

DCN 966

DATA CALL #13 - REQUESTS FOR CLARIFICATION

Control # AW-089

BRAC-95 CERTIFICATION

Reference: SECNAV NOTE 11000 dtd 8 Dec 93

In accordance with policy set forth by the Secretary of the Navy, personnel of the Department of the Navy, uniformed and civilian, who provide information for use in the BRAC-95 process are required to provide a signed certification that states "I certify that the information contained herein is accurate and complete to the best of my knowledge and belief."

The signing of this certification constitutes a representation that the certifying official has reviewed the information and either (1) personally vouches for its accuracy and completeness or (2) has possession of, and is relying upon, a certification executed by a competent subordinate.

Each individual in your activity generating information for the BRAC-95 process must certify that information. Enclosure (1) is provided for individual certifications and may be duplicated as necessary. You are directed to maintain those certifications at your activity for audit purposes. For purposes of this certification sheet, the commander of the activity will begin the certification process and each reporting senior in the Chain of Command reviewing the information will also sign this certification sheet. This sheet must remain attached to this package and be forwarded up the Chain of Command. Copies must be retained by each level in the Chain of Command for audit purposes.

I certify the information contained herein is accurate and complete to the best of my knowledge and belief.

ACTIVITY COMMANDER

Thomas R. Darnell  
(Name (Please type or print))

  
Signature

Commanding Officer  
Title

20 September 1994  
Date

Naval Air Warfare Center, Aircraft Div.  
Activity

DATA CALL #13 - BSAT  
REQUEST FOR CLARIFICATION CONTROL #AW-089  
BRAC-95 CERTIFICATION

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

CAPTAIN JOHN B. PATTERSON  
NAME (Please type or print)

*J. B. Patterson*  
Signature

9/22/94

Date

ACTING COMMANDER  
Title

NAVAL AIR WARFARE CENTER AIRCRAFT DIVISION PATUXENT RIVER, MD  
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

WILLIAM E. NEWMAN  
NAME (Please type or print)

*W. E. Newman*  
Signature

9/20/94

Date

COMMANDER  
Title

NAVAL AIR WARFARE CENTER  
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

WILLIAM C. BOWES  
NAME (Please type or print)

*W. C. Bowes*  
Signature

29 Sep 94

Date

COMMANDER  
Title

NAVAL AIR SYSTEMS COMMAND  
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)  
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

\_\_\_\_\_  
NAME (Please type or print)

*W. C. Bowes*  
Signature

10/1/94

Date

\_\_\_\_\_  
Title



DEPARTMENT OF THE NAVY  
OFFICE OF THE SECRETARY  
WASHINGTON, D.C. 20350-1000

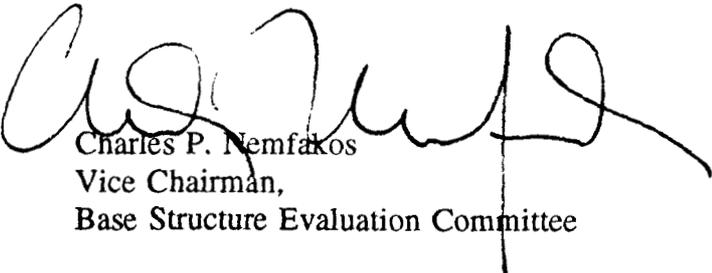
MM-0361-F7  
BSAT/MS  
3 October 1994

MEMORANDUM FOR CO-CHAIRS, TEST AND EVALUATION JOINT CROSS-SERVICE  
GROUP

Subj: PROVISION OF CERTIFIED NAVY DATA TO BRAC 95 TEST AND  
EVALUATION JOINT CROSS-SERVICE GROUP

In compliance with the Internal Control Plan for Managing the Identification of DoD Cross-Service Opportunities as Part of the DoD 1995 Base Realignment and Closure Process, dated 13 April 1994 and as authorized by the BRAC 95 Steering Group by memorandum dated 5 August 1994, I am forwarding the enclosed data and information to be used for analysis by the Test and Evaluation Joint Cross-Service Group. This data was obtained by the Department of the Navy (DoN) in response to the Test and Evaluation Joint Cross-Service Group Supplemental Data Call issued on 4 August 1994 and was certified in accordance with the DoN BRAC 95 certification policy and procedure.

The enclosed document is a certified true copy of the data call responses received from the Assistant Secretary of the Navy (RD&A). The only changes authorized for the enclosed data call responses will be any technical corrections made in response to errors identified by internal DoN verification checks, or for any additional clarifying information requested by the Test and Evaluation Joint Cross-Service Group. In either circumstance, another formal transmission will be made by DoN for any such data submitted to the Test and Evaluation Joint Cross-Service Group.

