIAMS AFB

PL-EDWARDS HANSCOM KIRTLAND

CONTROL NUMBER: LJCSWG-AF 023

PURPOSE: To provide SAF/AQX staff corrected answers to Question 3.2.4.2 Papers published in peer reviewed journals, of the (see Distribution List) response to the Laboratory Joint Data Call. For each CSF in which you perform work, provide a list of papers published in peer reviewed journals by your government personnel during FY 1991 through FY 1993. The papers listed must directly support the CSF. For each paper listed provide both the title of the article and the journal in which it was published, and the month and year of publication. Do not list papers prepared by non-government personnel or other personnel who were not employed by your activity, even if the paper was prepared in support of a contractual requirement. Do not list papers published in non-peer reviewed journals; technical, letter, test, and other reports; manuals and handbooks; presentations at symposiums; etc.

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSO Guidance Package instructions

MAJCOM: Concur Does not concur (explain:)

MAJCOM REVIEWER: 23 Sep 94
(print name, organization, DSN)
Capt C Kay, Maj, HQ AFMC/SI, 787-5368

BASE: Concur Does not concur (explain:)

SEE ATTACHED

BASE REVIEWER: James R Albert
(print name, organization, DSN)
JAMES R. ALBERT, MAJ, USAF, PL/XPB, 246-0241

I certify the information above is accurate and complete to the best of my knowledge and belief.

3.2.4.2. How many papers were published in peer-reviewed journals?

FY91 - Phillips Laboratory - Kirtland AFB NM; Hanscom AFB MA; and Edwards AFB CA

Phillips Laboratory (PL) was established during FY91. Therefore, due to the time lag in papers submitted for publication and the publication date, there are no significant number of papers published during FY91 which are attributable to "Phillips Laboratory" government personnel. There were publications during FY91 by personnel at PL, but their articles reflected the name of their pre-PL organization (e.g., Geophysics Laboratory, etc.). In addition, FY91 records for PL at Kirtland AFB by these predecessor organizations are incomplete; therefore, no reliable data can be provided for PL at Kirtland AFB NM for FY91

FY91 - Phillips Laboratory - Edwards AFB CA

CSF	Number Published	Paper Titles (List)
Launch Vehicles	10	See Below
TOTAL	10	

Matrix Isolated Spectroscopy of Metal Atoms Generated by Laser Ablation: the Li/Ar, Li/Kr, and Li/Xe - Journal of Chemistry and Physics, May 91

Advantage of the scanning tunneling microscope in documenting changes in carbon fiber surface morphology brought about by various surface treatments - Journal of Materials Science, Sep 91

The surface topography of non-shear treated pitch and PAN carbon fibers as viewed by the STM - Journal of Materials Research, Aug 91

Effects of near-tip behavior of particulate composites on classical concepts - Composites Engineering, Vol 1, No. 4, 1991

Evaluation of damage fields near crack tips in a composite solid propellant - Journal of Spacecraft and Rockets, Jan-Feb 91

Investigating the crack stress shielding effect by using photo-elastic and acoustic imaging techniques - Optics and Lasers in Engineering, Vol 14, No. 3, 1992

Numerical modeling of crack-defect interaction - Journal of Propulsion and Power, Jul-Aug 91

Rapid Evaluation of Integer-Order Bessel Functions Using an FFT Algorithm, IEEE Antennas and Propagation Magazine, Dec 91

Deuterium isotope effects during RDX combustion - Mechanistic burn rate-controlling step determination - Propellants, Explosives, Pyrotechnics, Dec 91

Postlight data-reduction techniques for hovered kinetic energy weapons - Journal of Guidance, Control, and Dynamics, Sep-Oct 91

FY92 - Phillips Laboratory - Edwards AFB CA

CSF	Number Published	Paper Titles (List)
Launch Vehicles	23	See Below
TOTAL	23	

Electric Propulsion - The Future is Now - Aerospace America, Jul 92

The Results of a Round-Robin Study Conducted on Glass Transition Temperature Determinations Using Hydroxy-Terminated Polybutadiene Polymers. New Directions in Material Characterization by Thermal Analysis - Theoretical Chimica Acta, Vol 212,1992

Some Fun with Bessel Functions - IEEE Antennas and Propagation Magazine, Vol 34, No. 4, 1992

Observation of Several New Electronic Transitions of the B SUB 2 Molecule - Journal of Chemistry and Physics, Vol, 96, 1992

Rotational Analysis of the 000 Band of the A 3E- X 3A2 System of Methylnitrene - Journal of Chemistry and Physics, Vol 96, 1992

A Nonphotochemical Approach for Synthesizing Functionalized Pentacyclo [5.4.0.0(2,6).0(3,10).0(5,9)-Undecanes Using Samarium (II) Iodide - Journal of Organic Chemistry, Vol 57, 1992

Abinitio Studies of Ground and Excited Electronic States of MGAR, CDAR, and BEAR - Theoretical Chimica Acta, Aug 92

Autonomous Orbit Determination System for Earth Satellites - Journal of Guidance Control and Dynamics, May-Jun 92

A Comparison of CH4/NO/02 and CH4/N20 Flames by LIF Diagnostics and Chemical Kinetic Modeling - Combustion Science and Technology, Vol 83, 1992

Abinitio Computation of the Interaction Energy Curves for Some Low-Lying States of CO Which Dissociate to Ground-State P-3 O and P-3 C-Atoms - Theoretical Chimica Acta, Mar 92

Cross-Sectional Areas of Adsorbed N2, AR, KR, and O2 on Carbons and Fumed Silicas at Liquid-Nitrogen Temperature - Langmuir, Feb 92

Three-Dimensional Finite Element Analysis of Crack-Defect Interaction - Journal of Spacecraft and Rockets, Sep 92

Acoustic Evaluation of Damage Characteristics in a Composite Solid Propellant - Journal of Spacecraft and Rockets, Sep 92

Scanning Probe Microscopy of Carbon Fiber Surfaces - Carbon, Vol 30, 1992

Trajectory Analysis and Issues Associated with the EXCALIBIR Mission - Advances in the Astronautical Sciences, Vol 76, 1992

Determination of Trace Solvents in Hydraulic Fluid by Equilibrium Headspace Analysis - Journal of Chrom. Science, Vol 30, Apr 92

Synthesis of isocyanates from carboxylic acids using diphenylphosophoryl azide and 1,8-bis (dimethylamino) napthalene - Synthetic Communications, Vol 23, 1992

Synthesis of new Triisocyanate Curatives: the Synthesis of 2,2-bis (isocyanatomethyl) Propyl Isocyanate and 4-(isocyanatomethyl) - 1, 7-heptyl Diisocyanate - Polymeric Bulletin, Vol 27, 1992

Extensional and Flexural Waves in a Thin-Wall Graphite Epoxy Tube - Journal of Composite Materials, 1992

Plate Wave Source Location and Embedded Acoustic Emission Sensor - Journal of Acoustical Society of America, 1992

Chemical Vapor Deposition of Silica on Carbon Surfaces, Processing and Fabrication of Advanced Materials for High Temperature Applications - The Minerals, Metals, and Materials Society, Vol 307, 1992

The USAF Electric Propulsion Systems Activities - AIAA paper 92-3702

The status and Future Plans for Electric Propulsion Development by the USAF - IEPC Paper 91-006

FY93 - Phillips Laboratory - Edwards AFB CA

CSF	Number Published	Paper Titles (List)
Launch Vehicles	12	See Below
TOTAL	12	

Classical Monte Carlo Simulations of Relaxed Trapping Site Structures in Li Atom Doped Solid Ne - Journal of Chemical Physics, Vol 98, 1993

Matrix Isolation Spectroscopy of Metal Atoms Generated by Laser Ablation: I. the Li/Ar, Li/Kr, and Li/Xe Systems - Journal of Chemical Physics, Vol 98, 1993

Matrix Isolation Spectroscopy of Metal Atoms General by Laser Ablation: II, the Li/Ne, Li/D_2, and Li/H_2 Systems - Journal of Chemical Physics, Vol 98, 1993

Comparison between Fullerene and Forms of Well-Known Carbons - Carbon, Vol 30, 1992

Determination of Atomic Velocity Distributions Using Transient Absorption Measurements - Mat. Res. Soc. Proceedings, Vol 285, 1993

Matrix Isolation Spectroscopy of Metal Atoms Generated by Laser Ablation: III, the Na/Ar, Na/Kr, and Na/Xe Systems - Journal of Chemical Physics, Vol 98, 1993

An Experimental Study of the Loading Rate Effect on the Crack Growth Behavior in a Composite Solid Propellant - Journal of Reinforced Plastics and Composites, Vol 12, Jan 93

Monte Carlo Simulations of the Structures and Optical Absorption Spectra of Na Atoms in Ar Clusters, Surfaces, and Solids - Journal of Chemical Physics, 1993

Limitations on Stored Energy Densities in Systems of Separated Ionic Species - AIAA Journal of Power and Propulsion, Vol 8, 1992

Modelling Carbon Fibers Oxidation in Air at Constant Heating Rates - Carbon, Vol 30, 1992

Acoustic Evaluation of Damage Characteristics in a Composite Solid Propellant - Journal of Spacecraft and Rockets, Vol 29, Sep-Oct 92

Three-Dimensional Finite Element Analysis of Crack-Defect Interaction - Journal of Spacecraft and Rockets, Vol 29, Sep-Oct 92

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Classical Monte Carlo Simulations of Relaxed Trapping Site Structures in Li Atom Doped Solid Ne

Matrix Isolation Spectroscopy of Metal Atoms Generated by Laser Ablation: I. the Li/Ar, Li/Kr, and Li/Xe Systems

Matrix Isolation Spectroscopy of Metal Atoms General by Laser Ablation: II, the Li/Ne, Li/D_2, and Li/H_2 Systems

Comparison between Fullerene and Forms of Well-Known Carbons

Determination of Atomic Velocity Distributions Using Transient Absorption Measurements

Matrix Isolation Spectroscopy of Metal Atoms Generated by Laser Ablation: III, the Na/Ar, Na/Kr, and Na/Xe Systems

An Experimental Study of the Loading Rate Effect on the Crack Growth Behavior in a Composite Solid Propellant

Monte Carlo Simulations of the Structures and Optical Absorption Spectra of Na Atoms in Ar Clusters, Surfaces, and Solids

3.3 Workload

3.3.1 FY93 Workload

3.3.1.1 Work Year and Lifecycle

CSF	Fiscal Year 1993 Actual			
	Civilian	• Military	• FFRDC	SETA

LAUNCH VEHICLES	220	82	0	243
• SATELLITES	42	19	• 0	49

"SETA" refers to all on-site contractors involved with S&T. This is not the traditional definition we use.

3.3.1.2 Engineering Development By ACAT

Phillips Laboratory performs no ACAT I, II, III, or IV activities

3.3.1.3 In-Service Engineering

Phillips Laboratory performs no in-service engineering efforts

3.3.2 Project Funding

3.3.2.1 Direct Funding

"DET 10 PRODUCT" JOINT CROSS-SERVICE GROUP PACKAGE

Section I: Introduction
1.1 Cover Letter
1.2 Guidelines & Assumptions

Section II: Capacity
2.1 Workload
2.2 Excess Capacity

Section III: Capability of Activities to Perform Common Support Functions
3.0 Mission
3.1 Location
3.2 Personnel
3.3 Workload
3.4 Facilities & Equipment
3.5 Expansion Potential

Section IV: Certification Work Sheets
4.0 BMO/CD OPR: Mr Dumaine
4.1 RSLP/FM OPR: Ms Jan Zarr
4.2 SMC/DPX OPR: Lt Susan Schlacter

SECTION I: INTRODUCTION

1.1 Cover Letter

1.2 Guidelines/Assumptions:

1.2.1 Det 10 Product/"Lab" activities are considered to be those activities involved in the engineering development life cycle efforts. Det 10 product functions include only engineering development efforts associated with a product from any funding source. Pervasive functions are not applicable as they include those efforts that are S&T funded, i.e. Technology Base/Exploratory Development/Advanced Development.

1.2.2 Service missions and force structure are stipulated in the FY1995-2000 Defense Planning Guidance and Interim Force Structure Plan.

1.2.3 Projected funding include the FY95 President's Budget Submission (Future Years Defense Plan -- FYDP) and an estimated funds received from outside military department for execution.

1.2.4 Previous BRAC decisions will be factored into cross-service alternatives.

1.2.5 Common Support Function (CSF) for BMO (Ballistic Missile Office), Det 10 Organization is documented as a Weapons ICBMs CSF.

1.2.6 Senior Staff (O-6 and higher and GS-15 and higher) is management and all else is technical or technical support. Additionally, staff is prorated as a percent of the CSF.

1.2.7 "Lab" capacity will be based on budgeted workyears. A workyear is considered to be 2080 hours adjusted for time not on the job (e.g. sick leave, annual leave, etc.)

SECTION II: CAPACITY OF DOD COMPONENTS

2.1 **Workload**. Assume previous BRAC closures and realignments are implemented on schedule. Projected funding is derived from FY95 President's Budget Submission (Then year dollars). Past fiscal year data begins with FY86 or at the inception of the activity as it existed on 1 Oct 93. OPRs by the below chart four rows are SMC & BMO 1) FMB 2) FMB 3) MO & SD, 4) MO, SD & DP. (BRAC Criteria I & IV)

Det 10 Information Required	Fiscal Years											
	86	87	88	89	90	91	92	93	94	95	96	97
Total Funds Programmed ($M)		310	1242	1027	962	738	290	140	68	144	137	80
Total Actual Funds ($M)		310	1242	1027	962	738	290	140				
Programmed Workyears	0	0	0	0	2087	2180	1895	692	551	258	258	258
Actual Workyears	0	0	0	0	1918	2011	1420	849				
	<---- BMO ---->							<---- DET 10 ---->				

2.2 **Excess "Lab" Capacity -- Measured at the DOD Component Level**
Excess "Lab" Capacity = Sum of the Peak Workyears - Sum of the Projected Workyears
Peak at each activity = Highest value between FY86 and FY93
1,922 Programmed Workyears = 2,180 - 258

Projected at each activity = See estimated at FY97

94-09-06 08:47 RCVD

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.0 for ~~SM-ALC~~ SMC, Det 10 for the Laboratory JCSG guidance package. The Laboratory JCSG guidance package requested the description of relationships and interconnectivities with other functions (common or unique) in support of the overall activity mission. This question was intended to solicit a list of functions which a particular common support function (CSF) (listed in appendix C of the questionnaire) is interconnected. The term "interconnected" is defined as any relationships, connections, and/or synergies that exist among CSFs either common (i.e. listed in appendix C) or unique (i.e. not included in appendix C) by virtue of shared /common scientific or engineering disciplines, shared/common equipment or facilities, joint or common requirements, or any other factors which link or relate the CSFs and/or unique functions to each other. Clearly identify these interconnectivities for each CSF reported by your activity

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

MAJCOM REVIEWER: _____
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

Item #10

SMC Det 10

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.0 for ~~SM-ALC, Det 10~~ for the Laboratory JCSG guidance package. The Laboratory JCSG guidance package requested the description of relationships and interconnectivities with other functions (common or unique) in support of the overall activity mission. This question was intended to solicit a list of functions which a particular common support function (CSF) (listed in appendix C of the questionnaire) is interconnected. The term "interconnected" is defined as any relationships, connections, and/or synergies that exist among CSFs either common (i.e. listed in appendix C) or unique (i.e. not included in appendix C) by virtue of shared /common scientific or engineering disciplines, shared/common equipment or facilities, joint or common requirements, or any other factors which link or relate the CSFs and/or unique functions to each other. Clearly identify these interconnectivities for each CSF reported by your activity

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

SEE ATTACHED WORKSHEET, WHICH UPDATES LATEST DISKETTE WITH CSF

Thomas L. Koepnick

MAJCOM REVIEWER: THOMAS L. KOEPNICK HQ AFMC/XPX 787-2642
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

ATTACHMENT 1

INSTALLATION WORKSHEET

SMC DET 10

PURPOSE: To document answer to question number 3.0.

SOURCE: Capt Larry Hubler, DSN 876-8316, Det 10 Draft Strategic Plan, dtd 7 Mar 94.

METHOD: Answer extracted from Det 10 Draft Strategic Plan, paragraph 2.2 for each product function.

CONCLUSION:

3.0 DETACHMENT 10, SMC MISSION

Detachment 10, Space and Missile Systems Center (Det 10, SMC) is an integrated, professional government and contractor team that develops, tests, and acquires:

- State-of-the-art technology;
- Supportable strategic missile systems; and
- Experimental launch programs;

responsive to national policy and customer needs.

Detachment 10 Vision

Maintaining mission capability while transitioning program responsibilities and resources to other AFMC organizations by October 1995.

- Detachment 10, SMC formerly the Ballistic Missile Organization (BMO)
  - -- Activities are conducted by
    - --- Approximately 105 Air Force military and 160 civilian personnel
    - --- Approximately 270 employees of our Systems Engineering/Technical Assistance (SE/TA) contractor, TRW

- Det 10 organizations
  - -- Specialize in acquisition functions
  - -- Program Management
  - -- Contracting
  - -- Financial Management
  - -- Acquisition and Development Engineering

Product Functions - ICBM

- Development System Organization (DSO) (AFPEO/ST Program):

  -- Rapid Execution and Combat Targeting (REACT) program develops Minuteman Alert Facility (MAF) modifications hardware and software, along with trainer and test equipment--equipment and software modifications will continue at a significant level until the year 2000.

  -- Guidance Replacement Program (GRP) is a major modification to the Minuteman III (MM III) Guidance System.

  -- Peacekeeper organization has the responsibility for management of all development and sustainment activities for the Peacekeeper weapon system integrates the subsystems; guidance, propulsion, reentry, basing, and oversees all FOT&E efforts.

  -- ICBM Code Processing System (CODES) is the Air Force system dedicated to providing secure code data, keys, databases, and software to the entire MM III and Peacekeeper missile inventory.

- Advanced Missile Technology Division (AMTD):

  -- Advanced Inertial Measurement System (AIMS) is an advanced ICBM guidance system technology development program.

  -- Ballistic Missile Technology (BMT) Support provides technical program management support to BMT program at Phillips Lab (PL/VT-B) at Kirtland AFB, New Mexico.

  -- Small Business Innovative Research (SBIR) conducts innovative research for AMTD.

- Reentry System Launch Program (RSLP) and Multi-Service Launch System (MSLS) under the SMC/CUB program.

  -- DOD single agency for conducting ICBM and sounding rocket flight tests.

  -- Provides inter-service support for acquisition and delivery of booster and payloads, and launch services.

  -- Provides program management for flight test booster replacement programs.

  -- Responsible for storage and maintenance of all DOD non-operational ballistic missiles.

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: Robert E Dunn Date: 4 Aug 94
ROBERT E. DUNN, GM-14, Det 10/CE, DSN 876-8316

SMC Reviewer: Juri Randmaa Date: 5 Aug 94
JURI RANDMAA, Colonel, SD, DSN 833-3818

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Thomas P. Showers Date: 8 Aug 94
THOMAS P. SHOWERS, GM-14
HQ AFMC/XRS, DSN 787-6151

3.1 **Location** (OPR is Det 10)

3.1.1 **Geographic/Climatological Features:**
No features (only administrative type functions at Det 10).

3.1.2 **Licenses & permits:** 2 permits. 1) Hazardous Waste Generator
2) Hazardous Material Handler

3.1.3 **Environmental constraints:** There is no environmental or land use constraints present which restrict the current scope of the base common support function. (BRAC Criteria II)
SEE PAGES 6A & 6B

3.1.4 **Special Support Infrastructure:** List and describe the importance of any mission related special support infrastructure (e.g. utilities) present at your location for your activity. (OPR is Det 10) (BRAC Criteria I) (None.) Detachment 10 currently occupies 4 permanent facilities totaling 233,000 gross square feet. Activities are administrative. No laboratory, test, or other special facility requirements at Det 10.

3.1.5. **Proximity to Mission-Related organizations:** The importance and impact of not having nearby organizations which facilitate the Det 10 mission accomplishment or performance are described ????? (e.g. operational units, FFRDCs, universities/colleges, other government organizations, and commercial activities): (OPR is Det 10) (BRAC Criteria I)

Common Support Function	Name	Type of Organization	Distance	Workyears Performed by BMO FY93	Workyears Funded by BMO FY93
ICBM	TRW	SETA	0	692	377

AIR STAFF CORRECTION WORKSHEET

PURPOSE: To provide corrected answer to **DET 10 (SMC), NORTON AFB ,CA**.

SOURCE: **'95 BRAC Questionnaire**

CONCLUSION: **Update needed (~~no change~~)** SEE below

MAJCOM (CONCURS)(NONCONCURS): **CONCURS (Provided info VIA questionnaire)**

BASE (CONCURS) (DOES NOT CONCUR): -same-

I certify the above information is accurate and complete to the best of my knowledge and belief, based upon information provided by identified sources.

AIR STAFF REVIEWER: R. McCann (CEVP) **DATE:** 28 JUL 1994

Norton AFB is located within an air quality non-attainment area for particulates (PM-10) and ozone.

94-09-21 11:23 RCVD

DET 10

015

CONTROL NUMBER: LJCSWG-AF 015

PURPOSE: To provide SAF/AQX staff clarified answers to Question 3.1.3. of the (see Distribution List) response to the Laboratory Joint Data Call. The response indicated you were in a non-attainment area.

1. Can you return to the Peak Programmed Workyears level (Question 2.1 response) without either a Permit modification or a new Permit?

2. If a Permit modification or a new Permit is required, will mitigation be required?

2a. If mitigation is required, describe the nature of the mitigation required.

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

DET 10 WORKSHEET ATTACHED

09 SEP 1994

MAJCOM REVIEWER: THOMAS L. KOEPNICK HQ AFMC/XPX 7872622
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: ROBERT E. DUNN DET 10/CE 876-8316
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

ATTACHMENT 1

INSTALLATION WORKSHEET

PURPOSE: To document answer to question number 3.1.3.

SOURCE: Capt Larry Hubler, DSN 876-8316, Det 10 Draft Strategic Plan, 7 Mar 94.

METHOD: Answer extracted from Det 10 Draft Strategic Plan, Description Of The Proposed Action And Alternatives (DOPAA) section (para 4.5) and Detachment 10, Space and Missile Systems Center Closure and Realignment Final Environmental Assessment, June 1994.

CONCLUSION: There are no environmental constraints such as smog or rideshare programs for Detachment 10, SMC. All air permits are handled by March AFB. Detachment 10 can return to peak workyears level without either a permit modification or a new permit.