  
Charles P. Nemfakos  
Vice Chairman,  
Base Structure Evaluation Committee

94-10-03 19:44 RCVD

# DATA CALL 69 BRAC-95 CERTIFICATION

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

WILLIAM E. NEWMAN, RADM USN

NAME (Please type or print)

COMMANDER

Title

NAVAL AIR WARFARE CENTER

Activity

W E Newman

Signature

9/7/94

Date

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

W. C. BOWES, VADM USN

NAME (Please type or print)

COMMANDER

Title

NAVAL AIR SYSTEMS COMMAND

Activity

W C Bowes

Signature

7 Sep 94

Date

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

W. A. EARNER

NAME (Please type or print)

Title

Activity

W Earner

Signature

9/23/94

Date

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

ASSISTANT SECRETARY LEVEL

NORA SLATKIN

NAME (Please type or print)

ASN (RD&A)

Title

Activity

Nora Slatkin

Signature

3 OCTOBER 1994

Date

WC

DATA CALL 69  
NAVSEA SYSCOM

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print)

Signature

Title

Date

Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print)

Signature

Title

Date

Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

NAME (Please type or print)

Signature

G. R. STERNER

9/22/94

Commander

Title Naval Sea Systems Command

Date

Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)  
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

W. A. EARNER

NAME (Please type or print)

Signature

9/23/94

Title

Date

WC



DATA CALL 64  
PEO (TAD)

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print)

Signature

Title

Date

Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print)

Signature

Title

Date

Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

NAME (Please type or print)

Signature

G. R. STERNER

Commander

Title Naval Sea Systems Command

Date

9/22/94

Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)  
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

W. A. EARNER

NAME (Please type or print)

Signature

Title

Date

9/23/94





DEPARTMENT OF THE NAVY  
OFFICE OF THE SECRETARY  
WASHINGTON, D.C. 20350-1000

MM-0361-F7  
BSAT/MS  
3 October 1994

MEMORANDUM FOR CO-CHAIRS, TEST AND EVALUATION JOINT CROSS-SERVICE  
GROUP

Subj: PROVISION OF CERTIFIED NAVY DATA TO BRAC 95 TEST AND  
EVALUATION JOINT CROSS-SERVICE GROUP

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Charles P. Nemfakos  
Vice Chairman,  
Base Structure Evaluation Committee

**1. Naval Air Warfare Center, Weapons Division, China Lake, CA**

Revised APPENDIX A pages: 205R and 384R.  
Answers to RFC #EC-025 (pages 1 thru 44)

**2. Naval Surface Warfare Center, Crane Division, Crane, IN**

Responses to RFC #EC-024 for: Electronic Warfare Facility, Conventional Ammunition Facility and the Pyrotechnics Lab.

**3. Naval Surface Warfare Center, Dahlgren Division, Dahlgren, VA.**

Responses to RFC #EC-024 for: Explosive Experimental Area (EEA), Warheads Research Test Facility, Electromagnetic Vulnerability Assessment Facility, and Electromagnetic Pulse Facilities.

Revised APPENDIX A page for the Explosive Experimental Area (pageA2-5-R)

**4. Naval Surface Warfare Center, Indian Head Division, Indian Head, MD.**

Responses to RFC #EC-024 for: Non-Destructive Test, Propulsion/Component Test Facility, Environmental Test Facility, Cartridge Actuated Device (CAD) Test Facility, Chemical/Physical Characterization Facility,

**5. Naval Air Warfare Center, Aircraft Division, Patuxent River, MD**

Revised pages: AI5 R, AI101a R.

Revised APPENDIX A pages: Facility Condition form for the Electro-Optical & Reconnaissance System Test Facility (TAB 14), Additional Information form for the Ground Range Antenna Test Facility (TAB 16), Additional Information and Determination of Unconstrained Capacity forms for the Air Combat Environment Test and Evaluation Facility (TAB 26-page 1 & 2), Facility Condition form for the Test and Evaluation Hanger Space (TAB 35).

**6. Naval Surface Warfare Center, Port Hueneme Division, Port Hueneme, CA.**

Response for RFC #EC-024 for the Self Defense Test Ship.

**Attachment**

**7. Naval Air Warfare Center, Weapons Division, Point Mugu, CA**

Revised pages: 120R, 120aR, 121R, 125R, 125AR, 126R, 128R, and 130R.

Revised APPENDIX A pages: 8R, 22R, 32R, 42R, 70R, 89R, 106R, 124R, 134R, 153R, 216R, 246R, 276R, and 308R.

Responses to RFC #EC-025 (pages 1 thru 29).

**8. AEGIS Combat Systems Center (ASCS), Wallops Island, VA>**

Revised General Information and Additional Information forms for the Cruiser & Destroyer Buildings.

**9. Naval Surface Warfare Center, Dahlgren Division, White Oak, MD.**

Responses to RFC #EC-024 for the Nuclear Weapons Radiation Effects Complex, and the Hypervelocity Wind Tunnel Complex.