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: Robert E Dunn Date: 7 Sep 94
ROBERT E. DUNN, GM-14, Det 10/CE, DSN 876-8316

SMC Reviewer: _____ Date: _____
JURI RANDMAA, Colonel, SD, DSN 833-3818

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Joseph C Brafford Date: 9 Sep 94
Joe Brafford, GM-14, AFMC/XRMP, 787-5591

6B

3.2 Personnel:

3.2.1 **Total Personnel:** Those individuals involved in more than one CSF are accounted for by their predominance of work towards one CSFs. OPR is SMC/DPX and SMC/SD. (BRAC Criteria I)

Det 10 - IBM Types of personnel	Number of Personnel			
	Government		On-Site FFRDC	On-Site SETA
	Civilian	Military		
Technical	271	194	0	377
Management (Supv)	3	4	0	0
Other	0	0	0	0

Note: SETA numbers are by calendar year. DET 10's contract with TRW is by calendar year..
SEE PAGE 7A

3.2.2 **Education:** The number of government personnel actively engaged in engineering development activities are identified by highest degree and type of position. OPR is SMC/DPX: (BRAC Criteria I)

Det 10 Type of Degree/ Diploma	Number of Government Personnel by Type of Position	
	Technical	Management (Supv)
High School or Less	173	0
Associates	27	0
Bachelor	126	2
Masters	131	5
Doctorate (include Med/Vet/etc.)	5	0
Others	3	0
Total	465	7

94-09-21 11:24 RCVD

SMC/Det-10 CORRECTION WORKSHEET

Control Number: LJCSWG-AF 022

PURPOSE: To provide SAF/AQX staff corrected answers to Question 3.2.1 of the SMC DET 10 response to the Laboratory Joint Data Call Review of the 3.2.1 "Total Personnel" responses by the Laboratory Joint Cross-Service Group show possible anomalies in your response. The amount of personnel identified in the "OTHER" category relative to the amount identified in the "TECHNICAL" category appears to be low for some reported CSFs. your response to this question needs to be compared to the clarifying guidance contained in the attachment hereto. Your response should provide either a narrative explanation of how you arrived at the response you originally provided or a revised response that is consistent with the guidance. If changes are required in your response, ensure all other affected questions/answers are correspondingly revised. These include but are not limited to the answers to questions 3.2.2, 3.2.3, and 3.3.1.1.

> "To provide clarification to the response to Question 3.2.1 of the Det 10, Norton AFB response to the Laboratory Joint Data Call. The information provided is accurate according to the guidance. The personnel at SMC are divided into two categories: Management or technical. All personnel fit into those. Each person is either a manager or part of a technical team to produce and acquire a product. There are no "others" at Det 10, Norton AFB."

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain)

14 SEP 1994

MAJCOM REVIEWER: Thomas R. Showers, HQ AFMC/XRS, DSN 787-6151
(print name, organization, DSN)

BASE: Concurs Does not concur (explain)

BASE REVIEWER: Ed Salem SMC/XRP 833 4199
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

7A

TOTAL P.03

3.2.3 **Experience:** The number of government personnel actively engaged in government or military service by type of position and time. OPR is DPX: (BRAC Criteria I)

Det 10 Type of Position	Years of Government and/or Military Service				
	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Technical	28	102	93	79	163
Management (Supv)	0	0	0	0	7
Total	28	102	93	79	170

3.2.4 **Accomplishments During FY91-93:**

3.2.4.1 Det 10 has no record for patent titles. OPR is Det 10. (BRAC Criteria I)

Det 10 ICBM	Disclosures	Awarded	Patent Titles (List)
None	0	0	0

3.2.4.2 Papers published are none. OPR is Det 10. (BRAC Criteria I)

CSF	Number Published	Paper Titles (List)
ICBM	2	A Second Look at Fixed Price Contracting in the R&D Environment A Concurrent Government/Contractor Approach for Developing Design Constraints
TOTAL	2	

3.3 Workload

3.3.1 **FY93 Workload**

SAF/AQX CORRECTION WORKSHEET

PURPOSE: To provide SAF/AQX staff corrected answer to Question 3.3.1.1 of DET 10 (SMC), Norton AFB Base Joint Lab Questionnaire.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison with answers to questions

CONCLUSION: Answer should be: Note states "Science & Technology and Engineering Development are not applicable to Det 10". This should read "Science & Technology and In-Service Engineering are not applicable to Det 10".

RATIONALE: Data must match the note.

MAJCOM: Concurs Does not concur (explain):

MAJCOM REVIEWER: _____
(sign/print name, organization, DSN)

BASE: Concurs Does not concur (explain):

BASE REVIEWER: _____
(sign/print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF Date:
Manufacturing & Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

SAF/AQX CORRECTION WORKSHEET

PURPOSE: To provide SAF/AQX staff corrected answer to Question 3.3.1.1 of DET 10 (SMC), Norton AFB Base Joint Lab Questionnaire.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison with answers to questions

CONCLUSION: Answer should be: Note states "Science & Technology and Engineering Development are not applicable to Det 10". This should read "Science & Technology and In-Service Engineering are not applicable to Det 10".

RATIONALE: Data must match the note.

MAJCOM: Concurs Does not concur (explain):

Thomas L. Koepnick

MAJCOM REVIEWER: THOMAS KOEPNICK AFMC/XPX 787-2622
(sign/print name, organization, DSN)

BASE: Concurs Does not concur (explain):

BASE REVIEWER: STEED A. LOBOTZKE, 1Lt, SMC/XRP, DSN 833-4348
(sign/print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing & Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

Lt Col Hanson/AQXM/DSN 227-8850/12 Aug 94/correct15.doc

94-09-23 18:33 RCVD

SMC/Det-10 CORRECTION WORKSHEET

Control Number: LJCSWG-AF 024

PURPOSE: To provide SAF/AQX staff corrected answers to Question 3.3.1.2 Engineering Development by ACAT of the (see Distribution List) response to the Laboratory Joint Data Call. When reporting ACAT systems your response should be restricted to hardware or software programs/systems which are listed as ACAT Programs in your Program Management Directives (PMDs) or in other Military Departments ACAT listing for FY 1993. In addition, pay particular attention to your responses in the "OTHER" category. These will not be on the MILDEP ACAT listings. You should list the non-ACAT programs you are working on here. Ensure that these are actual Product Programs (i.e. hardware/software systems, vaccines, etc.) Do not state "various". You must list individual programs. Review your response to Question 3.3.1.2 and make sure it complies with the above guidance or correct it to meet the guidance.

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain)

20 SEP 1994 20 1994

MAJCOM REVIEWER: Joe Bradford
(print name, organization, DSN)
Joe Bradford, GM-14, AFMC/XAMP, 787-5591

BASE: Concurs Does not concur (explain)

SMC/Det-10 answers comply with the above guidance.

BASE REVIEWER: Ed Salem SMC/XRP 833-4199
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

3.3.1.1 **Work Year and Lifecycle:** OPR civilian and military is SMC/DPX and for SETA is SD.

Det 10	Fiscal Year 1993 Actual by Engineering Development			
	Civilian	Military	FFRDC	SETA
ICBM	274	198	0	377

~~Note: Science & Technology and Engineering Development are not applicable to Det 10~~ Replaced by 9A

3.3.1.2 **Engineering Development By ACAT**
Identified below are any programs between Milestone I and IV that contain demonstration and validation (Dem/Val 6.4)/Engineering and Manufacturing Development (EMD 6.5) funds in the FY95 PBS considered to be engaged in engineering development: OPR for the Funds column is Det 10. OPR for the Workyears is SD. Det 10 and SD are both OPRs for the remaining data.

ICBM WORKLOAD	Name or Number	Workyears FY93 Actual	FY93 Funds Received (Obligation Authority)	Narrative Description
ACAT IC	Guidance Replacement Prog (GRP)	133	45.2M	A major modification to the Minuteman III (MMIII) ICB guidance system.
ACAT ID				
ACAT II	Rapid execution and Combat Targeting (REACT)	167	12.5M	Develops Minuteman Alert Facility hardware and software modifications. Develops test equipment and training for operators.
ACAT III/IV	1	134	8.3M	Reentry System Launch Program (RSLP)
Other	5	415	73.8M	Ballistic Missile Technology (BMT) Peacekeeper (PIMS) National Launch System (NLS) Small Business Innovative Research (SBIR) Strategic Defense Initiative (SDI)

3.3.1.3 **In-Service Engineering:** (Not Applicable to Det 10.)

3.3.2 **Projected Funding**

3.3.2.1 **Direct Funding:** For each applicable CSF, identify direct mission funding by appropriation from FY94 to FY97. Use FY95 PBS for FY95-FY97. OPR is SMC/FMB and BMO. (BRAC Criteria I)

CSF for Det 10 $M	FY94	FY95	FY96	FY97
ICBM	44	136	129	72

3.3.2.2 **Other Obligation Authority:** Identify reimbursable and direct-cite funding (other obligation authority expected) from FY94 to FY97. Funding allocation must be traceable to FY95 PBS. OPR is SMC/FMB and BMO. (BRAC Criteria I)

CSF for Det 10 $M	FY94	FY95	FY96	FY97
ICBM	8	8	8	8

3.4 **Facilities and Equipment**

3.4.1 **Major Equipment and Facilities:** Identified major facilities and equipment necessary to support each Common Support Function (including SCIFs) with the percentage of total time used by each function. Pictures show the breadth and scope of the equipment and facilities. Unique items are explained. Replacement cost = (Initial cost + capital investment) multiplied by the inflation factor for the original year of construction. (OPR is BMO) (BRAC Criteria II)

REDACTED by Page 10A

Common Support Function	Major Facility or Equipment Description	Unique To			Replacement Cost ($K)
		DOD	Federal Gov't	U. S.	
DSO	Administrative	No	No	No	25,000 (for all CSFs)
AMTD	Administrative	No	No	No	
RSLP	Administrative	No	No	No	

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.4.1, Major Equipment and Facilities, of the ~~SM-ALC~~ SMC/Det 10 response to the LJCSG guidance package. The 10 Aug 1994 response did not provide data at the lowest level CSF per the instructions, nor identify sharing.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

MAJCOM REVIEWER: _____
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF Date:
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

SMC-Det 10

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.4.1, Major Equipment and Facilities, of the [redacted] response to the LJCSG guidance package. The 10 Aug 1996 response did not provide data at the lowest level CSF per the instructions, nor identify sharing.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

SEE ATTACHED WORKSHEET, WHICH UPDATES LATEST DISKETTE WITH CSF

Thom. L. Koznick

MAJCOM REVIEWER: THOMAS L. KOZNICK HQ AFMC/XPX 787-2622
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

ATTACHMENT 1

INSTALLATION WORKSHEET

SMC DET 10

PURPOSE: To document answer to question number 3.4.1.

SOURCE: Mr Robert Dunn, DSN 876-8316, Det 10 Draft Strategic Plan, 7 Mar 94.

METHOD: Answer extracted from Det 10 Draft Strategic Plan, mission statements section and Description Of The Proposed Action And Alternatives (DOPAA) (para 4.5) section.

CONCLUSION: Major Equipment and Facilities

Common Support Function	Major Facility or Equipment Description	Unique To DOD	Unique To Federal Gov't	Unique To U.S.A.	Replacement Cost ($K)
ICBM	Administrative	NO	NO	NO	N/A

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: Robert E Dunn Date: 4 Aug 94
ROBERT E. DUNN, GM-14, Det 10/CE, DSN 876-8316

SMC Reviewer: Juri Randmaa Date: 5 Aug 94
JURI RANDMAA, Colonel, SD, DSN 833-3818

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Thomas P. Showers Date: 8 Aug 94
THOMAS P. SHOWERS, GM-14
HQ AFMC/XRS, DSN 787-6151

3.5 Expansion Potential

3.5.1 **Laboratory Facilities:** (None.) (BRAC Criteria II)

3.5.1.1 There is no capacity for Det 10 activities to absorb additional similar workyears categorized in the same common support function with minor facility modification. Thus, describing major modification to what extent the facilities would have to be modified is not necessary. (Use FY97 workyears as your requirement) (BRAC Criteria III)

3.5.1.2 There is no capacity to absorb additional workyears to determine how many additional workyears can be supported. (BRAC Criteria III)

3.5.1.3 Not applicable to describe the above 3.5.1.1 and 3.5.1.2 impact for military construction programs or other alteration projects programmed in the FY95 PBS. (BRAC Criteria II)

3.5.2 **Land Use:** Detachment 10 currently occupies 4 permanent facilities totaling 233,000 gross square feet. Activities are administrative. There are ten buildable acres for additional administrative support. (OPR is BMO) (BRAC Criteria II)

3.5.3 **Utilities:** Utilities (electric, gas and water) can be expanded at Det 10.. With the closure of Norton AFB all utilities have excess capacity. (OPR is BMO) (BRAC Criteria II)

SECTION IV: Certification Work Sheets

4.0 BMO/CD OPR: Mr Dumaine

4.1 RSLP/FM OPR: Ms Jan Zarr

4.2 SMC/DPX OPR: 1Lt Susan Schlacter (See SMC document packeage for original signed worksheets.)

94-09-20 12:34 RCVD

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.0 for SM-ALC, Det 25 for the Laboratory JCSG guidance package. The Laboratory JCSG guidance package requested the description of relationships and interconnectivities with other functions (common or unique) in support of the overall activity mission. This question was intended to solicit a list of functions which a particular common support function (CSF) (listed in appendix C of the questionnaire) is interconnected. The term "interconnected" is defined as any relationships, connections, and/or synergies that exist among CSFs either common (i.e. listed in appendix C) or unique (i.e. not included in appendix C) by virtue of shared /common scientific or engineering disciplines, shared/common equipment or facilities, joint or common requirements, or any other factors which link or relate the CSFs and/or unique functions to each other. Clearly identify these interconnectivities for each CSF reported by your activity

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: (Concurs) Does not concur (explain:)

SEE ATTACHED WORKSHEETS

Thomas L. Koepnick

MAJCOM REVIEWER: THOMAS L. KOEPNICK HQAFMC/XAY 787-2622
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

~~42~~ (44)

Item 1
DSS 1-41

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.1.4 Special Support Infrastructure of the SM-ALC/Det 15 response to the LJCSG guidance package. The 10 Aug 1994 version did not provide data at the lowest level CIIF per the instruction.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

SEE ATTACHED WORKSHEET

MAJCOM REVIEWER: Thomas L. Koepnick

THOMAS L KOEPNICK HQ AFMC/XPX DSN 787-2622

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

ANSWERS CHANGED IN DET 25 LAB DATA CALL RE-WORK, DUE TO SAF/AQX CORRECTION WORKSHEETS ## 44, 45, 46, 47, 48, 49, 50, 51, 52

3.0
3.1.4
3.2.1
3.2.2
3.2.3
3.2.4.2
3.3.1.1
3.3.1.3
3.4.1

31

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.2.1 of the SM-ALC/Dec 25 response to the LJCSG guidance package. The 10 Aug 1994 version did not provide data at the lowest level CIF per the instruction.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

SEE ATTACHED WORKSHEETS

Thomas L. Koepnick

MAJCOM REVIEWER: THOMAS L. KOEPNICK HQ AFMC/XPX DSN 787-2622

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.3.3 Education of the SM-ALC/Det 25 response to the LJCSG guidance package. The 10 Aug 1994 response did not provide data at the lowest level CSF per the instructions.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

SEE ATTACHED WORKSHEETS

Thomas L. Koepnick

MAJCOM REVIEWER: THOMAS L. KOEPNICK HQ AFMC/XPX DSN 787-2622

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.2.3 Experience of the SM-ALC – Dec 25 response to the LJCSG guidance package. The 10 Aug 1994 response did not provide data at the lowest level CEF per the instructions.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-4850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

SEE ATTACHED WORKSHEETS

MAJCOM REVIEWER: Thomas L. Koepnick

THOMAS L KOEPNICK HQ AFMC/XPX DSN 787-2622

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.2.4.2, Papers Published, of the SM-ALC/Det 25 response to the LJCSG guidance package. The 10 Aug 1994 version did not provide data at the lowest level CSF per the instruction.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

SEE ATTACHED WORKSHEETS

MAJCOM REVIEWER: Thomas L. Koepnick

THOMAS L KOEPNICK HQ AFMC/XPX DSN 787-2622

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.3.1.1 Work Year and Life Cycle of the SM-ALC/Det 25 response to the LJCSG guidance package. The 10 Aug 1994 response did not provide data at the lowest level C&F per the instructions.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

SEE ATTACHED WORKSHEETS

Thomas L. Koepnick

MAJCOM REVIEWER:

THOMAS L KOEPNICK HQ AFMC/XPX DSN 787-2622

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.3.1.3 In-Service Engineering of the SM-ALC/Det 25 response to the LJCSG guidance package. The 10 Aug 1994 response did not provide data at the lowest level CSF per the instructions. CSFs are identified in the left column but the information is not broken out.

Go To Next CSF

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

SEE ATTACHED WORKSHEETS

Thomas L. Koepnick

MAJCOM REVIEWE THOMAS L. KOEPNICK HQ AFMC/XPX DSN 787-2622

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

6

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.4.1 of the SM-ALC/Dec 25 response to the LJCSG guidance package. The existing response indicates that there is no sharing of equipment or facilities with other than common (as defined in appendix C) or unique support functions. Confirm this is correct. If anything is shared within the activity, indicate the other function(s) and the percentage of time the other function(s) uses the equipment or facility. Additionally, complete the matrix box for major equipment and facilities. The 10 Aug 94 version contains text only.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package Instructions

MAJCOM: Concurs Does not concur (explain:)

SEE ATTACHED WORKSHEETS

Thomas L. Koepnick

MAJCOM REVIEWER: THOMAS L KOEPNICK HQ AFMC/XPX DSN 787-2622

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing .Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

"LAB" JOINT CROSS-SERVICE GROUP GUIDANCE PACKAGE

Section I: Taskings
1.1 Guidelines
1.2 Standards
1.3 Assumptions
1.4 Measures of Merit
1.5 Activities
1.6 Common Support Functions

Section II: Capacity of DOD Components
2.1 Workload
2.2 Excess Capacity

Section III: Capability of Activities to Perform Common Support Functions
3.0 Mission
3.1 Location
3.2 Personnel
3.3 Workload
3.4 Facilities & Equipment
3.5 Expansion Potential

Section IV: Appendices
A. Macro Process/Schedule
B. List of Activities
C. Common Support Functions

SECTION I: TASKING

In accordance with the Deputy Secretary of Defense memorandum dated 7 Jan 94, the Laboratory Joint Cross-Service Group (LJCSG) with DOD components should, where operationally and cost effective, strive to: retain in only one Service militarily unique capabilities used by two or more Services; consolidate workload across the Service to reduce capacity; and assign operational units from more than one Service to a single base. Specifically, the purpose of the LJCSG is:

- Determine common support functions and bases to be addressed by LJCSG
- Establish guidelines, standards, assumptions, measures of merit, data elements and milestone schedules for DOD Component conduct of cross-service analysis of common support functions
- Review excess capacity analysis
- Develop closure or realignment alternatives
- Analyze cross-service trade-offs

The following information identifies to the Services common support functions and data element requirements necessary to support the cross-service analysis of these common support functions.

1.1 Guidelines

Because the DOD components are organized differently, "Lab" activities are considered to be those involved in the following life cycle efforts: Science and technology, and/or engineering development, and/or in-service engineering.

Service missions and force structure will be as stipulated in the FY1995-2000 Defense Planning Guidance and Interim Force Structure Plan.

The Military Departments will use the projected funding in the FY95 President's Budget Submission (Future Years Defense Plan -- FYDP) and an estimate of funds that will be received from outside the military department for execution.

If "lab" excess capacity exists, the Military Departments will start to reduce it where operationally and cost effective through a combination of downsizing in place within the departments, internal service consolidation, and cross service alternatives.

The Military Departments will gather, exchange, and analyze data collected per this guidance call for Common Support Functions (Appendix C) at "lab" activities (Appendix B) in accordance with the milestones and schedule dates identified in Appendix A.

Cross-service alternatives will result in an aggregate reduction in the overall "lab" infrastructure across the Military Departments -- personnel/funding/facilities and equipment.

Common cross-service Measures of Merit will be consistently applied for all cross-service alternatives.

Integration of weapon systems/components into operational forces will remain with the individual Military Departments responsible for those forces.

1.2 Standards

Evaluation of cross-service alternatives will be consistent with PL 101-510 (as amended) and the eight BRAC criteria. Only certified data will be used.

The COBRA cost model will be used to calculate estimated costs, estimated savings, and Return on Investment (ROI) of alternatives leading to proposed closures and realignments. Common inputs will be used for Military COBRA runs incorporating cross-service alternatives.

Military value analysis will be conducted by the Military Departments IAW Title 10, USC responsibilities.

1.3 Assumptions

"Lab" Common Support Functions and activities identified herein represent the major opportunities for developing cross-service alternatives. The Military Departments are not precluded from proposing other cross-service alternatives to reduce excess capacity as they assess the full complement of "lab" functions.

Previous BRAC decisions will be factored into cross-service alternatives.

"Lab" capacity will be based on budgeted workyears. A workyear is considered to be 2080 hours adjusted for time not on the job (e.g. sick leave, annual leave, etc.)

1.4 Measures of Merit

The following Measures of Merit represent the outcome from the DOD component final realignment and closure recommendations that are supported by the capabilities data which will be gathered by activity and common support function in Section III of this guidance.

- Reduction of "lab" infrastructure
- Return on investment (COBRA)
- Military value (BRAC criteria 1-4) -- the composite assessment of the quality of the remaining "lab" infrastructure

1.5 Activities

The Military Departments will collect capacity data for each "lab" activity identified in Appendix B. The "lab" activities were selected by considering all individual aggregates of personnel and facilities located at one base, under the same commander, performing predominantly science and technology (S&T), engineering development, and/or in-service engineering work. Small subelements of these "lab" activities were included with the activity. Larger subelements were broken out and defined as separate activities. The list of activities was then narrowed down to the list in Appendix B based on a joint Military Department assessment of common support functions with cross-service potential.

1.6 Common Support Functions

The common support functions (CSFs) were selected as shown in Appendix C based on a joint Military Department assessment of commonalty and cross-servicing potential. Common support functions which were already consolidated and being cross serviced were not included.

Common Support Functions are divided into two categories: product and pervasive. Product functions include all S&T, engineering development, and in-service engineering efforts associated with a product from all funding sources. Pervasive functions only include those efforts that are S&T funded, i.e. Technology Base (6.1)/Exploratory Development (6.2)/Advanced Development (6.3).

SECTION II: CAPACITY OF DOD COMPONENTS

2.1 **Workload.** Use the following table to describe historic and projected workload at each activity in terms of funding and workyears. Assume previous BRAC closures and realignments are implemented on schedule. Projected funding will be derived from FY95 President's Budget Submission (Then year dollars). Past fiscal year data shall begin with FY86 or at the inception of the activity as it existed on 1 Oct 93. (BRAC Criteria I & IV)

REQUIRED	90	91	92	93	94	95	96	97
Total Funds Programmed ($M)	0	0	6.0	38.6	62.1	26.8	122.5	114.5
Total Actual Funds ($M)	4.6	3.0	46.0	28.4	-	-	-	-
Programmed Workyears	32	47	47	47	47	54	54	54
Actual Workyears	32	47	47	47	-	-	-	-

Data not available for FY86-89. Organization was formed during the latter portion of FY88 and discreet accounting records not established until FY90.

- Budgeted workyears are the selected indicator of the "lab" infrastructure's capacity at an aggregate level for each Military Department. They include both workyears funded directly by the Military Department and the workyears funded from organizations outside the Military Department.

Workyears = government personnel and on-site FFRDCs and SETAs

2.2 **Excess "Lab" Capacity -- Measured at the DOD Component Level**

- Excess "Lab" Capacity = Sum of the Peak Workyears - Sum of the Projected Workyears

-- Peak at each activity = Highest value between FY86 (or since inception of organization) and FY93

-- Projected at each activity = Estimated at FY97

The CISF was not completed until Nov 93, when the government accepted beneficial occupancy of the building.

Installation Worksheet

Centralized Integration Support Facility, Peterson AFB CO

PURPOSE: To document answers to DoD Joint Cross-Service Working Group Lab question 3.0 Mission, 3.1 Location, 3.1.1 Geographic/Climatological Features, 3.1.2 Licenses and Permits, 3.1.3 Environmental Constraints, 3.1.4 Special Support Infrastructure, 3.1.5 Proximity to Mission-Related organizations.

SOURCE: Source for questions 3.0, 3.1, 3.1.1, 3.1.2, 3.1.3, 3.1.4 and 3.1.5 is Col. John R. Hull, SM-ALC Det 25/CC, DSN 834-2001. Source documents are the Memorandum of Agreement (MOA) among AFSPACECOM, AFLC, AFSC for the Joint Support of Space and Warning systems (dtd 12 Jul. 87). Memorandum of Agreement between Air Force Space Command and Air Force Materiel Command for Software Normalization (dtd 16 Feb. 93). The software support agreements, as amended by the Software Normalization MOA, between AFSPC and GPS, DSP, MILSTAR, DMSP, CMC, AFSCN, MWSSS. PMD for MWSSS. Functional documents and organizational knowledge provided by the System Program Director (SPD) for MWSSS and the Support System Managers (SSM) for GPS, DSP, MILSTAR, DMSP, CMC, AFSCN.

METHOD: Review and extraction of relevant data.

CONCLUSION:

3.0 Mission. Directed by the Pacer Frontier Tri-Command MOA of 12 July 1987, and the Software Normalization MOA of 16 Feb 93, the CISF was established at Peterson AFB CO, as the preferred location to take advantage of the natural synergy and interconnectivity that such collocation with Air Force and US Space Commands would provide in support of Space and Warning Systems. As a unique DOD facility the mission of SM-ALC Det 25, Peterson AFB CO, and the Centralized Integration Support Facility (CISF) is to:

- Perform system logistics support (sustainment) for space and warning systems through program management, planning, in-service engineering, modifications for RM&A, configuration and data management, troubleshooting, and installation, test, and certification of hardware and software.

- Provide system and application software support (called Level II or Depot level) for all space and warning command and control and spacecraft commanding software. This includes a software support and integration facility, test and integration, installation and checkout and direct operational support to the various operations centers in and around Colorado Springs.

- To be the System Program Director for MWSSS and the Support System Manager for NAVSTAR GPS, MILSTAR, DSP, DMSP, CMC, AFSCN.

- Plan, budget for and support new systems and major modifications to existing systems.

Installation Worksheet

Centralized Integration Support Facility, Peterson AFB CO

- The following Systems, Support Functions, and Locations are supported within or through their continued daily interconnectivity with the CISF:

MWSSS

CSF--C4I Systems/Fixed Ground-Based

Operations, Logistics and Software support interconnections:

ITWAA sites at AFSPC, NORAD, USSPACECOM
BMEWS sites at Thule, Clear, Fylingsdales
Pave Paws sites at Cape Cod, Beale AFB, Robins AFB, ElDorado
PARCS site at Cavalier
GEODSS sites at Socorro, Maui, Diego Garcia
Surveillance radar at Pirinclik, Eglin
Have Stare site at Vandenberg AFB
CMC

Sole acquisition officer responsible for all planning, budgeting and life cycle activities

Functions include in-service engineering, hardware repair/replacement and upgrade, software maintenance

NAVSTAR GPS

CSF--Space Systems/Satellite
CSF--Space Systems/Ground Control

Operations, Logistics and Software support interconnections:

50th Space Wing-Falcon AFB
Backup Master Control Station-Gaithersberg, MD.
Colorado Tracking Station-Falcon AFB
CMC for NDS (Nudet) monitoring
AFSCN

Acquisition relationship:

SMC-GPS Program Director, Los Angeles AFB

Function include in-service engineering, testing and development, modifications and level II software maintenance.

MILSTAR

CSF--Space Systems/Satellite
CSF--Space Systems/Ground Control

Operations, Logistics and Software support interconnections:

50th Space Wing-Falcon AFB
AFSCN, CMC, DSP fixed sites, GPS

Acquisition relationship:

SMC-MILSATCOM Program Director, Los Angles AFB

Functions include in-service engineering, engineering studies, sustaining engineering.

Installation Worksheet

Centralized Integration Support Facility, Peterson AFB CO

DSP

CSF--Space Systems/Satellite
CSF--Space Systems/Ground Control
CSF--C4I Systems/Ground Mobile

Operations, Logistics and Software support interconnections:

Large Processing Stations (LPS)-Buckley ANGB
Continental Ground Station-Buckley ANGB
Overseas Ground Station (OGS)-Woomera, Australia
European Ground Station (EGS)-Location classified
DSP Mobile Ground Systems located on Holloman AFB, NM.

Acquisition relationship:

SMC-SBEWS Program Director, Los Angeles AFB

Functions include in-service engineering, engineering studies, level II software maintenance

DMSP

CSF--Space Systems/Satellite
CSF--Space Systems/Ground Control

Operations, Logistics and Software support interconnections:

AFSPC Multi-purpose Satellite Control Centers
Offutt AFB, Fairchild AFB
AFSPC Automated Remote Tracking Stations
New Hampshire
Hawaii
Tule AFB
Vandenberg AFB
50th Space Wing, Falcon AFB
Naval Fleet Numerical Oceanographic Center, Monterey CA.

Acquisition relationship:

SMC-DMSP Program Director, Los Angeles AFB

Functions include in-service engineering, development and modifications

CMC

CSF--C4I Systems/Fixed Ground-Based

Operations, Logistics and Software support interconnections:

AFSPC, NORAD and USSPACECOM
Alternate Processing and Correlation Center-USSTRATCOM, Offutt AFB
Forward Users in European and Pacific regions
Survivable Communications Interface Systems
MWSSS sensor sites

Acquisition relationship:

14th AF, AFSCPC, NORAD, USSPACECOM
ESC-CMC Program Director, Hanscom AFB
Cheyene Mountain Upgrade

Functions include in-service engineering, testing and development, integration

Installation Worksheet

Centralized Integration Support Facility, Peterson AFB CO

AFSCN

CSF--Space Systems/Ground Control

Operations, Logistics and Sortware support interconnections:

50th Space Wing-Falcon AFB

750th Space Support Squadron-Onizuka AFB

Space Launch Facility-Vandenberg AFB

Cape Canaveral

ARTS sites-Camp Parks, Hawaii, New Hamshire, Thule, Oakhanger, UK, Guam, Diego Garcia, Indian Ocean Tracking Station, Eglin AFB

Acquisiton relationship:

SMC-AFSCN Progam Director, Los Angeles AFB

Function include in-service engineering, engineering studies, level II software maintenance

Note that space ground control and C4I systems are interconnected with the AF Satellite Control Network (AFSCN), and that the worldwide sensors and radar's that constitute the MWSSS provide early warning data to the various command and control centers in the Cheyenne Mountain Complex.

3.1 Location: Colorado Springs and vicinity

3.1.1 Geographic/Climatological Features: The placement of the CISF at Peterson AFB was necessary to support the mission assignment explained in 3.0 and it therefore must be collocated in the immediate vicinity of AFSPC, USSPACECOM, Cheyenne Mountain Complex, NORAD and Falcon AFB. In addition the engineering efforts accomplished by the CISF in support of GPS directly augment the Master Control Station (MCS) operating at Falcon AFB. The MCS is located at Falcon AFB because that geographic point allows above the horizon visibility of a greater number of the satellite's within the GPS Constellation.

Applies to the following Common Support Functions

Space Systems

Satellite

Ground Control Systems

C4I Systems

Fixed Ground-Based C4I

Ground Mobile C4I

13

3.1.2 Licenses and permits: None

3.1.3 Environmental Constraints: ~~None~~ See page 6A

3.1.4 Special Support Infrastructure: Space based weapon systems constitute a highly unique set of circumstances as regards infrastructure.

. **Applies to the following Common Support Functions**
  Space Systems
    Satellite
    Ground Control Systems
  C4I Systems
    Fixed Ground-Based C4I
    Ground Mobile C4I

Operations and support infrastructure elements are often interdependent on and interchangeable with each other.

- At any given moment any one or more infrastructure element may be in use by an operational system. The next minute that same capacity could be in use by a support function. For example the main frame computer systems installed in Cheyenne Mountain are often concurrently used for both operational missions and the development with operational testing of advanced software.

Special utility infrastructure elements include:

- Electrical power capabilities of 5.2 million volt-amps distributed throughout the building to support lighting, administrative, and technical needs. The power is distributed as 277/480V power for lighting, elevators, motors and uninterruptible power supplies, and as 120/208V power for administrative and computer use. In addition, there is a 500KW diesel generator to provide emergency power for lighting, security, and cooling systems. This generator does not provide backup power for the technical equipment.

- Chilled water air conditioning has been installed in the technical space to support the computer systems. There are 16 units with individual, sensible cooling capacity of 295,000BTU/hr, 5 units with individual, sensible cooling capacity of 03,5000BTU/hr, 1 unit with sensible cooling capacity of 240,000BTU/hr, and 1 unit with sensible cooling capacity of 45,000BTU/hr. Total cooling capacity is 5.5 million BTU/hr.

- The technical area has 11 uninterruptible power supplies installed to provide conditioned, uninterruptible power for the computer systems. Each unit provides 150KVA of power. Total UPS capability is 1.65 MVA. Under full load these units can provide 20 minutes of battery reserve power to the computer systems.

AIR STAFF CORRECTION WORKSHEET

PURPOSE: To provide corrected answer to **DET 25 (SM-ALC), PETERSON AFB, Colo.**

SOURCE: **'95 BRAC Questionnaire**

CONCLUSION: **Update needed (~~no change~~)** see below

MAJCOM (CONCURS)(NONCONCURS): **CONCURS (Provided info VIA questionnaire)**

BASE (CONCURS) (DOES NOT CONCUR): -same-

I certify the above information is accurate and complete to the best of my knowledge and belief, based upon information provided by identified sources.

AIR STAFF REVIEWER: R. McCuwn (CEVP) **DATE:** 28 JUL 1994

Peterson AFB is located within an air quality non-attainment area for CO.

- Unique C4I capabilities which allow resource sharing by means of a facility wide local area network (LAN). The CISF LAN is tied externally through T1 lines to the Peterson AFB communications networks. This allows software verification and validation on operational hardware systems located on Peterson AFB, Cheyenne Mountain ASN, and Falcon AFB. Wide area network (WAN) linkage with AFMC product centers and logistics centers nation wide is accomplished via T1 connection through AFSPC's Spacelan.

3.1.5 Proximity to Mission-Related organizations: The CISF is on Peterson AFB CO because that provides close proximity to the numerous mission-related activities and organizations in the Peterson AFB/Colorado Springs area.

Noteworthy are:

- The Cheyenne Mountain Complex (CMC), 10 miles
- Space and Warning System Center (SWSC), Peterson AFB, 2 miles
- Off-Site Test Facility (OSTF), Colorado Springs, 5 miles
- HQ AFSPC, Peterson AFB, 1 mile
- AF Satellite Control Network, mission control for MILSTAR and GPS, Falcon AFB, 7 miles
- Defense Support Program (DSP) facilities, mission, and mission support at Buckley ANG and Lowry AFB CO, and CU Boulder, 75 miles.

Proximity of Det 25 and CISF to the above 24 hour operational units facilitates responsiveness to their logistics requirements. All supported space and early warning systems have mission availability requirements at or above 97%. Required response times for software support are documented in formal support agreements between AFMC and AFSPC.

Installation Worksheet
Centralized Integration Support Facility, Peterson AFB CO

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: John T. Hoffman Date: 19 Aug 94
JOHN T. HOFFMAN, SM-ALC Det 25/LXCM, 834-2240

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Directorate Reviewer: _____ Date: 19 Aug 94.
JOHN R. HULL, Colonel, USAF 834-2001
Commander, SM-ALC Detachment 25

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Tom Spitler Date: 2 Sep 94
Tom Spitler, GM-13, HQ AFMC LGPE, DSN 787-5610

Installation Worksheet

Centralized Integration Support Facility, Peterson AFB CO

PURPOSE: To document answers to DoD Joint Cross-Service Working Group Lab question 3.2 Personnel, 3.2.1 Total Personnel, 3.2.2 Education, 3.2.3 Experience, 3.2.4 Accomplishments During FY91-93, 3.2.4.1 Patents awarded and patents disclosed, 3.2.4.2 Paper Published in peer reviewed journals.

SOURCE: Source for questions 3.2, 3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.2.4.1 and 3.2.4.2 is Mr. Ken Ecton, SM-ALC Det 25/LXAM, DSN 834-2016. Data sources are the Extended Unit Manning Document PCN ST511-310 dated 26 May 94, the SM-ALC Personnel Data System, and associated official personnel files.

METHOD: SM-ALC Det 25 presented a list of employees to SM-ALC/DPCC. DPCC took the list and extracted relevant data from the DCPDS on each employee on the list serviced by the personnel office at McClellan AFB. Relevant data included Education Level, - High, Service Computation Date, Supervisory Level, etc. Data on the remaining personnel was collected via direct personal interview by SM-ALC Det 25/LXAM, John Hoffman; transmitted via telecon to DPCC, and included in the following computation. DPCC categorized the data into three major groups of Management (4 records), Technical (39 records), and Other (4 records). For Question 3.2.2 the three groups were further divided into five categories. DPCC added the category of "Some College" to account for those employees not covered under the other five categories. For Question 3.2.3 the three groups were further divided into the five categories requested using their Service Computation Date.

CONCLUSION:

3.2.1 Total personnel = 47 engineers and related specialists performing in-service engineering (i.e., sustaining engineering, software engineering and support, modification engineering, R&M and cost improvements, performance enhancements, reverse engineering).

TYPES OF PERSONNEL	NUMBER OF PERSONNEL			
Space				
Satellite	Government		On-Site FFRD	On-Site SETA
	Civ	Mil		
Technical	9	1	N/A	N/A
Management (Supv)	0	0	N/A	N/A
Other	0	0	N/A	N/A
Ground Control	Government		On-Site FFRD	On-Site SETA
	Civ	Mil		
Technical	14	1	N/A	N/A
Management (Supv)	2	0	N/A	N/A
Other	1	0	N/A	N/A

C4I

Fixed Ground-Based	Government Civ	Government Mil	On-Site FFRD	On-Site SETA
Technical	7	2	N/A	N/A
Management (Supv)	2	0	N/A	N/A
Other	3	0	N/A	N/A

Ground Mobile	Government Civ	Government Mil	On-Site FFRD	On-Site SETA
Technical	5	0	N/A	N/A
Management (Supv)	0	0	N/A	N/A
Other	0	0	N/A	N/A

3.2.2 Education:

TYPE OF DEGREE/DIPLOMA	Common Support Function Space-Satellite	Ground Control	C4I-Fixed	Mobile
Some College	1	0	3	0
Associates	1	0	0	0
Bachelor	6	13	11	4
Masters	3	2	2	1
Doctorate	0	0	0	0
TOTAL	11	15	16	5

3.2.3 Experience:

COMMON SUPPORT FUNCTION	YEARS OF GOVERNMENT AND/OR MILITARY SERVICE: LESS THAN 3 YEARS	3-10 YEARS	11-15 YEARS	16-20 YEARS	MORE THAN 20 YEARS
SPACE					
Satellite	0	7	4	2	1
Ground Control	0	3	5	4	2
C4I					
Fixed	0	6	6	4	1
Mobile	0	1	0	0	1
TOTAL	0	17	15	10	5

3.2.4 Accomplishments During FY91-93:

3.2.4.1 Patents awarded and patents disclosed: None for all CSF's

3.2.4.2 Paper Published in peer reviewed journals: One presently, *Computing Supply Support Aug 93.*

Applies to the following Common Support Functions

Space Systems

Ground Control Systems

Installation Worksheet
Centralized Integration Support Facility, Peterson AFB CO

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: John T. Hoffman Date: 19 Aug 94
JOHN T. HOFFMAN, SM-ALC Det 25/LXCM, 834-2240

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Directorate Reviewer: _____ Date: 19 Aug 94
JOHN R. HULL, Colonel, USAF 834-2001
Commander, SM-ALC Detachment 25

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Peggy S. Rutter Date: 2 Sep 94
Peggy S. Rutter, GS-13, HQ AFMC/DPCF, DSN 181-4136

Installation Worksheet
Centralized Integration Support Facility, Peterson AFB CO

PURPOSE: To document answers to DoD Joint Cross-Service Working Group Lab questions 3.3 Workload, 3.3.1 FY93 Workload, 3.3.1.1 Workyear and Life cycle, 3.3.1.2 Engineering Development by ACAT, 3.3.1.3 In-Service Engineering, 3.3.2 Projected Funding, 3.3.2.1 Direct Funding and Other Obligation Authority.

SOURCE: Sources for questions 3.3, 3.3.1, 3.3.1.1, 3.3.1.2, 3.3.1.3, 3.3.2 and 3.3.2.1 are Bob Grookett, SM-ALC Det 25/LXAF, DSN 834-2056 and Ken Ecton, SM-ALC Det/LXAM, DSN 834-2016. Data sources are Det 25 Extended Unit Manning Document PCN ST511-310 dated 26 May 94; USAF Force and Financial Program AF: Sustained Engineering, pages 1 & 2, 24 Mar 94; FY95 PB (CE) Final, pages 2 & 3, 10 Feb. 94; FY95 PB, DMSP-AFSPC O&M, pages 1 & 2, 8 Jan. 94; Current Baseline, page 22, 29 Nov. 93; pages 36 & 37, 2 SEP. 92.

METHOD: Review and extraction of relevant data.

CONCLUSION:
3.3.1 FY93 Workload:

3.3.1.1 Workyear and Life cycle:

FY93 ACTUAL

LAB	CIV	MIL	FFRDC	SETA
S&I	N/A	N/A	N/A	N/A
ENG DEV	N/A	N/A	N/A	N/A
IN-HSE				
ENG				
SPACE				
Satellite	7			
Ground Control	13	2		
C4I				
Fixed Ground	19	2		
Ground Mobile	4			

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Det 25 currently employs 47 Systems Engineers and related specialists across all systems. Using an assumed man-year of 2080 hours (per Sec 1, para 1.3) times 58, the Det had an in-service engineering work year of 97,670 hours in FY93.

DMSP	6
AFSCN	6
MILSTAR	2
GPS	8
CMC	7
SBEWS	4
MWSSS	14
	47

3.3.1.2 Engineering Development by ACAT: No Dem/Val (6.4) nor EMD (6.5) funds executed at Det 25 in Colorado.

3.3.1.3 In-Service Engineering: Applies to the following Common Support Functions

Common Support Functions	In-Service Engineering Efforts (list)	FY93 Actual ($Millions) OA	Workyears	Weapons Systems Supported
Space-Ground Control	GPS Mission Console MOD	$1.2	2	GPS
Space-Ground Control	GPS Compat Upgrade MOD	.8	2	GPS
Space-Ground Control	GPS Echo Telemetry MOD	.6	1	GPS
C4I-Fixed Ground-Based	FPS-85 Coherent Receiver MOD	2.3	6	MWSSS
C4I-Fixed Ground-Based	FPS-85 Receiver Preamplifier MOD	1.1	2	MWSSS
Space-Ground Control	Sustaining Engineering Status	11.0	16	AFSCN
Space-Ground Control	Sustaining Engineering Status	5.7	9	GPS
Space-Ground Control	Sustaining Engineering Status	1.3	2	DMSP
Space-Ground Control	Sustaining Engineering Status	.8	2	SBEWS/DSP
C4I-Fixed Ground-Based	Sustaining Engineering Status	.2	1	CMC
C4I-Fixed Ground-Based	Sustaining Engineering Status	3.4	2	MWSSS

3.3.2 Projected Funding:

3.3.2.1 Direct Funding: ($000)

CSF	FY94	FY95	FY96	FY97
Space Systems				
Ground Control System	$41.1	87.6	86.7	84.1
C4I Systems				
Fixed Ground-Based C4I	$21.0	39.2	36.7	30.4

3.3.2.2 Other Obligation Authority: None. We do not, nor are we programmed to provide support to other activities or organizations on a reimbursable basis.

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Installation Worksheet
Centralized Integration Support Facility, Peterson AFB CO

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: John T. Hoffman Date: 19 Aug 94
JOHN T. HOFFMAN, SM-ALC Det 25/LXCM, 834-2240

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Directorate Reviewer: _____ Date: 19 Aug 94
JOHN R. HULL, Colonel, USAF 834-2001
Commander, SM-ALC Detachment 25

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Tom Spitler Date: 2 Sep 94
Tom Spitler, GM-13, HQ AFMC/LGPC/DSN 787-5610

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Det 25 (Peterson)

FOR OFFICIAL USE ONLY

Installation Worksheet

Centralized Integration Support Facility, Peterson AFB CO

PURPOSE: To document answers to DoD Joint Cross-Service Working Group Lab question number 3.4 Facilities and Equipment Note and 3.4.1 Major Equipment and Facilities.

SOURCE: Source for questions 3.4 and 3.4.1 is Bobby Tyson, SM-ALC Det 25/LXAM, DSN 834-2014, using engineering drawings and facility records, on file in Peterson AFB CO Civil Engineering Squadron and/or with Det 25/LXAM. Our additional source for the facility replacement cost under para 3.4.1 is Michael Tibbs, HQ AFMC/CECC, WPAFB OH 45433, DSN 787-4100. Major equipment replacement cost sources are: Cliff Webb, SM-ALC Det 25/LXE, DSN 834-2067 for GPS; John Puccioni, SM-ALC Det 25/LXBE, DSN 834-2199 for DSP; Pat Larter, SM-ALC Det 25/LXE, DSN 834-2026 for ISE; Mike Guthrie, SM-ALC Det 25/LXAM, DSN 834-2015 for WAN/LAN; Mike Findley, SM-ALC Det 25/LXW, DSN 834-2264 for MWSSS.

METHOD: Review and extraction of the relevant data.

CONCLUSION:

3.4 Facilities and Equipment Note: Phase I of the CISF was capitalized in the FY92 MCP. Beneficial occupancy was gained in Dec 93 (1st Qtr FY94). Full personnel occupancy has been achieved by housing at least 4 different AFMC organizations within the facility. Full operational capacity is expected to be exceeded by 4th Qtr FY94. Phase II construction is currently on hold.

3.4.1 Major Facilities and Equipment: The CISF is a 2 story building consisting of 92,514 sq ft. It is a common support facility for space and warning software engineering and supports the Common Support Functions of Space Systems, to include both Satellite and Ground Control Systems and C4I Systems, to include both Fixed Ground-Based and Ground Mobile in approximately equal proportions. The facilities and equipment are not shared with other functions at this time.

CSF	FACILITY/ EQUIPMENT	UNIQUE TO	TOTAL ESTIMATED REPLACEMENT COST
SPACE Satellite Ground Control	DSP & GPS	DOD/USAF	$26.646M
C4I Fixed Ground Ground Mobile	MWSSS,ISE,LAN	DOD/USAF	$65.776M

Narrative descriptions follow.

FACILITY INFORMATION

The first floor houses 29,865 square feet total of technical area and laboratory space

- Open Technical Area space of 18,700 sq ft. This space houses main frame computer systems and associated components. It was designed and built to provide power supply, air conditioning, electrical grounding, interconnectivity, comm/crypto control and physically secure work space for software support to AFSPC.

- Terminal Room space of 5,900 sq ft. This space houses the interface devices and systems connected to and interactive with the main frames housed in the open technical area.

- Production Control room space of 2,000 sq ft. This space houses the line printers which produce the lines of code listings used by Software Engineering personnel.

- Engineering Laboratory space of 3,265 sq ft.

A second floor comprises 39,000 sq ft.

- This area supports Administrative and Program Management personnel and functions related to the systems and in service engineering tasks being performed on the first floor.

Common Use and Facility Operations space of 23,649 sq ft

- This square footage is divided between both floors This space includes hallways, restrooms, technical library and source selection rooms.

The CISF is unique to DoD in that it brings together space and warning software engineering support in one location.

- Total facility cost $18,017,000 in FY92 MCP dollars

- A cost estimate for replacement of the Centralized Integration Support Facility itself has been developed using the following method:

  -The total construction cost (Bldg Const. Only) was determined to be $18,017,000. Please note that this includes As-Built drawing costs, Const. Engineering & Design, and Corp of Engineers Supervision & Overhead.

-The following formula illustrates the present (June 1994) value of this building since it was first constructed. This formula can be used if you desire to change the original cost or to project the replacement costs in the years to come.

Present Value = $P(1+i)^n$ where P = Original Cost
i = Percent Increase
n = Number of years ahead from midpt of const (Dec 92)

$V = 18{,}017{,}000\,(1+.028)^{1.5}$
$= \$\,18{,}779{,}00$

- An additional $6 million in MCP funds was expended to extend infrastructure elements such as roadways, utilities and communications connectivity, and a new base entrance. These elements are not part of the CISF facility itself. Their existence benefits the base and other activities such as the new Area Dental Lab also located on Peterson East.

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EQUIPMENT INFORMATION

The CISF houses; and Det 25 operates, supports and manages; major equipment suites which service the Common Support Functions of Space and C4I (reference para 3.0).

- Large segments of installed major equipment consist of obsolete, commercially unsupportable, main frame computer systems. Said systems provide the government's only existing, realistic test and development matrix. On it, the government can validate and/or verify Space and C4I software. After verification/validation the software is uploaded to operational Space and C4I systems having the same hardware configurations.

- COMMON SPACE SUPPORT FUNCTIONS. Major space support equipment suites installed in the CISF, are broken down by program in the paragraphs below. Replacement cost estimates are shown separately for each.

Replacement costs are calculated using the USAF Weighted Inflation Indices. These have a Base Year of 1992 and the FY94 factor of 1.110 was applied to the record value of the equipment. That is: Record Value x 1.110 = Estimated Replacement Cost

- The DEFENSE SUPPORT PROGRAM (DSP) is the space based surveillance system that provides warning of ballistic missile attack against the United States and its allies for NORAD. It uses infrared technology to sense heat from missile plumes against the Earth's background. Additionally, DSP carries sensors that detect nuclear explosions. The system has been operational for over 20 years.

The DSP software support equipment enables software maintenance and testing for DSP mobiles plus accomplishment of fixed site computer replacement logistics tasks.

The support equipment consists of an IBM ES-9000 mainframe computer with peripherals, seven Peripheral Control Processing Units (PCPUs), a Mass Memory Unit (MMU), a 13 foot antenna and other associated mobile software test equipment.

```
Record value:  $11.559M
Estimated Replacement Cost:  $12.830M

The only individual component for which an estimated replacement cost
is available is the IBM computer itself: $1,874,151 x 1.110 = $2.08M
```

Due to age and obsolescence, it is very doubtful whether the remaining system components could be replaced with like equipment.

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Installation Worksheet

Centralized Integration Support Facility, Peterson AFB CO

- The CISF provides an operational location for the four categories of equipment depicted below and is the major support environment for the GLOBAL POSITIONING SYSTEM'S OPERATIONAL CONTROL SEGMENT (GPS/OCS). The GPS mission is to provide secure, real time navigation and timing signals round the clock. The OCS monitors system performance and provides updating of the satellite transmitted navigation message.

a. The *CSIF/GPS Novell Network* provides file servers, mail hubs and fax servers for GPS program managers, software engineers and equipment specialists.

Record Value for hardware:	$ 57,000.00
Record Value for software:	$250,000.00
TOTAL	$307,000.00
Estimated Replacement Cost:	$340,770.00

b. The *GPS Engineering Management System (GEMS)* is a supermini computer system with operating system, manuals and peripherals that uses JCALS software for automated implementation of distributed information management system data.

Record Value for GEMS application software:	$ .300M
Record Value for GEMS host:	$ .413M
TOTAL	$ .713M
Estimated Replacement Cost:	$ .791M

c. The *Weapon Support System (WSS)* is an IBM model ES-9000 computer system with associated data processing, control and display equipment. It provides configuration management, software builds, system testing, prototyping, simulation, proof-of-support and documentation support services.

Record Value: $3.5M
Estimated Replacement Cost: $3.885M

d. The *Transportable Ground Antenna (TGA)* is an air and land mobile, remotely operated S-band antenna system that is functionally identical to the existing ground antennas. It allows round the clock operations during maintenance on existing ground antennas. It operates under Master Control Station (MCS) monitoring in the process of controlling and transmitting commands and navigation messages to the satellites and forwarding telemetry data received from the satellites back to the MCS.

Record Value: $8.0M
Estimated Replacement Cost: $8.8M

- COMMON C4I SUPPORT FUNCTIONS. Major C4I equipment suites installed in the CISF, are broken down by program in the paragraphs below. Replacement cost estimates are shown separately for each.

- The INTEGRATED SUPPORT ENVIRONMENT (ISE) constitutes a horizontally arranged infrastructure element of the CISF itself. It serves a variety of functions for all mainframe computer suites performing both Space and C4I support. To an extent, the ISE acts as a master scheduler of machine time and can provide overflow processing capability to one or more on-line systems operating in real time in the CISF. It also houses operator and analyst training routines and is host to the configuration management data bases for both the facility itself and all installed Space and C4I processing system architecture's. It's configuration allows the existence of an electronic test laboratory environment in which systems integration is achieved.

Major equipment components and their record value are:

VAX 6000 (hardware)	$1.0 M
VAX 9000 (hardware)	$0.39M
Software	$0.50M
Uninterrupted Power Supply	$0.23M
Printers/Cables/Comm Equip	$0.10M
Servers/Workstations	$0.90M
Interface Modules	$0.14M
TOTAL	$3.26M
Estimated Replacement Cost:	$3.61M

- The MISSILE WARNING AND SPACE SURVEILLANCE SYSTEM (MWSSS) is a system of systems which provides warning and characterization of intercontinental and submarine launched ballistic missile attacks against North America, Europe, and the United Kingdom. It responds to Joint Chiefs of Staff (JCS) requirements to support National Command Authority (NCA) decisions by providing accurate, reliable, and unambiguous tactical warning and attack assessment. The system provides space surveillance to support the space defense mission including weapon support, attack warning for U.S. satellites, post strike assessment, space order for battle (mission planning, payload assessment, targeting, over flight warning and routine space object catalog maintenance), and identification/ assessment (scientific and technical intelligence and treaty monitoring).

The sensor systems which make up MWSSS are all unique to DoD. Each system individually, and their collective integration as the MWSSS, is a dedicated missile warning and space surveillance asset. All systems possess interconnectivity with U.S. Space Command's Integrated Tactical Warning and Attack Assessment Network.

MWSSS is made up of Pave Paws/BMEWS I, BMEWS II and III, Eglin Radar, Have Stare, Pirinclik Radar, PARCS and GEODSS. Suites of equipment for all these systems - with the exception of PARCS and GEODSS - are installed in the CISF.

While these systems reside on Commercial Off The Shelf (COTS) Mission Critical Computer Resources (MCCR), their operational and reliability requirements are such that mission software and system architecture are unique to their military mission.

- Replacement costs for the various sensor Software Maintenance Support Equipment (SMSE) suites can be calculated in the same manner.

a. The *Pave Paws* and *BMEWS* systems all use Cyber computers. These are no longer in production, nor are they available in sufficient quantity in the excess list or used market. In order to replace any of the suites, we would have to replace all the SMSE suites and all the dual strings of equipment at the sites. A mission software rehost would also be required. With seven sites and one consolidated SMSE we would require fifteen strings of equipment, plus software rehost and installation and testing of each.

```
Record Value:  $44.5M
Estimated Replacement Cost:  $49.395M
```

b. All the hardware and operating system software for the *Eglin Radar* is still available on the commercial market.

```
Record Value:  $2.1M
Estimated Replacement Cost:  $2.331M
```

c. The hardware contained in the *Have Stare* SMSE suite is no longer available. Replacement cost involves buying new hardware for both the CISF and for the one site since they cannot function as different platforms. Also included is rehosting of the mission software.

```
Record Value:  $8.2M
Estimated Replacement Cost:  $9.102M
```

d. The hardware contained in the *Pirinclik* SMSE suite is available from government excess lists or commercial sources.

```
Record Value:  $.45M
Estimated Replacement Cost:  $.4995M
```

Installation Worksheet
Centralized Integration Support Facility, Peterson AFB CO

- The CISF provides System Program Directors and System Support Managers with internal and external communications and electronic media records keeping capacities. Installed LOCAL AREA NETWORK AND WIDE AREA NETWORK (LAN/WAN) equipment serves this function commonly across all programs.

Installed equipment includes: cabling, power supplies, network control boards, switching circuit hardware, fiber optic links and various software packages of a utility nature.

Record Value: $747,000.00
Estimated Replacement Cost: $829,170.00

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Preparer: John T. Hoffman Date: 19 Aug 94
JOHN T. HOFFMAN, SM-ALC Det 25/LXCM, 834-2240

I certify that the above information is accurate and complete to the best of my knowledge and belief.

Directorate Reviewer: [signature] Date: 19 Aug 94
JOHN R. HULL, Colonel, USAF 834-2001
Commander, SM-ALC Detachment 25

I certify that the above information is accurate and complete to the best of my knowledge and belief.

MAJCOM Reviewer: Tom Spitler Date: 2 Sep 94
Tom Spitler, GM-13, HQ AFMC/LGS, DSN 787-5210

3.5.1. Laboratory Facilities: N/A

3.5.1.1 Laboratory Facilities: Use facilities records as of fourth-quarter FY93 in answering the following (in sq ft) for each CSF: (BRAC Criteria II)

3.5.1.1 Describe the capacity of your activity to absorb additional similar workyears categorized in the same common support function with minor facility modification. If major modification is required, describe to what extent the facilities would have to be modified. (Use FY97 workyears as your requirement) (BRAC Criteria III)

The CISF will meet 100% utilization by 4th Qtr FY94, primarily by the planned incorporation of elements of the ITW/AA systems. A FY94 MCP project for a 101,311 sq ft addition was deferred for an FY95 need revalidation. This project is entitled CISF Phase II Add to And Alter (ADAL); and it was to provide capacity, at Colorado, Springs, to consolidate software engineering support for remaining C4I and space systems such as the AF Satellite Control Network. The Adal was deferred because of an ongoing AF and AFMC review of command wide MCP priorities and future infrastructure needs.

3.5.1.2 If there is capacity to absorb additional workyears, how many additional workyears can be supported? (BRAC Criteria III)

No additional capacity exists

3.5.1.3 For 3.5.1.1 and 3.5.1.2 (above) describe the impact of military construction programs or other alteration projects programmed in the FY95 PBS. (BRAC Criteria II)

There are no impacts on the CISF based on the FY95 PBS.

3.5.2 **Land Use:** Provide number of buildable acres for additional laboratory/administrative support construction at your installation. (BRAC Criteria II)

The Centralized Integration Support Facility is on Peterson AFB CO. The are allocated for the facility and the planned addition is 28.5 acres. If the addition is not approved for construction, this frees up 5.5 acres for Peterson AFB use

3.5.3 **Utilities:** Provide an estimate of your installation's capability to expand or procure additional utility services (electric, gas, water). Estimates should be provided in appropriate units -- e.g. KWH of electricity. (BRAC Criteria II)

Peterson AFB currently has 10 megawatts available in this area. This could be doubled to 20 megawatts. **Water**: The current capacity to the CISF is 4400 gallons per minute limited by the size of the 8 inch meter. We could increase the capacity by 560% by installing a 16 inch meter on the 16 inch water main. **Gas**: The current capacity to the area 300,000 sq ft of facility space. It can be increased by 100% and beyond (virtually unlimited).

1995 BASE REALIGNMENT AND CLOSURE (BRAC) Data Call for DoD JOINT CROSS-SERVICE WORKING GROUP

LABORATORY NAME: ROME LABORATORY, GRIFFISS AFB, NY

POINT OF CONTACT: DANIEL C. BOLLANA

COMMERCIAL PHONE: 315-330-4321

DSN NUMBER: 587-4321

NOTE: The following responses to the data call represent values associated with Rome Laboratory at Griffiss AFB, NY only. Rome Laboratory has a portion of its Electromagnetics and Reliability Directorate located at Hanscom AFB, MA which will report its data in a seperate submission. The contingent at Hanscom is comprised of approximately 160 personnel, 145,000 square feet of on-site space, and two off-base research facilities.

SECTION II: CAPACITY OF DOD COMPONENTS

2.1 Workload. Use the following table to describe historic and projected workload at each activity in terms of funding and workyears. Assume previous BRAC closures and realignments are implemented on schedule. Projected funding will be derived from FY95 President's Budget Submission (Then year dollars). Past fiscal year data shall begin with FY86 or at the inception of the activity as it existed on 1 Oct 93. (BRAC Criteria I & IV)

Information Required	Fiscal Years											
	86	87	88	89	90	91	92	93	94	95	96	97
Total Funds Programmed ($M)	480	469	485	418	394	312	356	295	321	376	356	340
Total Actual Funds ($M)	461	453	391	368	334	312	317	332				
Programmed Workyears	1065	1046	1047	1046	1053	996	969	884	847	847	847	847
Actual Workyears	1071	1084	1021	1044	1055	1001	942	863				

- Budgeted workyears are the selected indicator of the "lab" infrastructure's capacity at an aggregate level for each Military Department. They include both workyears funded directly by the Military Department and the workyears funded from organizations outside the Military Department.

Workyears = government personnel and on-site FFRDCs and SETAs

2.2 Excess "Lab" Capacity -- Measured at the DOD Component Level

- Excess "Lab" Capacity = Sum of the Peak Workyears - Sum of the Projected Workyears
  -- Peak at each activity = Highest value between FY86 (or since inception of organization) and FY93
  -- Projected at each activity = Estimated at FY97

1084 (HIGHEST ASSIGNED FY87) - 847 (FY97 ESTIMATE) = 237 WORKYEARS

SECTION III: CAPABILITY OF ACTIVITIES TO PERFORM COMMON SUPPORT FUNCTIONS (CSFs): Provide the information described for each common support function listed in Appendix C in which you are actively engaged.

3.0 Mission: Describe the major capabilities at your activity contributing to the common support function in bulletized format. Describe any relationship and interconnectivity with other functions (common or otherwise) in support of the overall activity mission.

Rome Laboratory contributes to the C4I-AIRBORNE Common Support Function (CSF). The major capabilities at Rome Laboratory (at both Griffiss and Hanscom AFB) which contribute to this CSF are described in our mission statement below.

ROME LABORATORY MISSION

The mission of Rome Laboratory is to be the Air Force Center of expertise for advancing the state-of-the-art in command, control, communications and intelligence. To achieve this, Rome Lab:

- Conducts the Air Force Materiel Command's highest quality/relevance research, development, and test programs in the applicable technologies of signal processing, computational sciences, electromagnetics, photonics and reliability sciences

- Transitions technology to current and future systems to improve operational capability, readiness, and supportability

- Provides a full range of technical support to Air Force Materiel Command product centers and other Air Force Organizations

- Promotes transfer of technology to the private sector by leading the command in technology transfer activities

- Maintains world class technological expertise in the areas of surveillance, communications, command and control, intelligence, reliability science, electromagnetic technology, photonics, signal processing, and computational science through a strong commitment to advanced educational programs.

NOTE: See Appendix "A" for Thrust quality ratings by the AF Science Advisory Board (SAB), Relevance ratings by Product/Test/Logistic Centers, AFMC Quality/Relevance metrics, accomplishments and the Rome Lab Technology Area Plan (TAP).

3.1 Location

3.1.1 Geographic/Climatological Features: Describe any geographic/climatological features in and around your activity that are relevant to each CSF. Indicate and justify those that are required versus those that just serve to enhance accomplishing the mission of the activity. For example, clear air at high altitude that increases quality of atmospheric, ground-based laser experiments in support of the weapons CSF. (BRAC Criteria I)

The proximity of Rome Lab to the NEADS and JSS/FAA radars allow the integrated development and test of C4I advanced technology with operational DOD and commercial air traffic control systems. This provides a means for rapid transition and transfer of these technologies to both DOD and FAA. This has allowed RL to tie directly into existing systems and provide demonstration and specification for air traffic control upgrades.

RL has 5 active off base facilities. Each of these facilities were picked because of specific geographic orientation or conditions. Newport and Stockbridge Facilities are antenna measurement and analysis facilities. These facilities require very quiet Radio Frequency (RF) environments with very low reflections from surrounding terrain and objects.

Newport Research Facility
Newport is uniquely situated on two hill tops, 1 1/2 miles apart, and separated by a valley over 400 feet deep. The separation is required to ensure measurements are performed in the "far field". Far field separation is required to ensure a plane wave illuminates the antennas under test and is essential to accurate and representative antenna pattern measurements. The deep valley is essential to low reflections which is a must for the measurement of modern antennas. In order to reduce the reflections even further RL uses terrain grading and signal processing techniques. Without the deep valley the other techniques would not come close to providing the degree of reflection reduction required.

Stockbridge Research Facility
The type of antenna measurements and analysis performed at Stockbridge require a mountain top location with a large flat area (1/2 mile in all directions) immediately adjacent to the facility. Stockbridge also has the very heavy duty positioners required to support large aircraft such as the C-130, B-52, B-1B and KC-135. Stockbridge is a major component of the Northeast Test Area (NETA). The NETA is unique to this part of the United States and consists of open field and wooded area representative of the topographical features found in the worlds temperate zones, particularly in Europe.

Verona Research Facility
The Verona facility is a multi-mission facility but is primarily involved in programs that rely on electromagnetic propagation and therefore require a remote, flat, electromagnetically quiet site. Verona has over 500 acres of flat unrestricted terrain surrounded by a much larger, flat agriculture area. These conditions are essential to radar evaluations, meteor burst communication experiments, optical/laser propagation experiments, troposcatter and multimedia communications experiments and over-the horizon high frequency (HF) radar and communications experiments. The Verona facility is uniquely located in respect to the Ava facility because of the spatial separation required by very high powered transmitters at Ava and very sensitive over-the-horizon receivers located at Verona. The facility is also uniquely located with respect to OTH experiments run at Goose Bay Labrador, auroral scattering experiments over the North Pole and tropo-scatter experiments run in conjunction with Ontario Center and Youngstown NY. The facility is also unique in that it is located at the precise distance from a Navy facility in Charlestown South Carolina which uses Verona to conduct low data rate meteor burst experiments.

Ava Research Facility
The Ava HF transmit facility is the only experimental HF facility in the world and is uniquely located such that it can place high power RF energy at any spot on the face of the earth. As such, it can be used to supplement the operational East Coast Radar System. Ava is used in conjunction with the Verona facility to form the Verona Ava Linear Array Radar (VALAR) experimental facility. The location of VALAR is unique because it allows over-the-horizon back scatter experiments, propagation studies and investigations of auroral activities in a Northerly direction. The combination of Verona and Ava is unique in that they are used as a tool in the Drug Enforcement Agency's drug interdiction program.

Forestport Research Facility
The Forestport facility is the only experimental Research, Development, Test & Evaluation (RDT&E) facility available for performing very low frequency/low frequency (VLF/LF) experimentation station in the world. It's location is unique in that it is at a very high elevation with relatively flat terrain in all directions and has a unique and specialized 1200 foot transmitter antenna tower (with an elevator that goes to the top) which can be used to transmit or as a unique one of a kind vertical testbed for other types of HF antenna experiments. It's unique location and equipment makes it part of the National Command Authority's Minimum Essential Emergency Communications Network (MEECN). Forestport is also unique in that it is currently being jointly used by the Navy to test VLF/LF insulators used on their submarine communications programs. It is the only facility in the DOD capable of performing these type of experiments and evaluations in a cost effective and non-interfering basis with national operational capabilities.

3.1.2 Licenses & permits: Describe and list the licenses or permits (e.g., environmental, safety, etc.) that your activity currently holds and justify why they are required to allow tests,

experiments, or other special capabilities at your location for each CSF. For example, permit to store and use high explosives. (BRAC Criteria I)

The following frequency authorizations are in effect and are required for our C4I mission:

a. RADC 90-006 (5.650 - 5.925 GHz)
b. RL 91-015 (3.100 - 3.700 GHz)
c. RL 91-022 (1.255 GHz)
d. AFMC 93-591 (5.420, 5.220, 5.680 GHz)

These frequency authorizations are required for the development and evaluation of advanced radar concepts.

RL obtains licenses and permits at the off-base facilities as required to meet our test and program objectives and preserve our facilities. For example, we obtain permits from the NY State Department of Environmental Conservation any time we have to set up equipment within 100 feet of a wet land. Verona Research Facility has wet lands on site. We have obtained permits from NYS DEC to trap and relocate beavers from the Verona Facility because of damage to buildings and equipment due to stream flooding. We have obtained permits from Herkimer County for burying cables along side other right-of-ways or when we have to bore holes under roads. The latest permit is #93-55 and is for burying fiber optic cable at the Newport Research Facility.

3.1.3 Environmental constraints: Describe and list the environmental or land use constraints present at your activity which limit or restrict your current scope for each CSF, i.e., would not allow increased "volume" or "spectrum" for the CSF. Example -- Volume: frequency of a type of experiment. Example -- Spectrum: Current permit to detonate high explosives will not allow detonation or storage of increased quantity of explosives without legal waiver (state law) or relocation of surrounding (non-govt) buildings. (BRAC Criteria II)

The primary reason our off-base facilities are located where they are is that the programs supported need very low electromagnetic environments. There are no other environmental restrictions to our operations at the off-base facilities except approximately 30% of the Verona Research Facility is on the official Wet Land Registry of NY State. We have to get a permit from NYS DEC before setting up on or within 100 feet of these wet lands.

3.1.4 Special Support Infrastructure: List and describe the importance of any mission related special support infrastructure (e.g. utilities) present at your location for your activity. (BRAC Criteria I)

The Ava Research Facility is a very high power transmitter site and as such requires up to 2000 KVA of primary electric service. There is a 100,000 volt commercial power line located within 1 mile of the facility so we have virtually unlimited power capability. Measurement programs have come to Ava because of this unique capability. Verona was selected as the site to evaluate the

Iceland NATO radar because it had a unique antenna pedestal similar to the radar being evaluated, proximity of the prime contractor (within 30 miles) and the electromagnetically quiet, flat terrain. Forestport has a unique 1200 foot antenna tower with a personnel elevator that goes to the top and can be stopped at any elevation. This tower has been used as a high frequency (HF) vertically polarized array because there was no other structure in the DOD capable of meeting the height and element spacing requirements. This tower and the unique transmitter is part of the National Command Authority's Minimum Essential Emergency Communication Network (MEECN).

3.1.5. Proximity to Mission-Related organizations: List and describe the importance and impact of not having nearby organizations which facilitate accomplishing or performing your mission -- e.g. operational units, FFRDCs, universities/colleges, other government organizations, and commercial activities. Restrict your response to the top five. Complete the following: (BRAC Criteria I)

Common Support Functions	Name	Type of Organization	Distance (miles)	Workyears Performed by Your Activity	Workyears Funded by Your Activity
C4I-AIRBORNE	Cornell Univ	University	95	2	4
C4I-AIRBORNE	Syracuse Univ	University	48	1	3
C4I-AIRBORNE	NYNEX	Contractor	48	2	10
C4I-AIRBORNE	NYS Photonics Corp	Not for Profit	1	1	3
C4I-AIRBORNE	Rome Research Corp	Contractor	2	1	90

Cornell University, National Nanofabrication Facility, Ithaca NY: The Rome Laboratory uses the facilities and personnel located at Cornell University to perform fabrication of a range of photonic semiconductor devices. The Cornell National Nanofabrication Facility is unique and was established for this purpose to provide foundry and technical support in this area for a large number of organizatons across the country. Our proximity to Cornell is extremely beneficial and obviates the need for a significant investment in foundry facilities in the Photonics Center. This allows the facility to concentrate its resources on more valuable activities of photonic concept development and engineering.

Syracuse Univeristy, the closest major research university provides technical and managerial support accross a broad range of Rome Lab techical programs including: Photonics, Signal Processing, Information Systems and Computer Science. In addition the university's Maxwell School of Public Administration provides training for the RL Management and Public Policy Program and support for our technology transfer program. The University is also Rome Lab's main source of graduate engineering training for our technical staff.

NYNEX: To facilitate the transfer of networking technologies into commercial applications, a joint initiative between Rome Lab, Syracuse University, Cornell University, Columbia University, Polytechnic University, New York New England Telephone Co (NYNEX) and others have been developed. This state wide network called NYNET is used for conducting experiments in high performance computing and communications.

Photonics Development Corporation, Rome NY: The Photonics Development Corporation is a not-for-profit New York State funded corporation that provides technology-based assistance primarily to small and mid sized firms within New York State. Tasks include: laiason with the NYS economic development agencies, access to unique Rome Labroatory facilities, market research, identificaiton of appropriate technology sources at research centers around the state. It is invaluable in exploring and establishing technology tranisfer opportunities for Rome Laboratory and in particular its Photonics Center.

Rome Research Corporation (RRC): RRC is the Facility Contractor for five off-base research facilities, the Electromagnetic Environmental Effects Research Center (E3RC) and three Rome Laboratory Directorates on base. RRC provides approximately 90 manyears of technical services personnel which have to be located on site to perform the operation, maintenance and upgrades of the unique Rome Laboratory facilities. These facilities are unique to the DOD and work can only be done at Rome Laboratory. If RRC was not collocated we would lose the personal contact necessary for efficient day-to-day operation, contract costs would be prohibitively high and test schedules would be adversely impacted.

3.2 Personnel:

3.2.1 Total Personnel: What is the total number of government (military and civilian), on-site federally funded research and development center (FFRDC), and on-site system engineering technical assistance (SETA) personnel engaged in science and technology (S&T), engineering development and in-service engineering activities as of end FY93? For individuals that predominantly work in CSFs, involved in more than one CSF, account for those individuals in the CSF that represents the preponderance of their effort. (BRAC Criteria I)

Personnel totals reflect the C4I-Airborne CSF.

Types of personnel	Number of Personnel			
	Government		On-Site FFRDC	On-Site SETA
	Civilian	Military		
Technical	429	60	9	11
Management (Supv)	90	10	1	0
Other	230	33	2	0
Total	749	103	12	11

3.2.2 Education: What is the number of government personnel actively engaged in S&T, engineering development and in-service engineering activities by highest degree and type of position? Provide the data in the following table: (BRAC Criteria I)

Type of Degree/ Diploma	Number of Government Personnel by Type of Position		
	Technical	Management (Supv)	Other
High School or Less	18	10	169
Associates	12	3	32
Bachelor	249	34	41
Masters	188	46	18
Doctorate (include Med/Vet/etc.)	22	7	3

3.2.3 Experience: What is the experience level of government personnel? Fill in the number of government personnel in the appropriate boxes of the following table. (BRAC Criteria I)

Type of Position	Years of Government and/or Military Service				
	Less than 3 years	3-10 years	11-15 years	16-20 years	More than 20 years
Technical	18	206	70	43	152
Management (Supv)	0	2	14	10	74
Total	18	208	84	53	226

3.2.4 Accomplishments During FY91-93: For government personnel answer the following questions.

3.2.4.1 How many patents were awarded and patent disclosures (only count disclosures with issued disclosure numbers) were made? (BRAC Criteria I)

CSF	Disclosures	Awarded	Patent Titles (List)
C4I-AIRBORNE	28	10	see listing below
Total	28	10	

DATE RECD. TITLE OF INVENTION (Disclosures)

90/12/06 OPTICAL DETECTOR ARRARY IMPROVEMENT
90/12/06 STRESS REDUCED INSULATOR
90/12/11 SAMSON: AN ANTI-INTRUDER CRON DAEMON SUN SYSTEMS BUG PATCH
91/01/12 SINGLE CRYSTAL INTERCONNECT
91/02/04 FIELD-SYMMETRIC BEAM DETECTOR FOR SEMICONDUCTORS
91/04/08 AEROGEL MESH GETTER
92/03/31 LIFT-OFF PATTERNING IMPROVEMENT
91/04/08 SECURED COPYING DEVICE
91/04/19 ERROR INJECTOR UNIT FOR BASEBAND DIGITAL COMMUNICATION SYSTEMS
91/05/15 PROGRAMMABLE ELECTRIC MIXER
91/06/13 SELF DEPLOYABLE RADIATING MONOPOLE
91/07/12 SEGMENTABLE FRESNEL LENSE FRAME

91/07/30 MECHANICAL METHOD FOR RAISING A TELESCOPING MAST USING THE GUYLINES AS THE HOISTING
91/08/09 ON-BOARD TEMPERATURE PREDICTION PROGRAM
92/08/27 DENSITY IMPROVEMENT FOR PLANAR HYBRID WAFER SCALE INTEGRATION
92/02/25 A VARIABLE TIME DELAY PHASED ARRAY RECEIVER AND RECONFIGURABLE FILTER
92/07/29 C.I.P. FOR AEROGEL/MESH GETTER
92/09/11 PRISM COUPLING MOUNT
92/11/09 PROGRAMMABLE DELAY LINE USING LASER DIODE TAPS
92/11/20 MULTICHIP MODULE ANALYZER
93/02/02 EXPERT SYSTEM CONSTANT FALSE ALARM RATE (ES-CFAR) PROCESSOR
93/01/27 HIGH EFFICIENCY POLYCRYSTALLINE PLZT CERAMIC ELECTRO-OPTIC PHASE
93/02/03 OPTICAL AMPLIFIER W/ A SPONTANEOUS EMISSION FILTER
93/04/02 PROGNASTIC RELIABILITY MODULES
93/04/16 CONFIGURABLE OPTICAL GATES
93/05/03 IN-LINE INTRFEROMETRIC TIME INTEGRATING CORRELATOR
93/05/06 SCREENING OF CONDUCTORS AND CONTACTS ON MICROELECTRONIC DEVICES
93/08/30 MULTICHANNEL NON-GAUSSIAN RECEIVER USING AN INNOVATIONS BASED APPROACH

DATE U.S. TITLE OF INVENTION (AWARDED)

91/11/26 ORTHOGONALLY POLARIZED QUADRAPHASE ELECTROMAGNETIC RADIATOR
93/05/25 ELECTROSTATIC DISCHARGE PROTECTIVE APPARATUS
91/08/13 EXTENDED DYNAMIC RANGE ONE DIMENSIONAL SPATIAL LIGHT
91/10/29 HYBRID CLUTTER CANCELLATION METHOD AND SYSTEMS FOR IMPROVED RADAR PERFORMANCE
93/06/29 MICRO-CODED BUILT-IN-SELF-TESTS OF SEMICONDUCTORY MEMORY
92/06/02 METHOD FOR EXTENDING GPS TO UNDERWATER APPLICATIONS
93/06/22 LIGHTWEIGHT SOLAR CELL
93/04/13 HICKS' PROBABILISTIC DATA ASSOCIATION METHOD
91/04/23 WAFER CLEANING METHOD
92/07/21 APPARATUS FOR ELECTROSTATIC DISCHARGE STRESS TESTING

3.2.4.2 How many papers were published in peer reviewed journals? (BRAC Criteria I)

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94-09-26 17:34 RCVD

CONTROL NUMBER: LJCSWG-AF 023

PURPOSE: To provide SAF/AQX staff estimated answers to Question 3.2.4.2 Papers published in peer reviewed journals, of the (see Distribution List) response to the Laboratory Joint Data Call. For each CSF in which you perform work, provide a list of papers published in peer reviewed journals by your government personnel during FY 1991 through FY 1993. The papers listed must directly support the CSF. For each paper listed provide both the title of the article and the journal in which it was published, and the month and year of publication. Do not list papers prepared by non-government personnel or other personnel who were not employed by your activity, even if the paper was prepared in support of a contractual requirement. Do not list papers published in non-peer reviewed journals; technical, letter, test, and other reports; manuals and handbooks; presentations at symposiums; etc.

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package Instructions

MAJCOM: Centers Does not occur (explain)

See Attached

MAJCOM REVIEWER: 21 Sep 94
(print name, organization, DSN)
CHUNG C KAM, MAJ, AQAPM/ST, 787-5368

BASE: Centers Does not occur (explain)

See Attached.

BASE REVIEWER:
(print name, organization, DSN)
R.M. Heines, RL/SUT, 587-7607

I certify the information above is accurate and complete to the best of my knowledge and belief. see attached

	FY91	FY92	FY93		
Tot # of papers	21	16	25	Σ	62

Peer Reviewed Journal Articles Published by Government Employees at Rome Laboratory for Fiscal Year 1991-Fiscal Year 1993 - Griffiss Location

ALL FOR CSF C4I- AIRBORNE

A traveling-wave high electron mobility transistor
ANAND, M. B.; GHOSH, PRASANTA K.; KORNREICH, PHILIPP G. (Syracuse Univ., NY); NICHOLSON, D. J. (USAF, Rome Air Development Center, Griffiss AFB, NY)
IEEE Transactions on Microwave Theory and Techniques (ISSN 0018-9480), vol. 41, no. 4, April 1993, p. 624-631.
Publication Date: 1993
Publication Date (YYMM): 9304

Gaussian-Schell model sources in one-dimensional first-order systems with loss or gain
KAUDERER, MARK (USAF, Rome Lab., Griffiss AFB, NY)
Applied Optics (ISSN 0003-6935), vol. 32, no. 6, Feb. 20, 1993, p. 999-1017. Research supported by National Research Council and USAF.
Publication Date: 1993
Publication Date (YYMM): 9302

Dispersion effects in a single-mode holographic-waveguide interconnect system
LIN, FREDDIE; NUGYEN, CONG; ZHU, JULIE (Physical Optics Corp., Torrance, CA); HENDRICKSON, BRIAN M. (USAF, Rome Lab., Griffiss AFB, NY)
Applied Optics (ISSN 0003-6935), vol. 31, no. 32, Nov. 10, 1992, p. 6831-6835.
Publication Date: 1992
Publication Date (YYMM): 9211

The effect of Jet-streak curvature on kinematic fields
MOORE, JAMES T. (Saint Louis Univ., MO); VANKNOWE, GLENN E. (USAF, Rome Lab., Griffiss AFB, NY)
Monthly Weather Review (ISSN 0027-0644), vol. 120, no. 11, Nov. 1992, p. 2429-2441. Research supported by USAF.
Publication Date: 1992
Publication Date (YYMM): 9211

The first demonstration of an optically steered microwave phased array antenna using true-time-delay
NG, WILLIE W.; TANGONAN, GREGORY L. (Hughes Research Laboratories, Malibu, CA); WALSTON, ANDREW A.; NEWBERG, IRWIN L. (Hughes Aircraft Co., Radar Systems Group, Los Angeles, CA); LEE, JAK J. (Hughes Aircraft Co., Ground Systems Group, Fullerton, CA); BERNSTEIN, NORMAN (USAF, Rome Air Development Center, Griffiss AFB, NY)
Journal of Lightwave Technology (ISSN 0733-8724), vol. 9, Sept. 1991, p. 1124-1131.
Publication Date: 1991
Publication Date (YYMM): 9109

mputer-aided reliability finite element methods
JLLOWELL, DAVID; LIGUORE, SALVATORE L.; PEREZ, RIGO; YATES, W. D., III (McDonnell Aircraft Co., Saint Louis, MO); BOCCHI, WILLIAM J. (USAF, Rome Air Development Center, Griffiss AFB, NY)
IES, Journal (ISSN 1052-2883), vol. 34, Sept.-Oct. 1991, p. 46-52.
Publication Date: 1991
Publication Date (YYMM): 9110

A better method for verifying production reliability
COPPOLA, ANTHONY (USAF, Rome Air Development Center, Griffiss AFB, NY)
Quality and Reliability Engineering International (ISSN 0748-8017), vol. 6, Sept.-Oct. 1990, p. 295-299.
Publication Date: 1990
Publication Date (YYMM): 9010

Demonstration of a rapidly tunable optical time-division multiple-access ondar
PRUCNAL, P. R. (Princeton University, NJ); KROL, M. F.; STACY, J. L. (USAF, Rome Air Development Center, Griffiss AFB, NY)
IEEE Photonics Technology Letters (ISSN 1041-1135), vol. 3, Feb. 1991, p. 170-172.
Publication Date: 1991
Publication Date (YYMM): 9102

An experimental demonstration of improved Doppler processing performance
BROWN, RUSSELL D. (USAF, Rome Air Development Center, Griffiss AFB, NY); WANG, HONG (Syracuse University, NY)
IEEE Transactions on Signal Processing (ISSN 1053-587X), vol. 39, March 1991, p. 718-721.
Publication Date: 1991
Publication Date (YYMM): 9103

The effects of low-angle off-axis substrate orientation on MOSFET performance and reliability
CHUNG, JAMES E.; CHEN, JIAN; KO, PING-KEUNG; HU, CHENMING (California, University, Berkeley); LEVI, MARK (USAF, Rome Air Development Center, Griffiss AFB, NY)
IEEE Transactions on Electron Devices (ISSN 0018-9383), vol. 38, March 1991, p. 627-633. USAF-supported research.
Publication Date: 1991
Publication Date (YYMM): 9103

RADC cathode life test program
BUSSEY, D.; DANISZEWSKI, E.; NOVAK, M.; RYAN, J.; WILKINSON, J. (USAF, Rome Air Development Center, Griffiss AFB, NY)
NASA, Tri-Service Cathode Workshop, 7th, Cleveland, OH, Apr. 3-5, 1990
IEEE Transactions on Electron Devices (ISSN 0018-9383), vol. 37, pt. 2, Dec. 1990, p. 2612, 2613.
Publication Date: 1990

bilication Date (YYMM): 9012

A photonic variable RF delay line for phased array antennas
TOUGHLIAN, EDWARD N. (USAF, Rome Air Development Center, Griffiss AFB, NY); ZMUDA, HENRY (Stevens Institute of Technology, Hoboken, NJ)
Journal of Lightwave Technology (ISSN 0733-8724), vol. 8, Dec. 1990, p. 1824-1828.
Publication Date: 1990
Publication Date (YYMM): 9012

Use and application of MIL-HDBK-217
MORRIS, SEYMOUR F. (USAF, Rome Air Development Center, Griffiss AFB, NY)
IEEE Journal (ISSN 1052-2883), vol. 33, Nov.-Dec. 1990, p. 40-46.
Publication Date: 1990
Publication Date (YYMM): 9012

The upside-down air force (facility for testing electronic warfare systems)
GRUDZINSKI, SIGMUND S. (USAF, Rome Air Development Center, Griffiss AFB, NY)
Aerospace America (ISSN 0740-722X), vol. 28, Nov. 1990, p. 30-33.
Publication Date: 1990
Publication Date (YYMM): 9011

Microwave optical characterization of high-speed photodetectors utilizing mode-locked, pulse-compressed 1.3 micron solid-state laser
KASEMSET, D.; ACKERMAN, E.; CHINN, S.; WANUGA, S. (GE Electronics Laboratory, Syracuse, NY); KROL, M. (USAF, Rome Air Development Center, Griffiss AFB, NY)
Microwave and Optical Technology Letters (ISSN 0895-2477), vol. 3, Oct. 1990, p. 335-337.
Publication Date: 1990
Publication Date (YYMM): 9010

Title: A method for consistent fault coverage reporting
Author(s): Debany, W.H., Jr.; Kwiat, K.A.; Al-Arian, S.A.
Author Affiliation: *Rome* *Lab*., Griffiss Air Force Base, NY, USA
Journal: IEEE Design & Test of Computers
Publication Date: Sept. 1993

Title: Bit error rate and noise analysis of an InGaAs photoconductive gate at gigabit per second data rates
Author(s): Krol, M.R.; Boncek, R.K.
Author Affiliation: *Rome* *Lab*, Photonics Center, Griffiss AFB, NY, USA
Journal: IEEE Photonics Technology Letters
Publication Date: July 1993

le: Modes in n-dimensional first-order systems
,thor(s): Kauderer, M.
Author Affiliation: *Rome* *Lab*., Griffiss Air Force Base, NY, USA
Journal: Journal of Mathematical Physics
Publication Date: Sept. 1993

Title: Fabrication of hybrid diffractive optics for fiber interconnects
Author(s): Battiato, J.M.; Kostuk, R.K.; Yeh, J.
Author Affiliation: *Rome* *Lab*., Griffiss AFB, NY, USA
Journal: IEEE Photonics Technology Letters
Publication Date: May 1993

Title: Variable time-delay system for broadband phased array and other transversal filtering applications
Author(s): Toughlian, E.N.; Zmuda, H.
Author Affiliation: *Rome* *Lab*., Photonics Center, Griffiss Air Force Base, NY, USA
Journal: Optical Engineering
Publication Date: March 1993

Title: A simple surface-emitting LED array useful for developing free-space optical interconnect
uthor(s): Bare, H.F.; Haas, F.; Honey, D.A.; Mikolas, D.; Craighead, .; Pugh, G.; Soave, R.
Author Affiliation: *Rome* *Lab*., Griffiss AFB, NY, USA
Journal: IEEE Photonics Technology Letters
Publication Date: Feb. 1993

Title: Variable time delay of microwave signals using high dispersion fibre
Author(s): Johns, S.T.; Norton, D.A.; Keefer, C.W.; Erdmann, R.; Soref, R.A.
Author Affiliation: *Rome* *Lab*., Griffiss AFB, NY, USA
Journal: Electronics Letters
Publication Date: 18 March 1993

Title: All-optical, high contrast GaAlInAs multiple quantum well asymmetric reflection modulator at 1.3 mu m
Author(s): Krol, M.F.; Ohtsuki, T.; Khitrova, G.; Boncek, R.K.; McGinnis, B.P.; Gibbs, H.M.; Peyghambarian, N.
Author Affiliation: *Rome* *Lab*. Photonics Center, Griffiss AFB, NY, USA
Journal: Applied Physics Letters
Publication Date: 29 March 1993

tle: Numerical analysis of photorefractive grating formation dynamics at rge modulation in BSO
Author(s): Brost, G.A.
Author Affiliation: Photonics Center, *Rome* *Lab*., Griffiss AFB, NY,

Journal: Optics Communications
Publication Date: 1 Feb. 1993

Title: Ultra-low density aerogel optical applications
Author(s): Hotaling, S.P.
Author Affiliation: *Rome* *Lab*., Griffiss AFB, NY, USA
Journal: Journal of Materials Research
Publication Date: Feb. 1993

Title: Integration of conceptual graphs and government binding theory
Author(s): McWalo, M.L.; Nyoeng, S.H.
Author Affiliation: Software Technol. Div., *Rome* *Lab*., Griffiss Air Force Base, NY, USA
Journal: Knowledge-Based Systems
Publication Date: Sept. 1992

Title: Photorefractive grating formations at large modulation with alternating electric fields
Author(s): Brost, G.A.
Author Affiliation: Photonics Center, *Rome* *Lab*., Griffiss Air Force Base, NY, USA
Journal: Journal of the Optical Society of America B (Optical Physics)
Publication Date: Aug. 1992

Title: Effect of deposition technique on the As-deposited microstructure of copper thin films
Author(s): Walsh, L.H.; Feilchenfeld, N.B.; Schwarz, J.A.
Author Affiliation: *Rome* *Lab*., Griffiss Air Force Base, NY, USA
Journal: Journal of Vacuum Science & Technology A (Vacuum, Surfaces, and Films)
Publication Date: July-Aug. 1992

Title: Spatial light modulation techniques for system application to multipath delay estimation
Author(s): Ward, M.J.; Keefer, C.W.; Halstead, S.T.
Author Affiliation: *Rome* *Lab*., Photonics Center, Griffiss Air Force Base, NY, USA
Journal: Applied Optics
Publication Date: 10 July 1992

Title: Comments, with reply, on 'Generation of electromigration ground rules utilizing Monte Carlo simulation methods' by B. A. Beitman and A. Ito
Author(s): Walter, M.J.
Author Affiliation: *Rome* *Lab*., Griffiss AFB, NY, USA
Journal: IEEE Transactions on Semiconductor Manufacturing
Publication Date: Feb. 1992

Title: Absolute phasing of segmented mirrors using the polarization phase nsor
Author(s): Klumpe, H.W., III; Lajza-Rooks, B.A.; Blum, J.D.
Author Affiliation: *Rome* *Lab*., DCPC, Griffiss AFB, NY, USA
Journal: Review of Scientific Instruments
Publication Date: Feb. 1992

Title: Bounds on the sizes of irredundant test sets and sequences for combinational logic networks
Author(s): Debany, W.H., Jr.; Hartmann, C.R.P.
Author Affiliation: Air Force *Rome* *Lab* ., RL/ERDA, Reliability Assurance Branch, Griffiss AFB, NY, USA
Journal: Journal of Electronic Testing: Theory and Applications
Publication Date: Nov. 1991

Title: Measuring the quality of knowledge_work
Author(s): Coppola, A.
Author Affiliation: *Rome* *Lab*., Griffiss AFB, NY, USA
Journal: Quality and Reliability Engineering International
Publication Date: Sept.-Oct. 1991

Title: Intracavity laser absorption spectroscopic investigation of barium desorption from dispenser cathodes
Author(s): Daniszewski, E.; McCalmont, J.; Chrostowski, A.; Chaiken, J.
Author Affiliation: *Rome* *Lab*., OCTP Griffiss Air Force Base, NY, USA
Journal: Journal of Applied Physics
Publication Date: 1 Sept. 1991

Title: The New York Photonics Development Corporation: a showcase for innovation/commercialization
Author(s): Oaks, B.G.
Author Affiliation: Rome Air Dev. Center, *RADC*/XP, Griffiss Air Force Base, NY, USA
Journal: Government Information Quarterly
Publication Date: 1991

Title: Critical current magnetic field dependence of YBa//2Cu//3O//7
Author: Kahan, Alfred
Corporate Source: *Rome* *Lab*, MA, USA
Source: Superconductor Science & Technology v 6 n 7 Jul 1993. p 476-483
Publication Year: 1993

Title: POPART: partial optical implementation of adaptive resonance theory 2
Author: Kane, Jonathan S.; Paquin, Marc J.
Corporate Source: *Rome* *Lab*, Lexington, MA, USA
Source: IEEE Transactions on Neural Networks v 4 n 4 Jul 1993. p 695-702
Publication Year: 1993

Title: Modified radiative transfer theory in second-order backscattering
fficients of a two-layer random medium
uthor: Mudaliar, Sabai Lee, Jay K.
Corporate Source: *Rome* *Lab*, Bedford, MA, USA
Source: Radio Science v 28 n 4 Jul-Aug 1993, p 459-469
Publication Year: 1993

Title: MLEK crystal growth of large diameter (100) indium phosphide
Author: Bliss, David F.; Hilton, Robert M.; Adamski, Joseph A.
Corporate Source: *Rome* *Lab*, MA, USA
Source: Journal of Crystal Growth v 128 n 1-4 pt 1 Mar 1 1993, p 451-456
Publication Year: 1993

Title: Algorithm for generating optimal tests for exclusive-OR networks.
Author: Debany, W. H. Jr.; Hartmann, C. R. P.; Snethen, T. J.
Corporate Source: *Rome* *Lab*, Romo, NY, USA
Source: IEE Proceedings, Part E: Computers and Digital Techniques v 138 n
2 Mar 1991 p 93-96
Publication Year: 1991

Performance of synthetic discriminant functions for binary phase-only
filtering of thresholded imagery
KOZAITIS, SAMUEL P. (Florida Institute of Technology, Melbourne); FOOK,
WESLEY E. (USAF, Rome Laboratory, Griffiss AFB, NY)
Optical Engineering (ISSN 0091-3286), vol. 31, no. 4, April 1991, p.
830-837.
Publication Date: 1991
Publication Date (YYMM): 9104

Steple photorefractive square-law conversion using moving grating
techniques
VACHSS, FREDERICK; HUNG, JOHN; CAMPBELL, SCOTT (Rockwell International
Science Center, Thousand Oaks, CA); CORDEIRO, DAVE (USAF, Roma Laboratory,
Griffiss AFB, NY)
Applied Optics (ISSN 0003-6935), vol. 31, April 10, 1992, p. 1783-1786.
Publication Date: 1992
Publication Date (YYMM): 9204

Air Force vacuum electronics reliability and maintainability
ROMAKER, HOWARD (USAF, Wright Laboratory, Wright-Patterson AFB, OH);
DANISZEWSKI, EDWARD (USAF, Rome Laboratory, Griffiss AFB, NY)
Microwave Journal (ISSN 0192-6225), vol. 35, Feb. 1992, p. 79, 80, 82.
Publication Date: 1992
Publication Date (YYMM): 9202

Adaptive microwave signal processing - A photonic solution
ZMUDA, HENRY (Stevens Institute of Technology, Hoboken, NJ); TOUGHLIAN,
EDWARD N. (USAF, Rome Laboratory, Griffiss AFB, NY)
Microwave Journal (ISSN 0192-6225), vol. 35, Feb. 1992, p. 56, 62, 64 (3
f.).
Publication Date: 1992

Publication Date (YYMM): 9202

Absolute phasing of segmented mirrors using the polarization phase sensor
KLUMPE, HERBERT W., III; LAJZA-ROOKS, BARBARA A. (USAF, Rome Laboratory, Griffiss AFB, NY); BLUM, JAMES D. (W.J. Schafer Associates, Inc., Rome, NY)
Review of Scientific Instruments (ISSN 0034-6748), vol. 63, Feb. 1992, p. 1698-1706.
Publication Date: 1992
Publication Date (YYMM): 9202

Room-temperature optical nonlinearities of GaInAs/AlInAs and GaAlInAs/AlInAs multiple quantum wells and integrated-mirror etalons at 1.3 micron
HSU, C. C.; MCGINNIS, B. P.; SOKOLOFF, J. P.; KHITROVA, G.; GIBBS, H. M.; PEYGHAMBARIAN, N. (Arizona, University, Tucson); JOHNS, S. T.; KROL, M. F. (USAF, Rome Laboratory, Griffiss AFB, NY)
Journal of Applied Physics (ISSN 0021-8979), vol. 70, pt. I, Nov. 15, 1991, p. 5615-5618. Research supported by USAF, NSF, and University of Arizona.
Publication Date: 1991
Publication Date (YYMM): 9111

Affordable MMICs for Air Force systems
EMERLEY, ROBERT T. (USAF, Wright Aeronautical Laboratories, Wright-Patterson AFB, OH); FAYETTE, DANIEL F. (USAF, Rome Laboratory, Griffiss AFB, NY)
Microwave Journal (ISSN 0192-6225), vol. 34, May 1991, p. 172, 174, 175.
Publication Date: 1991
Publication Date (YYMM): 9105

FIRST SUPPLEMENT TO JCSWG DATA CALL QUESTION 3.2.4.2 FOR ROME LABORATORY GRIFFISS LOCATION

Title: 5 gigabit/second of a 50-channel optical time-division multiple-access interconnect
Author(s): Boncek; Krol; Johns; Stacy
Author Affiliation: OCPA, Rome Lab., Griffiss AFB, NY
Journal: Optical Engineering
Publication Date: Nov. 1992

Title: Performance of a 50 Gbit/s optical time domain multiplexed system using a terahertz optical asymmetric demultiplexer
Author(s): Boncek
Author Affiliation: OCPA, Rome Lab., Griffiss AFB, NY
Journal: IEEE Photonics Technology Letters
Publication Date: Fall 1993

Title: All optical asymmetric fabry-perot reflection modulators
Author(s): Krol; Boncek
Author Affiliation: OCPA, Rome Lab., Griffiss AFB, NY
Journal: International Journal of Nonlinear Optical Physics
Publication Date: Jan. 1993

Title: Aerogel optical substrates
Author(s): Hotaling
Author Affiliation: OCPA, Rome Lab., Griffiss AFB, NY
Journal: Journal of Materials Research
Publication Date: Feb. 1993

Title: Statistical design of ternary phase-only filters for distortion invariance
Author(s): Foor
Author Affiliation: OCPA, Rome Lab., Griffiss AFB, NY
Journal: Optical Communications
Publication Date: July 1993

Title: Anisotropic light-induced scattering and scattering and position dispersion in KNbO3:Fe crystal
Author(s): Zmuda; Talbot; Maurice
Author Affiliation: OCPB, Rome Lab., Griffiss AFB, NY
Journal: Optics Communications
Publication Date: May 1993

Title: Polarization sensitivity of birefringent photo-refractive holograms and it's application to binary switching
Author(s): Talbot
Author Affiliation: OCPB, Rome Lab., Griffiss AFB, NY
Journal: Applied Optics
Publication Date: Oct. 1992

Title: Photrefractive response at high modulation depths in barium tinate

Author(s): Brost
Author Affiliation: OCPA, Rome Lab., Griffiss AFB, NY
Journal: Journal of the Optical Society of America B, vol. 9
Publication Date: Aug. 1992

Title: Optical correlation using reduced resolution filters
Author(s): Foor; Kozaitis
Author Affiliation: OCPA/FIT, Rome Lab., Griffiss AFB, NY
Journal: Optical Engineering, vol. 31, no. 9
Publication Date: Sep. 1992

SECOND SUPPLEMENT TO JCSWG DATA CALL QUESTION 3.2.4.2 FOR ROME LABORATORY GRIFFISS LOCATION

Title: Photo-induces absorption in photorefractive barium titanate
Author(s): G. Brost; R. Motes
Author Affiliation: OCPA, Rome Lab., Griffiss AFB, NY
Journal: Optics Letters
Publication Date: Oct. 1990

Title: Origin of the sublinear photorefractive response time in barium titanate
Author(s): G. Brost; R. Motes
Author Affiliation: OCPA, Rome Lab., Griffiss AFB, NY
Journal: Optics Letters
Publication Date: Nov.1990

Title: Hybrid correlator for rotation and scale invariant binary phase-only filtering of aerial images
Author(s): S. Kozaitis; S. Halby; W. Foor
Author Affiliation: OCPA, Rome Lab., Griffiss AFB, NY
Journal: Applied Optics
Publication Date: Dec. 1990

Title: Optical coder
Author(s): M. Krol; S. Johns; J. Stacy
Author Affiliation: OCPA, Rome Lab., Griffiss AFB, NY
Journal: IEEE Photonics Technology Letters
Publication Date: 1991

Title: Efficient pulsed CO2 laser calculations
Author(s): D. Honey
Author Affiliation: OCPB, Rome Lab., Griffiss AFB, NY
Journal: Journal of Applied Physics
Publication Date: Feb. 1991

Title: Optical switching with photorefractive polarizing holograms
Author(s): Q.W. Song; M.C. Lee; P.J. Talbot; E. Tam
Author Affiliation: OCPC, Rome Lab., Griffiss AFB, NY
Journal: Optics Letters
Publication Date: Feb. 1991

SELF-PUMPED OPTICAL PHASE CONJUGATION WITH A SODIUM RAMAN LASER

OPTICAL BAND GAP OF THE TERNARY SEMICONDUCTOR SI(1-X-Y)GE(X)C(Y)

THE INFLUENCE OF DISLOCATION DENSITY ON ELECTRON MOBILITY IN INP FILMS ON SI

ELECTRON-ACOUSTIC PHONON SCATTERING IN SIO2 DETERMINED FROM A PSEUDO-POTENTIAL FOR ENERGIES OF E GREATER THAN E(BZ)

AFFORDABLE MMICS FOR AIR FORCE SYSTEMS

3.3 Workload

3.3.1 FY93 Workload

3.3.1.1 Work Year and Lifecycle: Identify the number of actual workyears executed for each applicable CSF in FY93 for each of the following: government civilian; military; on-site FFRDCs; and on-site SETAs. (BRAC Criteria I)

Workyear totals reflect the C4I-Airborne CSF.

"LAB"	Fiscal Year 1993 Actual			
	Civilian	Military	FFRDC	SETA
Science & Technology	749	103	12	11
Engineering Development	0	0	0	0
In-Service Engineering	0	0	0	0

3.3.1.2 Engineering Development By ACAT: For each Common Support Function (e.g. airborne C4I) at each activity engaged in engineering development, provide:
- For each ACAT IC, ID, and II program (as defined in DODI 5000.2):
  - The name of the program
  - A brief program description
- For each ACAT III and IV programs:

  - The number of such programs
  - A list of program names
- For each program not an ACAT I, II, III, IV:
  - The number of such programs
  - A list of program names
- For the purpose of this question, any program between Milestone I and IV and containing demonstration and validation (Dem/Val 6.4)/Engineering and Manufacturing Development (EMD 6.5) funds in the FY95 PBS is considered to be engaged in engineering development (BRAC Criteria I).

NOTE: Workyear values represent Scientific and Technical (S&T) personnel in support of these ACAT programs and are included in the S&T line totals of question 3.3.1.1 in lieu of Engineering Development.

Engineering Development	Name or Number	Workyears (FY93 Actual)	FY93 Funds Received (Obligation Authority)	Narrative
ACAT IC C4I-Airborne	PMD 5021 (20)/PE 64750F for Intelli-gence Equipment	3.2	2.85	Threat Modeling and Simulation. Develop new and improved scientific and technical intelligence exploitation capabilities.

ACAT ID **C4I-Airborne**	F-22 Aperture Measure-ment Program	1.733	642k	Study Effort for the F-22 Test bed ; provide cost and schedule information the three options as stated in the PID; participate in the selection of the platform for use at RL's Newport Research Facility; once selected convert a prototype air vehicle to a Model 640 avionics test bed to support electronic warfare, communications, navigation and identification aperture measurements
ACAT ID **C4I-Airborne**	B-1B ALQ-161 Avionics	.086	125k	Instrument the HAVE NOTE Facility and perform measurements specified in requirements; measurements will be performed on 16 antennas
ACAT ID **C4I-Airborne**	Advanced Medium Range Air-to-Air Missile (AMRAA M)	.481	370k	Engineering and assessment support; consultation on E3 hardening; perform HAVE NOTE EMS measurements; perform E3 vulnerability assessment of the AMRAAM missile; test preparation and start of HAVE NOTE measurements of AMRAAM Producibility Enhancement Program hardware
ACAT II **C4I-Airborne**	CTAPS	6.5	3,316k	Develop Advanced Planning System (APS) application and software module
ACAT III/IV				
Other				

3.3.1.3 In-Service Engineering: For each Common Support Function at each activity engaged in in-service engineering, list the in-service engineering efforts, the FY93 funds (from all sources) obligated for these efforts, the FY93 workyears for these efforts, and the weapon system(s) supported by these efforts. In-service engineering consists of all engineering support of fielded and/or out of production systems and includes efforts to improve cost, throughput, and schedule to support customer requirements as well as mods and upgrades for reliability, maintainability, and performance enhancements. (BRAC Criteria I)

Common Support Functions	In-Service Engineering Efforts (List)	FY93 Actual		Weapon System(s) Supported
		Funds Received (Obligation Authority)	Workyears	

RESPONSE TO THIS ITEM NOT REQUIRED BY ROME LAB

3.3.2 Projected Funding

3.3.2.1 Direct Funding: For each applicable CSF, identify direct mission funding by appropriation from FY94 to FY97. Use FY95 PBS for FY95-FY97. (BRAC Criteria I)

CSF	FY94	FY95	FY96	FY97
C4I-AIRBORNE (3600)[$M]	154	192	233	234
C4I-AIRBORNE (3400)[$M]	3	3	3	3

3.3.2.2 Other Obligation Authority: For each applicable CSF, identify reimbursable and direct-cite funding (other obligation authority expected) from FY94 to FY97. Funding allocation must be traceable to FY95 PBS. (BRAC Criteria I)

CSF	FY94	FY95	FY96	FY97
C4I-AIRBORNE Other than direct mission funding	164	181	120	103

3.4 Facilities and Equipment

3.4.1 Major Equipment and Facilities: Describe major facilities and equipment necessary to support each Common Support Function (include SCIFs). If the facilities and equipment are shared with other functions, identify those functions and the percentage of total time used by each

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.4.1 Major Equipment and Facilities of the Rome Lab, Griffis response to the LJCSG guidance package. The response does not indicate any sharing of facilities. Confirm these equipment/facilities are 100% dedicated to this CSF or provide the % shared and with what other CSF or activity

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be: Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs Does not concur (explain:)

MAJCOM REVIEWER: _____
(print name, organization, DSN)

BASE: Concurs Does not concur (explain:)

BASE REVIEWER: _____
(print name, organization, DSN)

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

SAF/AQX CORRECTION WORKSHEET

PURPOSE: To provide SAF/AQX staff corrected answers to question 3.4.1 Major Equipment and Facilities of the Rome Lab, Griffiss response to the LJCSG guidance package. The response does not indicate any sharing of facilities. Conform these equipment/facilities are 100% dedicated to the CSF or provide the % shared and with what other CSF or activity.

SOURCE: Lt Col Hanson, SAF/AQXM, DSN 227-8850

METHOD: Comparison of answers to questions

CONCLUSION: Answer must be Complete

RATIONALE: Response must be in accordance with LJCSG Guidance Package instructions

MAJCOM: Concurs (Does not concur (explain))

SEE BASE ACTIVITY RESPONSE

Timothy L. Dues 14 Aug 1994

MAJCOM REVIEWER: TIMOTHY L. DUES, GM-15, AFMC/STP DSN 787-7

BASE: Concurs Does not concur (explain)

No corrections are necessary to the most recent version (10 Aug package) of the Laboratory JCSG Data Call for Rome Laboratory-Griffiss AFB NY. I confirm that those equipment/facilities listed in answer to question 3.4.1 are 100% dedicated to the C4I-Airborne Common Support Facility (CSF) as outlined in the Laboratory JCSG guidance package. None of these facilities are shared with other CSFs or activities.

BASE REVIEWER: William R. Shobert II

WILLIAM R. SHOBERT II, Capt, USAF
Rome Laboratory (AFMC), Griffiss AFB NY
DSN 587-7701

I certify the information above is accurate and complete to the best of my knowledge and belief.

CHARLES R. HANSON, Lt Col, USAF
Manufacturing Quality Assurance Division
Dep Asst Sec (Mgt Policy and Prog Integ)
Assistant Secretary (Acquisition)
Base Closure Working Group

Date:

of the functions. Provide labeled photographs that picture the breadth and scope of the equipment and facilities described. If it is unique to DOD, to the Federal Government, or to the US, describe why it is unique. Insert the replacement cost. For this exercise, Replacement cost = (Initial cost + capital investment) multiplied by the inflation factor for the original year of construction. (BRAC Criteria II)

NOTE: See appendix "B" and attached copy of RL-TR-93-91, In-House Report, April 1993: "ROME LABORATORY FACILITIES REGISTER" for photographs and detailed write-up of laboratory facilities.

Common Support Function	Major Facility or Equipment Description	Unique To			Replacement Cost ($K)
		DOD	Federal Gov't	U. S.	
C4I-AIRBORNE	Ava	X	X	X	5,955
C4I-AIRBORNE	Forestport	X	X	X	10,052
C4I-AIRBORNE	Newport	X	X	X	31,338
C4I-AIRBORNE	Stockbridge	X	X	X	6,664
C4I-AIRBORNE	Verona	X	X	X	29,500
C4I-AIRBORNE	E3RC	X (1 of 3)	X	X	21,720

C4I-AIRBORNE	Surface and Elemental Analysis (See Appendix B for Fact Sheets of RL Atomic Force Microscopy Facility; RL Auger Electron Spectroscopy Facility; RL X-Ray Photoelectron Spectroscopy Facility; RL Low Energy Electron Diffraction Facility; RL Microbalance Facility)	X	X	X	1,900 This system is in itself unique. It is the only one available to the Air Force and the Department of Defense
C4I-AIRBORNE	Mechanical/Materials Analysis (See Appendix B for fact Sheets ofRL Microcircuit Ambient Gas/Materials Analysis System; RL C-Mode Scanning Acoustic Microscope (C-SAM); RL Scanning Infrared Imaging Facility; RL Microcircuit Physical Assessment Facility)	X	X	X	2,600 This system is in itself unique. It is the only one available to the Air Force and the Department of Defense

C4I-AIRBORNE	Electrical Test and Analysis (See Attached Sheets for RL Digital Microelectronic Test Facility; RL Analog Research Facility; RL Microwave Device Test and Analysis Facility; RL Microelectronic Test Structure Facility; RL Computer-Aided Systems Analysis and Engineering Facility; RL Testability Workbench)	X	X	X	12,818 This system is in itself unique. It is the only one available to the Air Force and the Department of Defense
C4I-AIRBORNE	Surveillance Facility	X	X	X	85,000
C4I-AIRBORNE	Sensor Technology Evaluation & Performance Facility	X	X	X	6,825
C4I-AIRBORNE	Multisensor Fusion Testbed	X	X	X	7,500
C4I-AIRBORNE	Airborne Radar Technology Development Facility				3,578
C4I-AIRBORNE	Attack Management Development Facility				410
C4I-AIRBORNE	Photonic Center	X	X	X	32,500
C4I-AIRBORNE	C3I Technology Facility	X	X	X	3,100
C4I-AIRBORNE	Vault				175
C4I-AIRBORNE	Shielded Vault				492
C4I-AIRBORNE	Multispectral Fusion Facility	X	X	X	7,500

C4I-AIRBORNE	ICF	X	X	X	2,650
C4I-AIRBORNE	ELINT Development Fac	X			1,108
C4I-AIRBORNE	ICARUS Facility	X	X	X	770
C4I-AIRBORNE	SIGINT Support Fac	X			2,120
C4I-AIRBORNE	Speech Process Fac	X	X	X	8,111
C4I-AIRBORNE	SCIF				1,826
C4I-AIRBORNE	IIPF	X	X	X	6,763
C4I-AIRBORNE	IIPF Support Fac (ISF)	X			275
C4I-AIRBORNE	Computer Science and Technology Facility				2,000
C4I-AIRBORNE	C2 Technology Center	X		X	8,300
C4I-AIRBORNE	Distributed Systems Evaluation Environment				1,950
C4I-AIRBORNE	Network Design Facility	X	X	X	2,400
C4I-AIRBORNE	SHF Satellite Antenna Nulling Range	X	X	X	4,500
C4I-AIRBORNE	Laser Communications Facility				2,250

ELECTROMAGNETIC AND RELIABILITY DIRECTORATE MAJOR FACILITIES AND EQUIPMENT:

RL has five active off base research facilities. Each of these unique facilities were picked because of specific geographic orientation or conditions. Newport, Stockbridge and the Precision Airborne Measurement System (PAMS) at the Verona Research Facility are used primarily as antenna measurement and analysis facilities. These facilities require very quiet radio frequency (RF) environments with very low reflections from surrounding terrain and objects.

NEWPORT RESEARCH FACILITY

Newport is unique because it is the only full size, actual aircraft testbed antenna measurement facility in the Air Force and the best equipped and most versatile facility in the DOD. Newport is uniquely situated on two hill tops, 1 1/2 miles apart (connected via fiber optics), and separated by a valley over 400 feet deep. The separation is required to ensure measurements are performed in the "far field." Far field separation is required to ensure a plane wave illuminates the antennas under test and is essential to accurate and representative antenna pattern measurements. The deep valley is essential to low reflections which is a must for the measurement of modern ultra low sidelobe antennas. In order to reduce the reflections even further RL uses terrain grading and signal processing techniques to obtain a measurement capability of -60 dB (1/1,000,000 of the main beam) which is required to evaluate new conformal array radar technology antennas (CART). Without the deep valley the other techniques would not come close to providing the degree of reflection reduction required. Newport is the only facility in the world that has the following full size, actual aircraft testbeds available for testing: F-15, F-16, F-4, A-10, RF-4, F-111, and the new F-22. Newport also has the only fully operational F-16 electromagnetic effects testbed that can be used for test, evaluation and experimentation.

STOCKBRIDGE RESEARCH FACILITY

Stockbridge is a 300 acre facility. It is used as an antenna measurement and analysis facility and is a component of the Northeast Test Area (NETA). The type of antenna measurements and analysis performed at Stockbridge require a very electromagnetically quiet mountain top location with a large flat area (1/2 mile in all directions) immediately adjacent to the facility. Stockbridge has a one-of-a-kind very heavy duty positioner required to support and rotate very large aircraft. Stockbridge is the only facility in the DOD that can provide a computer controlled hemispheric antenna measurement capability and has the following full size actual aircraft testbeds: C-130, B-52, B-1B and KC-135. Stockbridge is a major component of the NETA. The NETA is unique to this part of the United States and consists of open field and wooded area representative of the topographical features found in the worlds temperate zones, particularly in Europe. The NETA is divided into eight sectors and includes a military equipment display area with over 70 military vehicles such as tanks, jeeps, trucks, armored personnel carriers and mobilized guns. The range also contains simulations of a surface-to-air missile (SAM) site, an anti-aircraft-artillery (AAA) site, three mortar pits, a trench warfare complex, and a field supply point. The NETA is used to test and evaluate new airborne reconnaissance sensors and to evaluate concealment and deception techniques.

VERONA RESEARCH FACILITY

The Verona facility is a multi-mission facility, but is primarily involved in programs that rely on electromagnetic propagation and therefore require a remote, flat, electromagnetically quiet site. Verona has over 500 acres of flat, unrestricted terrain surrounded by a much larger, flat agriculture area. These conditions are essential to radar evaluations, meteor burst communication

experiments, optical/laser propagation experiments, troposcatter and multimedia communications experiments, over-the horizon high frequency (HF) radar and communications experiments and airborne antenna pattern and systems evaluations. The Precision Antenna Measurement System (PAMS) and associated search, tracking and range finding radars and communications equipment located at Verona is the only airborne antenna measurement capability in the Air Force and the most versatile one in the DOD. The Verona facility is also uniquely located in respect to the Ava facility because of the spatial separation required by very high powered transmitters at Ava and very sensitive over-the-horizon receivers located at Verona. These two facilities and the unique instrumentation and transmitters and receivers make up the Verona/Ava Linear Array Radar (VALAR). The VALAR is also uniquely located with respect to OTH experiments run at Goose Bay, Labrador, auroral scattering experiments over the North Pole and tropo-scatter experiments run in conjunction with Ontario Center and Youngstown, New York. The facility is also unique in that it is located at the precise distance from a Navy facility in Charlestown, South Carolina, which uses Verona to conduct low data rate meteor burst experiments.

AVA RESEARCH FACILITY

The Ava HF transmit facility consists of a 300 acre site and is the only experimental HF facility in the world. It is uniquely located and instrumented such that it can place high power RF energy at any spot on the face of the earth. As such, it can be used to supplement the operational East Coast Radar System. This one-of-a-kind facility has transmitters capable of output powers in excess of 600,000 watts using any form of modulation, an unrestricted field of view over a full 360 degree angle, and a vast array of antennas consisting of multiple steerable log periodic, conical antennas, rhombics, sloping V antennas, monopoles, omni directional antennas, dipoles, and long wire antennas. The facility has access to a 100,000 volt primary service and has transformer capability in excess of 3000 KVA. A high demand water system and large volume air flow system is required to operate the high power transmitters. Ava is used in conjunction with the Verona facility to form the Verona/Ava Linear Array Radar (VALAR) Experimental Facility. The location of VALAR is unique because it allows over-the-horizon back scatter experiments, propagation studies and investigations of auroral activities in a northerly direction. The combination of Verona and Ava is unique in that they are used as a tool in the Drug Enforcement Agency's Drug Interdiction Program.

FORESTPORT RESEARCH FACILITY

The Forestport facility is a 300 acre facility and is the only experimental research, development, test & evaluation (RDT&E) facility available for performing very low frequency/low frequency (VLF/LF) experimentation in the world. Its location is unique in that it is at a very high elevation with relatively flat terrain in all directions and has a unique one-of-a-kind 1200 foot transmitter antenna tower (with an elevator that goes to the top) which can be used to transmit or as a unique one-of-a-kind vertical testbed for other types of antenna experiments. Its unique location and equipment makes it part of the National Command Authority's Minimum Essential Emergency Communications Network (MEECN). Forestport is also unique in that it is currently being jointly used by the Navy to test VLF/LF insulators (at voltages in excess of 275,000 volts) used on their submarine communications programs. It is the only facility in the DOD capable of performing these type of experiments and evaluations in a cost effective and non-interfering basis. Forestport can radiate signals in the 20-60 KHz range at an effective radiated power of 8000 watts in continuous wave (CW), clear text, and encrypted modes. It is the only facility capable of generating a test signal for Navy take charge and move out (TACAMO) aircraft testing and was used to test the reliability of the Air Force Miniature Receive Terminal on the B-1 Aircraft.

E3 RESEARCH CENTER

The E3 Research Center (E3RC) is unique in that it is the only electromagnetic environmental effects test facility available in the Air Force. It provides the capability to simulate, measure, and improve the electromagnetic performance of Air Force weapon systems and communications, command, control, computer and intelligence (C4I). The Center consists of a highly instrumented radio frequency test capability having anechoic chambers, reverberation chambers, screen rooms, an EME microcircuit facility and electromagnetic simulation codes for systems and microcircuits. The two anechoic chambers are 40'x32'x48' and 12'x12'x36', respectively. These chambers provide a free space test environment which simulates the operational environment of operational weapon systems such as the new generation of smart weapons currently in use. The two reverberation chambers, which are the only reverberation chambers in the Air Force, are 32'x17'x12' and 3.8'x4.7'x4.9' in size. These chambers provide a quick look capability at a system to provide a frequency culling evaluation for electromagnetic susceptibility and vulnerability assessments as well as radio frequency coupling and shielding effectiveness measurements. The chambers are used in conjunction with state-of-the-art very high power signal sources used to radiate systems under test to determine their response to high power electromagnetic effects. The E3RC is the Air Force responsible test organization for the HAVE NOTE Program. As such it is the only place in the Air Force where C3I and weapon systems are tested for EM effects. This program tests the electromagnetic susceptibility and vulnerability of weapon systems such as AMRAAM, Maverick, Sidewinder, ALCM, Sensor Fuzed Weapon and other smart weapons.

SURFACE AND ELEMENTAL ANALYSIS FACILITY

The major facilities for surface and elemental analysis are a unique concentration of analytical instrumentation together with experienced engineers and scientists dedicated to the single

objective of providing the Air Force and the DOD with the highest possible reliability in electronic devices. The criticality of this mission to the Federal Government and the U. S. requires that these facilities be fully utilized for this single purpose. Having these facilities housed at a single location allows the timely response to critical reliability issues necessary for the defense of the United States.

- RL Microbalance Test Unit

The RL Microbalance Test Unit located in the unique Surface and Elemental Analysis Facility at RL/ERDR represents a test capability which is totally unique to the United States and capable of measuring changes in material mass to 1 part in 10^9 as a function of increasing temperature or isothermally as a function of time. The instrumentation in this facility was totally constructed in-house, and instrumentation that meets these specifications is not commercially available.

MECHANICAL/MATERIALS ANALYSIS FACILITY

The major systems listed under Major Facility or Equipment Description are analytical instruments fabricated on-site or acquired over a period of years and continuously upgraded to meet the analysis needs of existing and new microelectronics technology. This extensive analytical instrumentation is applied to reliability assessments of not only microelectronic components, but to mechanical and optoelectronic device and packaging technologies. Although one or several of these specific equipments exist within the DOD Tri-Service Labs, NASA or other government agencies, the collection of cited equipment into a major facility is unique within the Air Force and DOD. The uniqueness is based on the comprehensive collection of analytical instrumentation at a single location operated by a multi-disciplined team of trained analysts (degreed professionals) with vast corporate knowledge of solid state electronics materials, design, processing, package assembly, quality control inspection and reliability test and evaluation expertise. The facility is dedicated to basic semiconductor technology materials research, product evaluation of existing and advanced solid state technologies, destructive physical analysis for design/construction analysis and component failure analysis. This type of solid state reliability technology does not exist anywhere else in the DOD as a collective entity focused on reliability analysis techniques. The autoclaves, temperature/humidity, temperature cycling/thermal shock chambers are commercially available equipment, but are an integral part of the other Rome Lab ERD test and analysis major facilities with trained personnel in equipment operation, reliability stress testing techniques, and failure diagnostics. The Electrical Test and Analysis Facility, and Surface and Elemental Analysis Facility, further complement ERD's capability to provide complete device electrical characterization in conjunction with subsequent surface/elemental/physical analysis and failure analysis.

- Microcircuit Ambient Gas/Materials Analysis (MAGMA)

The Microcircuit Ambient Gas/Materials Analysis (MAGMA) capability is one of a kind in the world. This system has been developed to provide highly accurate analysis of moisture in microelectronic devices in support of our position as technical certifying agency for the Department of Defense. It also has a dual function of analyzing materials present in advanced microelectronic packaging technologies. The system features a combination of instruments and hardware not found in any commercially available equipment. In order to take full advantage of the MAGMA system capabilities, approximately $300K has been spent to develop special software to (1) control analyses procedures, (2) acquire, reduce, analyze, report, and archive data, (3) calibrate and monitor system instruments, and (4) provide flexibility to emulate various analytical procedures.

ELECTRICAL TEST AND ANALYSIS FACILITY

These facilities are a unique concentration of design, simulation, test and analysis equipment with experienced engineers and scientists dedicated to the design, simulation, analysis and test of microelectronic devices covering the spectrum from digital to microwave. The capability is not available anywhere else within the Air Force, DOD, or microelectronic community at large. The housing of this capability in one location allows for a timely response to critical reliability issues necessary for U. S. defense.

- Digital Microelectronic Test Unit

The RL DMTF houses a Teradyne J953 Automated Microcircuit Test Equipment (AMTE) system. The J953 AMTE is a highly customized $3.9M test system. It is the only digital microelectronic test system of its kind in any AF/DOD laboratory. In fact, there are only a handful of AMTE systems installed world-wide that are capable of performing electrical measurements on digital microcircuits with the accuracy and precision of Rome Laboratory's equipment.

- Microelectronic Test Structure Unit

The RL Microelectronic Test Structure Unit houses a Hewlett-Packard 4062 Semiconductor Parametric Test System, Electroglas 2001X automatic wafer prober and Micromanipulator probe station in an environmentally controlled laboratory. This unique combination of test equipment provides the capability of testing structures at both the wafer and package level, as well as, quantities as small as a few wafers up through wafer lots composed of 25 to 30 wafers. It is one of four unique evaluation facilities within the Government/DOD capable of independent process reliability evaluation.

- RL Analog Research Test Unit

This test unit consists of an LTX Analog Tester, SUN 4/470 workstation with analog design and SPICE simulation packages, DAS9200 Ditigal Analysis System and various pieces of bench top test equipment. The facility is unique to the Air Force and the U. S. Government in that analog devices can be evaluated from the conceptual design stage through the final packaged product. The combination of equipment and software tools provide the Government with the unique capability to examine the bahavior of analog devices and evaluate the various failure modes. The unit is also utilized to spearhead DOD research in the analysis of testability concepts and techniques for analog microcircuits. This is a worldwide unique capability.

- Digital Testability Workbench Test Unit

The testability workbench is a unique set of software tools built around a core set of simulators that perform logic simulation, fault simulation, testability analysis, test generation and fault isolation for microcircuits. The tools were developed in-house and are unique to the Air Force and scientific community at large.

- CASTLE Test Unit

The CASTLE test unit develops, investigates, evaluates and applies new and improved engineering concepts and procedures relating to Finite Element Analysis (FEA) of electronic systems, fault detection, fault isolation, false alarm suppression and computer-aided design for built-in-test. Time Stress Measurement Device (TSMD) technology is being developed and evaluated for the acquisition of performance and environmental data on electronic systems in their operational environment to aid in the development of maintenance diagnostic and prognostic concepts. These test capabilities are unique to the DOD and the mission performed here is on behalf of the Tri-Service JDL Reliance Project.

- RL Microwave Device, Test and Analysis Test Unit

This capability provides the Air Force, DOD and government with the unique capability to design, simulate and analyze microwave devices. The capability is unique to DOD and is assigned here under the auspices of the JDL Reliance Project.

SURVEILLANCE AND PHOTONICS DIRECTORATE MAJOR FACILITIES AND EQUIPMENT:

SURVEILLANCE FACILITY

PURPOSE:
To provide the capability to emulate, simulate, analyze and evaluate new developments and concepts in signal processing, electronic countermeasures/electronic counter-countermeasures (ECM/ECCM), and target/clutter classification.

DESCRIPTION:
The Surveillance Facility is a unique, multi-radar test facility combining three high power microwave radar systems. The three radars are an L Band search radar, an S Band dual polarized tracking and wideband system (3.1-3.7 GHz), and a C Band phased array (5.65-5.90 GHz). Signal processing capabilities within the facility provide all the waveform generation, timing, data storage, and analysis for the entire complex of radars. The heart of the facility is a minicomputer which communicates with programmable hardware modules in near real-time and whose parameters can be changed very rapidly. This capability allows emulation of new techniques and concepts so they can be evaluated and their feasibility proven before commitment to hardware.

CAPABILITIES and UNIQUE FEATURES:
Simulation, emulation, and evaluation of radar (monostatic and bistatic); multisensor fusion techniques; coherent and noncoherent signal processing; and digital beamforming and adaptive nulling concepts and techniques.

Unique features include: simultaneous data collection at L, S, and C Band radars on the same target; polarization diversity at S and C Band, each with dual receive channel data collection and storage capabilities; wideband (640 MHz instantaneous) transmit and receive capability at S Band; numerous signal processing techniques for coherent processing, weather phenomenon evaluation high resolution doppler processing, adaptive nulling for both clutter and jammers, and radar resource control; and hardware and software for digital beamforming with the C Band phased array.

INSTRUMENTATION:
Computer hardware within the facility consists of an HP2117F and HPA900, the system controllers, high bandwidth Digital Recorders, SUN and VAX workstations. All computers are networked for easy data transfer. Also, the facility contains various experimental testbeds including: 1) distributed processing brassboard AOSP Risc Insertion (ARIN), 2) a space/time adaptive processor brassboard which includes a high performance computer (HPC) for real time radar processor integrated into the C-Band phased array, 3) Expert Systems for resource management/allocation and detection enhancement, and target identification workstations.

SENSOR TECHNOLOGY EVALUATION AND PERFORMANCE (STEP) FACILITY

This facility consists of approximately 4200 S/F of Lab space, 2700 S/F of which is shielded. It consists of the following capabilities:

(1) High Stability and Dynamic Range Measurements in excess of 80 dB for components and strings

(2)Radar Emulation Environment which exposes components to array environments including pushing
and pulling, temperature cycling etc.

(3)Life Test Capability for modules and subcomponents in the L to X band regime. This capability includes
preliminary screening, wirebonding and fixturing, initial characterization and post mortem analysis

(4)Power Amplifier Evaluation which consists of high voltage power supplies and support microwave electronics for evaluation and life testing of thermionic amplifiers

The combination of the above capabilities makes this facility unique.

MULTISENSOR FUSION TESTBED

The facility consists of approximately 1,820 S/F of lab space. It contains the following capabilities.

(1) Multispectral fusion with interface to all sensor in the Surveillance Facility (L, S, & C band radars), IR sensor, Bistatic/ESM sensor and NORAD Joint Surveillance Search (JSS) radars.

(2) Bistatic/ESM sensor with tower mounted antennas, processors and displays capable of real time passive RF detection and track of airborne targets.

(3) IR sensor systems: Roof top mounted pedestal and PtSi infrared camera, processing/recording hardware and display capability.

AIRBORNE RADAR TECHNOLOGY DEVELOPMENT FACILITY

The mission objectives of the facility are to provide exploratory and advanced development of airborne radars and passive surveillance technology applicable to wide area surveillance systems capable of detecting low-observable targets; to develop tools (hardware and software) necessary to perform subsystem and system analyses on new system concepts and configurations; and to identify, develop, and evaluate advanced ECCM techniques and provide hardware implementation of these techniques.

ATTACK MANAGEMENT DEVELOPMENT FACILITY (AMDF)

This facility has been developed by Rome Laboratory (RL) to support the design and development of Directed Energy (DE) experiments and future weapon platforms by providing a high fidelity simulation of the Acquisition, Tracking, Pointing, and Fire Control (ATP-FC) process. The AMDF provides a framework for testing and evaluating Fire Control decision algorithms, and establishing overall engagement timeline performance. Key features include software tools and several Silicon Graphics IRIS Workstations.

Software tools consists of a library of high fidelity fire control algorithms and sensor models; a graphical interface for creating, displaying and manipulating architecture designs (from which a simulation can then be generated); a seamless interface with the Strategic Scene Generator Model for run-time scene generation, and an integrated set of data analysis tools and procedures.

PHOTONICS CENTER

This facility occupies a 20,000 sq ft (net) building of which almost 9,000 sq ft is experimental space consisting of 17 separate research laboratories. Each laboratory is fully equipped with vibration isolation tables and standard optical and photonic components. Instrumentation includes high speed detector systems, precision TE cooled laser diode systems, femtosecond CPM laser, picosecond mode locked laser. YAG laser, second harmonic generator system, Ti-sapphire laser, color center laser, CO2 laser, nonlinear frequency mixing system, high-gain amplifier system, optical spectrum analyzer, spectrophotometer, autocorrelators, numerous workstations, high speed bit error rate testers, and microwave test equipment

C3I TECHNOLOGY FACILITY

This facility is a technology development facility established to further research in support of advanced surveillance programs, chief among them being the Hostile Target Identification Program. The C3I Technology Facility supports this program with advanced test beds capable of supporting the development of state-of-the art algorithms. At the heart of the facility are two unique test beds, the multispectral fusion test bed and the ESM/bistatic radar test bed. The combination of these two technologies renders a covert surveillance system capable of a multitude surveillance function. The two test beds described above are connected with a variety of other facilities and capabilities, such as an intelligence data base facility to identify electronic emissions, a regional ROCC display for ground truth, and voice communication analysis to aid in aircraft nationality identification. A portable clutter collection test bed is available to provide data on the clutter field and the system has the capability of having the data from other sensors (e.g. IR camera, etc.) added to it. In addition the technologies developed through the use of the C3I Technology Facility are currently implemented in an airborne test bed.

INTELLIGENCE AND RECONNAISSANCE DIRECTORATE MAJOR FACILITIES AND EQUIPMENT:

INTELLIGENCE AND CARTAGRAPHIC FACILITY (ICF)

The Intelligence and Cartographic Facility (ICF) is a 12,992 square foot computer facility located on the northwest side and connected to Building 240 at Griffiss AFB NY. The ICF supports the three Divisions of the IR directorate. The ICF contains the Imagery Exploitation Facility(IE 2000), The Common Mapping Test Facility, The Reconnaissance Data Base, Electronic Test Facilities managed by IRA, The IPA Project facility, a Data Base facility managed by IRD, Lonex equipment for building 240, Maintenance contractor facility, as well as a supply room.

The ICF is unique in that Imagery, Cartographic, ELINT R&D, and Data Base activities are conducted in very close proximity which greatly enhances the quality of Intelligence and Data Fusion R&D that supports C4I.

The Image Exploitation 2000 facility is government owned and operated R&D testbed for advanced development and demonstration of digital imagery exploitation technology. Techniques and applications developed or integrated in the facility are being prepared for transition into operational C3I environments or production systems development. The IE 2000 facility has over twenty-five applications actively running on nine networked SUN workstations. Applications include: ELT-2 2.3, Matrix 2.7, Framemaker Khoros, ERDAS 8.0.2, CODSS, 4D/5D, Asterex, ICM 1.2, Sentinel Byte 2.1.1, DIEPSS 4.0, CMTK 1.4.2, Slate, Island Graphics Paint/Write Draw, Sybase 4.9.1,XV 3.0, and PixelFx. There are additional workstations and equipment in the facility such as the Rapid Application of Airpower (RAAP) testbed, and Multi-media workstation, Kodak CD system, Eikonix image digitizer as well as a Digital Equipment Corp VAX 11/785 computer. There are also network connections to other RL Facilities (ELINT facility, Vaults 1327 & 918, and Building 3/C3I facility). Associated with the IE 2000 facility is the Reconnaissance Data Base which contains a wide variety of Imagery, both operational and developmental with extensive ground truth on specific data collections, and documents necessary to support the research and development in Imagery Exploitation. The primary unique feature of this world class softcopy imagery research facility is the interconnection/ interaction with the CATIS data base, ELINT and Carto facilities.

The Common Mapping Test Facility provides the cartographic mapping and analysis functionality required by both Force and Unit level conventional mission planners and Air Force Weapons Systems. Applications include multi point terrain masking, lineal feature intervisibility, point-point line-of-sight, distance measurement ,optimal threat relocation, intervisibility profiles, vegetation masking, sensor prediction, terrain/threat perspectives, ridge/valley highlighting, elevation/relief shading, imagery/map/elevation/feature data combinations, monoscopic positioning, point transfer positioning, transportation network analysis, cross country mobility analysis, sensor allocation and geopositioning. The unique feature of the CMS Facility is that it provides a standardized,

Government owned, Air Force validated cartographic applications software suite and a common internal data base structure to all systems exploiting this capability.

Replacement costs:
Hardware as per current H/W Catalogs
IE 2000.....$635,000
RAAP .....$ 89,700
CMS $431,000

Physical facility (ICF total) ...$1,495,000,
(based on 13000 sq ft. at $115/sq ft.)

total .....$ 2,650,000

The ICF is a unique Government owned and operated Intelligence and Cartographic Research and Development facility that to physically replace would cost $ 2,650,000.

ELINT DEVELOPMENT FACILITY (EDF)
The EDF is the sole USAF R&D facility dedicated to the creation, testing, integrating, and evaluating of intelligence collection and correlation algorithms, software, methodologies, and hardware for the RIVET JOINT and COMBAT SENT aircraft. Included within this facilities in the IRAP Technical Research Facility. Both are uniquely designed and were especially created to support active analog and digital collection and analysis systems integration for current and future USAF R&D programs. The Technical Research Facility incorporates both of these (analog/digital) capabilities, while the EDF is primarily dedicated to computer software development relative to the intelligence collection, analysis and reporting community. Both facilities are instrumental in reducing time between R&D and system fielding.

860 sq ft of SCIF space x $400/sq foot = $344,000
1,544 sq ft of administrative space x $250/sq foot = $386,000
Total: $730,000

Equipment replacement costs: $378,228

Total Replacement Cost for the EDF: $1,108,228

ICARUS FACILITY
The ICARUS facility is dedicated to the creation, integration, testing and evaluation of intelligence modeling, analysis and tutoring software systems. It is used both to perform research of advanced modeling and analysis techniques and to evaluate Software Engineering Development systems before they are inserted into AIA intelligence operational environments.

Equipment Replacement Costs (based on equipment catalog prices) plus facility work space requirements (i.e., furniture): $770,406
(NOTE: Special facility reconstruction costs are not applicable for this facility)

The ICARUS facility is a unique government owned and operated facility that to physically replace would cost $770,406.

SIGINT SUPPORT FACILITY

This facility supports the overall C4I System function, including Airborne fixed ground based, and ground mobile subfunctions. The facility is housed within a larger Special Compartmented Information Facility. This is a unique DoD facility where the widest range of development analysis and experimentation in the area of SIGINT exploitation is performed in support of the C4I functions. Some of the capital investment is in one of a kind systems.

Capital Investment of Equipment: $1,559,863
Physical Facility: 1400 SF of SCIF space x $400/SF= $560,000
Total Replacement Cost: $2,119,863

SPEECH PROCESSING FACILITY

The Speech Processing Facility (SPF) is constructed with sound absorbent materials, a self contained environmental control unit (air conditioner/heater), and computer and audio networking cables installed within the walls with access panels every few feet. The facility contains numerous computer workstations, specialized audio equipment, and an N-Cubed super computer. Audio and speech enhancement processing combined with specialized signal processing techniques running on the N-Cube computer make this facility unique to the United States.

Replacement Cost

Initial Investment: $82,000 (refurbish a room to facility specs)
Replacement Cost: $82,000 x inflation factor for 1986
= $82,000 x 5% x 8 years
= $115,000
Capitol Investment: initial cost ADPE and equipment + inflation factor + new N-Cube computer
= $2,461K + $984K + $4,551K
= $7,996K

Total Replacement Cost = $8,111K

SPECIAL COMPARTMENTED INFO FACILITY (SCIF):

Although the SCIF exists currently, the SCIF space is needed not only for the processing of Sensitive Compartmented Information (SCI) but for office storage of all SCI material used by all Rome Laboratory personnel. Also, SCI clearance messages are sent from this office for Rome Lab SCI cleared individuals who travel to various TDY areas. This office also supports numerous contractor SCIF's working under the direction of Rome Laboratory research and development contracts. furnishings, etc.

Capital Investment of Equipment: $206,640
Physical Space Requirements:
4049 sq ft of SCIF space x $400/sq ft = $1,619,000
Total Replacement Cost: $1,826,240

Even though the SSO administrative office is not unique, it is required to support the SCI work within the Directorate and the rest of the Laboratory. The cost to rebuild it would be $1,826,240.

INTELLIGENCE INFORMATION PROCESSING FACILITY (IIPF)
ROME LABORATORY/IR INTELLIGENCE DATA HANDLING SYSTEM (IDHS)
TESTBED AND SOFTWARE SUPPORT FACILITY

The IIPF, located in the Rome Laboratory Bldg 240 Intelligence and Reconnaissance Directorate (RL/IR), consists of two Sensitive Compartmented Information Facilility (SCIF) enclosures, vaults 1327 and 918. Total combined square footage is approximately 4500 sq ft of raised floor Radio Frequency Interference (RFI) shielded computer room and approximately 750 square feet of administrative area. The IIPF houses various internetworked computer resources ranging from legacy mainframe systems and terminals to state-of-the art workstation, network and communications equipment.

The IIPF is a facility unique to the United States, as it provides a single SCI test facility for integration, testing, software maintenance and dissemination of new and updated IDHS systems and techniques for the U.S Intelligence Community. It possesses many of the USAF/DOD standard systems available in the typical U&S Command Joint Intelligence Center (JIC) and is able to simulate these sites for test and demonstration activities. Testing conducted at the IIPF alleviates potential site impacts to the operational users by allowing maximum testing and debugging of systems before delivery to the user community.

External SCI connectivity (via Defense Secure Network 3 (DSNET)/Joint Worldwide Intelligence Communications System (JWICS)) allows for electronic dissemination of software products, and remote problem analysis and installation of systems at the operational sites. The IIPF also provides an environment for Research and Development (Program 6.1, 6.2, 6.3) technology demonstrations in a live SCI environment, allowing for demonstration of concrete payoffs without

possible impact to the Community's operational users. Industry is also encouraged to bring in new products for integration, demonstration, and testing with existing DOD systems.

Computer/Communications Hardware,Furniture and Equipment: $4,633,173
Physical Space Reconstruction
5324 sq ft of SCIF space x $400/sq foot = $2,129,600
Total Replacement Cost for the IIPF: $6,762,773

Computer/Communications Equipment/Hardware: $200,000
Physical Space Reconstruction
298 sq ft of lab space x $250/sq foot = $74,500
Total Replacement Cost for the ISF: $274,500

Both facilities are unique to the government and are government owed and operated. To replace both of these facilities would cost $7,037,273.

COMMAND, CONTROL AND COMMUNICATIONS DIRECTORATE MAJOR FACILITIES AND EQUIPMENT:

COMPUTER SCIENCE AND TECHNOLOGY FACILITY
Provides high performance workstations and networking services for wide variety of software technology development projects.

C2 TECHNOLOGY CENTER (C2TC)
The C2TC was created with two key goals in mind. The first was to establish an environment that promotes efficient utilization of Rome Laboratory's distributed C3I technology research and development facilities. Secondly, the C2TC provides a Laboratory architecture that facilitates early and effective transition of technology to the operational user. The C2TC is the principal node in a distributed fiber optics network that electronically connects Rome Laboratory's key R&D facilities. Because of this connectivity, the C2TC with its display and demonstration capabilities is **unique** enabling it to be the hub for end-to-end C3I sub-system/system simulations. Adopting this integrated approach involving facilities and technology components throughout the Laboratory provides the basis for addressing the extremely important issue of interoperability at the Laboratory level prior to transition.

The Top Secret C2TC is entirely housed within Rome Lab, Building 3, Griffiss AFB,NY. The vaulted area of the C2TC is constructed of 8" thick monolithic reinforced concrete and is lined with a sheet steel inner wall to provide the necessary RFI shielding, as well as additional wall penetration protection. All wall openings in the vaultd area are large enough for surreptitious entry are barred or screened with reinforced steel to preclude

access. In addition to the security bars, acoustical duct, attenuators have been installed giving the vault a sound transfer coefficient (STC) of 45. The main entrance has both a vault door and cipher lock door for controlled access. The cipher lock door controls access during normal hours of operation. The equipment entrance provides access for ADP hardware and emergency egress for personnel. When not in use, it is secured to preclude access. The remaining portion of the C2TC (non-vaulted area) is constructed of reinforced block with poured concrete ceiling. The cores of the blocks are filled with concrete. There are five entrance doors to this portion of the C2TC. Each door is either key lock or cipher lock controlled access.

The C2TC houses some 50 computer workstations, a Virtual Reality development capability, large screen display systems, simulators and classified data storage devices all configured to develop classified C2 capabilities to support the US war fighting commands. CTAPS applications are examples.

DISTRIBUTED SYSTEMS EVALUATION ENVIRONMENT (DISE)

The DISE is a computer facility, approximately 650 sq ft that provides space, power and required air-conditioning for multiple computer system networking equipment. The facility has conditioned power, a chiller system, and air handling. Within the facility, all floors are raised panel, with wiring troughs and multiple power outlets. The facility includes an office/conference space, an equipment room and main laboratory facility. Walls are concrete block construction. The facility currently contains about 14 computer systems, ranging from small minicomputers to workstations. Communications wiring includes telephone, broad band cable, and fiber optic systems.

NETWORK DESIGN FACILITY

The Network Design Facility provides a unique environment for conducting investigations in state-of-the-art communications technologies. The facility provides a diverse assortment of communication network resources that can be easily configured to allow researchers and designers from government, industry, and academia to develop their ideas and test their solutions in a realistic yet controlled environment. The facility's resources include switches, routers, and host processors and the system level and application level software that controls them. These resources are evenly distributed across the entire range of military and commercial product development from proof-of-concept prototypes through advanced development models and alpha/beta test models, to fielded military systems and commercial-off-the-shelf products. The specific networks which can be accessed from the facility include NYNet - a prototype regional commercial ATM network, JADE - a prototype national military ATM network, ACCORD - a prototype international/allied ATM network, and Romenet - a replica of the packet switched Defense Internet. Local, regional, and national segments of these networks can be controlled from the facility and it provides powerful tools for advanced distributed network management investigations that require local and distributed emulation and simulation capabilities that can be

linked to other such systems in the testbed. This combination of network connectivity, management and control systems, and other applications available in the Network Design Facility provides multi-media network communication and military command and control designers and developers with access to other high performance computing facilities located throughout the country.

The facility is in the unique position of having the necessary resources in place to provide integration of all the following programs and networking resources. This integrated infrastructure forms a tremendous environment for joint research and development, and technology transfer, as well as providing a basis for implementation of the National Information Infrastructure.

New York Network (NYNet). NYNet is a Broadband Asynchronous Transfer Mode Network that spans New York State. Through a cooperative research and development agreement between the participants, NYNEX has put into place the resources to form broad band fiber optic based communications infrastructure. The NYNet participants include Rome Laboratory, NYNEX, Syracuse University, Cornell University, Columbia University, Rensealear Polytechnic University, Brookhaven National Laboratory, Cold Springs Harbor Research, Grumman. The infrastructure for NYNet consists of NYNEX assets dedicated to the effort. These assets consist of a OC-48 (2.5 Gbps) backbone network, and dual OC-3 (155 Mbps) access lines to each site. Research is being accomplished in a number of broad band networking related areas. These areas include the investigation of networking strategies, including migration paths to integrate emerging technology with legacy systems, development of applications to make use of the features of the new technology in areas such as Command and Control, education, telemedicine, law enforcement, and social services.

Joint Advanced Development Environment (JADE). JADE is a multi-agency, CONUS based ATM testbed network. Building on the results of Rome Laboratory's Secure, Survivable Communications Network (SSCN) program, JADE provides an environment in which to analyze the performance of ATM technology in a military environment. The testbed consists of ATM switches located at ROME LABoratory, US Army CECOM (Ft Monmouth, NJ), NRaD (San Diego, CA), DISA (Reston, VA), 480th AIG (Langley, VA), JITC (Ft Huachuca, AZ), and GTE (Needham, MA). These locations are connected via a commercially provided DS-3 (45 Mbps) ATM based infrastructure. The testbed provides a vehicle to analyze the performance of broad band networking in a reach-back, theater extension architecture as well as providing analysis and testing for the next generation Defense Information System Network (DISN).

ATM Command and Control Operations Research Domain (ACCORD). ACCORD is a four nation ATM testbed network being developed under TTCP cooperation. The

network consists of assets from Australia , Canada, Great Britain, and the United States. These Assets will be integrated using the existing JADE infrastructure to form the multi-national network.

SHF SATELLITE ANTENNA NULLING RANGE

This adaptive nulling antenna testbed capability is primarily focused on spacecraft communications uplinks. The testbed specifically addresses many unique analysis requirements relative to military communications uplinks. The testbed consists of a reconfigurable software station, a large variety of test equipment for verifying critical phase and amplitude tracking measurements, special test jigs for interfacing a number of nulling antenna architectures, data storage and retrieval systems which have been setup to handle antenna nulling test data, and various data display and recording systems. The reconfigurable software station can implement a wide variety of advanced nulling algorithms that are specifically tailored for uplink communications for geosynchronous communications spacecraft. Sustaining theater communications while closely located to enemy jammers requires nulling algorithms (and the hardware to implement them) that can specifically address military satellite communications users.

Within DoD: The only other Government lab or FFRDC lab that does analysis for spacecraft nulling antennas is MIT/Lincoln Laboratory (MIT/LL). Most of their work has traditionally been focused on advanced algorithm development and bench top nulling demonstrations. A small amount of actual nulling tests has been conducted on the MIT/LL ranges, but not on a permanent basis.

Within other non-DoD agencies: No work is being done in this area. The only other group who addresses satellite communications is NASA and they are not concerned with military unique requirements such as nulling antennas.

Industry: There are a few companies who have a fair amount of antenna nulling test capability. One example is TRW in Redondo Beach, CA. However, they do not conduct nulling tests on a permanent basis and they do not have the extensive nulling algorithm base and special test apparatus that Rome Laboratory has.

3.5 Expansion Potential

3.5.1 Laboratory Facilities: Use facilities records as of fourth-quarter FY93 in answering the following (in sq ft) for each CSF: (BRAC Criteria II)

			Space Capacity (KSF)		
Common Support	Facility or Equipment	Type of Space	Current	Used	Excess

C4I-AIR	Land OPS	Tech. Photo Lab	7.9	7.9	0
C4I-AIR	Training	Tech. Library	10.2	10.2	0
C4I-AIR	Maint. Fac.	Storage	3.5	3.4	0.1
C4I-AIR	Elct. Rsch.	Technical	436.6	434.3	2.3
C4I-AIR	Elct. Test	Technical	65.3	59.9	5.4
C4I-AIR	Equip. Rsch.	Technical	55.2	55.2	0
C4I-AIR	Equip. Test	Technical	95.8	95.8	0
C4I-AIR	Equip. Stor.	Storage	55.6	55.5	0.1
C4I-AIR	Ops. Stor.	Storage	2.7	2.7	0
C4I-AIR	Lab HQ	Administrative	89.2	89.2	0
C4I-AIR	Utilities	Utilities	10.6	9.2	1.4
		Total (KSF)	832.6	823.3	9.3

The excess propreties reported above represent two (2) off-site properties. Due to the realignment (1 Oct 95), of the base, approximately 1,700.0 KSF will be vacated and available for possible redevelopment. The 1,700 KSF figure is in excess of other DOD retained property, weapons storage areas, hangers, MWR facilities, AAFES facilities, base housing, dormitories, and dining facilities.

3.5.1.1 Describe the capacity of your activity to absorb additional similar workyears categorized in the same common support function with minor facility modification. If major modification is required, describe to what extent the facilities would have to be modified. (Use FY97 workyears as your requirement) (BRAC Criteria III)

Note: All excess manyear values are estimated quantities based upon professional judgement and experience.

Electromagnetics and Reliability Directorate:

Newport. With minor modifications (additional measurement positioner) and increased shift work and scheduling adjustments, the Newport Facility can increase workload.

Stockbridge. With minor modifications and increased shift work and scheduling adjustments, the Stockbridge Facility can also increase workload.

Verona. With minor modifications and additional radar system, Verona has the capacity to increase workload more than 300%.

Ava/Forestport. With schedule control and additional shifts, these sites could increase workload by ~300%.

E3RC. Minor addition of office space is only modification required to increase workload.

The Electromagnetics & Reliability Directorate (RL/ERG) is the premier Reliability Sciences Facility in the Department of Defense (DOD). RL/ER has a total of 112 personnel dedicated to Research and Development (R&D) activities in Reliability Sciences. (ERG) posseses unique/state-of-the-art equipment and a trained multi-disciplined and integrated staff, all present at one geographic location. RL/ER spans the spectrum from basic research for materials and devices through packaged electronic components to fielded systems including life-cycle support activities with the Air Logistics Centers. With only minor facility modification and the addition of ten to twelve scientists and engineers to our existing staff, we could effectively expand the following program areas: performing assessments of advanced technologies in the area of Reliability Sciences in support of ARPA sponsored efforts, conducting basic research for AFOSR, participation in DOD/Industry working group activities in the area of design and use of electronics in DOD/Industrial systems and the standardization activities associated with these technologies. Current examples of participation with other federal activities and industry include: the National Institute of Standards and Technology (NIST) Workshops and Advanced Technology Program, the Advanced Research Project Agency (ARPA) Technology Reinvestment Program, and Electronic Industry Association (EIA) standardization meetings. In the arena of Reliability Sciences, RL/ERG also represents the DOD in NATO activities related to reliability and quality. Examples of these international activities include: a Data Exchange Agreement on Vacuum Tube Reliability with the Dutch and a Data Exchange Agreement on Electronics Reliability with the French.

The additional ten to twelve manyears would be combined with reprioritizing up to ten manyears of available staffing as well as contracting out for specific tasks in support of our mission from readily accessible nearby organizations such as the Illinois Institute Technology Research Institute (IITRI), Oneida Research Corporation, State University of NY Technology Campus, etc. With these additional/reprioritized resources, Rome Laboratory would continue its mission to ensure that Air Force/DOD electronic systems reliably perform their specified mission in diverse and severe military environments. This mission would be accomplished by a broad spectrum of science and engineering research that encompasses all aspects of the system life cycle from "cradle to grave." This research would include technology areas that stress development and use of tools and techniques such as: modeling and simulation, materials and process characterization, operational assessments, failure modes and effects assessment and correction. In addition, emphasis would be placed on development of diagnostic techniques for implementation of cost effective logistic support capability such as strategies to support Two Level Maintenance. Results from these efforts would be utilized by both the commercial and industrial base in the design, development, production and maintenance of cost-effective reliability systems that meet customer needs.

The ER Directorate can absorb up to three times the present work years (approximately 50) invested in Reliability Sciences. This expansion to 150 work years can be done by utilization of existing facilities (i.e., second and third shift operations, outsourcing with Academia, private industries, and commercial organizations with similar capabilities and absorbing personnel from the respective Army and Navy facilities, etc.

Intelligence and Reconnaissance Directorate:

The IIPF (A Top Secret testing facility) is expandable into existing facilities which doubles laboratory facilities for about 650K. A 120 workyear expansion is feasible. Costs do not include upgrading building 102 to meet Director of Central Intelligence Security requirements

Ths ISF can readily be expanded with only capital equipment in section.

The Speech Processing activity could absorb three (3) additional workyears for In-house R & D within the Speech Processing Facility with minor or no modifications.

Surveillance and Photonics Directorate:

The Rome Laboratory Photonics Center fully utilizes its current administrative and utility space areas. With minor modifications of the existing facility additional personnel can be added. In addition to reconfiguration of existing laboratory space, the use of existing, adjoining buildings to house personnel would allow a ten percent (five people) increase in the workforce.
Airborne Radar Facility: The excess space capacity for the facility can support 1 additional computer workstation.

Attack Management Development Facility (AMDF): It has been estimated that 200 square feet of the lab space is under utilized (approximately 20%).

Command, Control and Communications (C3) Directorate:

With minor modifications of existing facilities, the Command, Control, and Communications (C3) Directorate can absorb a 20% increase in work years or 42 workyears.

3.5.1.2 If there is capacity to absorb additional workyears, how many additional workyears can be supported? (BRAC Criteria III)

As a minimum, with no modification, Rome Laboratory can support its "excess capacity" of 237 additional workyears. This is based upon the fact that in 1986 Rome Lab had 1084 workyears in the same facilities that today house 847 workyears. With minor modification as described in 3.5.1.1, Rome Lab can support 353 workyears.

DATE: 12 July, 1994

MEMORANDUM FOR RECORD, AF/CEPP

AIR STAFF CORRECTION WORKSHEET

PURPOSE: To provide corrected answer to Question 3.5.3, Utilities, in the Joint Cross Service Data for Rome Lab, Griffiss AFB

SOURCE: MAJCOM engineers.

METHOD: Telecon with MAJCOM & Base POCs

CONCLUSION: The capacity and current usage for utilities was misstated for the following:

Utility	Existing Data	Change To
Electric	74,003,703 KWH/Yr	37.2 MW

MAJCOM CONCURS: Maj Chang Kang, HQ AFMC/STC, Wright Patterson AFB, DSN: 787-5368.

BASE CONCURS: Mr Brian Hoehn, RL/CE, Griffiss AFB, DSN: 578-3131.

I certify that the above information is accurate and complete to the best of my knowledge and belief.

AIR STAFF REVIEWER: Steven K. Lillemon DATE: 2 Jul 94

Maj Steven K. Lillemon

AF/CEPP

94-08-31 08:07 RCVD

3.5.1.3 For 3.5.1.1 and 3.5.1.2 (above) describe the impact of military construction programs or other alteration projects programmed in the FY95 PBS. (BRAC Criteria II)

There are no planned Military Construction Projects for FY95 at Rome Laboratory.

3.5.2 Land Use: Provide number of buildable acres for additional laboratory/administrative support construction at your installation. (BRAC Criteria II)

1974 acres will become available once Griffiss AFB is realigned on 30 Sep 95 as result of BRAC Round III.

3.5.3 Utilities: Provide an estimate of your installation's capability to expand or procure additional utility services (electric, gas, water). Estimates should be provided in appropriate units -- e.g. KWH of electricity. (BRAC Criteria II)

Electricity	~~74,003,703 KWH/yr~~ See Change Dated 12 July, 1994
Water	375,268 Kgal/yr
Sewage	209,251 Kgal/yr
Central Steam Plant	3,172,600 MBTU/yr
Natural Gas	100 MCF/day