**Attachment**



DEPARTMENT OF THE NAVY  
OFFICE OF THE SECRETARY  
WASHINGTON, D. C. 20350-1000

94-09-30 13:26 RCVD

MM-0358-F7  
BSAT/MS  
30 September 1994

MEMORANDUM FOR CO-CHAIRS, TEST AND EVALUATION JOINT CROSS-SERVICE  
GROUP

SUBJECT: PROVISION OF CERTIFIED NAVY DATA TO BRAC 95 TEST AND  
EVALUATION JOINT CROSS-SERVICE GROUP

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The documents enclosed consist of a certified true copy of the revised data call response received from the activities listed on the attachment. If further revisions are necessary another formal transmission will be made by DoN.

Charles P. Nemfakos  
Vice Chairman  
Base Structure Evaluation Committee

Attachment

**1. Naval Air Warfare Center, Weapons Division, China Lake, CA**

Revised pages: 4R, 5R, 10R, 11R, 16R, 17R, 19R, 20R, 24R, 26R thru 30R, and 47R thru 185R.

Revised APPENDIX A pages: 1, 2, 3, 10R, 11R, 14R, 16R, 27R, 29R, 35R, 36R, 45R, 47R, 48R, 51R, 53R, 56R, 73R, 74R, 75R, 107R, 126R, 127R, 135R, 142R, 144R, 165R, 171R, 172R, 177R, 179R, 181R, 182R, 188R, 194R, 195R, 196R, 229R, 247R, 253R, 265R, 270R, 293R, 295R, 302R, 306R, 317R, 330R, 339R, 342R, 345R, 350R, 364R, 367R, 376R, 401R, 404R, 409R, 435R, 446R, 453R, 495R, 501R, 508R, 513R, 530R, 532R, 544R, and 545R. These revisions include responses to RFC's: A/W-009, 010, 011, 015, 016, 019, 026, and 029

**2. Naval Air Warfare Center, Aircraft Division, Indianapolis, IN**

Responses to RFC EC-025 for: Electronic Warfare Facility, and the ALQ-170 Lab.

**3. Naval Air Warfare Center, Aircraft Division, Patuxent River, MD**

Responses to RFC EC-025 for: Electronics Warfare/Avionics Flight Test Facility, Antenna Testing Laboratory Automated System (ATLAS), Combat Identification Systems, Ground Range Antenna Test Facility (GRATF), Communications Test and Evaluation Laboratory (COMTEL), Surveillance & Topographical Radar Systems (STARS) Laboratory, Air Combat Environment Test and Evaluation Facility (ACETEF), Chesapeake Test Range (CTR), Telemetry Data Systems Facility, Airborne Instrumentation Support Facility, Target Support Facility, and the Test and Evaluation Data Processing.

**4. Naval Air Warfare Center, Weapons Division, Point Mugu, CA**

Revised pages: 3R, 120R, 121R, 158R, 159R, 174R, 206R, 218R, and 219R

**Attachment**



DEPARTMENT OF THE NAVY  
OFFICE OF THE SECRETARY  
WASHINGTON, D.C. 20350-1000

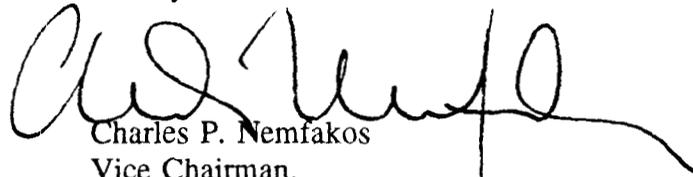
MM-0362-F7  
BSAT/MS  
3 October 1994

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GROUP

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Charles P. Nemfakos  
Vice Chairman,  
Base Structure Evaluation Committee

Attachment

94-10-03 19:32 RCVD

**1. Naval Air Warfare Center, Aircraft Division, Indianapolis, IN**

Revised pages: General Information forms for the Integrated Avionics Lab (Page 1R of TAB A) (answers RFC AV-020), EP-3/ES-3 Convert in Lieu of Procurement (CILOP) and Integrated Test Facilities (page 23R of TAB A) (answers RFC AV-018), and the TACAIR Pod Lab (page 30R of TAB A) (answers RFC AV-019).

**2. Naval Surface Warfare Center, Crane Division, Crane, IN**

Revised pages: 9R (answers RFC AW-030), 13R & 13a (answers RFC AW-031), 16R (answers RFC AW-032), 18R & 19R (answers RFC AW-033), and Historical Workload forms (answers RFC AW-34) for the Electronic Warfare Facility (page 8R of 13, Attachment A), Conventional Ammunition Facility (Summary) (page 2R of 61, Attachment B), Missile Fuze Test Facility (page 14R of 61, Attachment B), Ordnance Radiographic Facility (page 22R of 61, Attachment B), Ordnance Component Evaluation Facility (OCEF) (page 33R of 61, Attachment B), Fleet Ballistic Missile Ordnance Components Test Facility (page 44R of 61, Attachment B), Ordnance Environmental Test Facility (page 56R of 61, Attachment B), Ordnance Test Area (page 21R of 36, Attachment C), Automated Infrared Test Facility (page 27R of 36, Attachment C), Transient Velocity Windstream Apparatus (page 32R of 36, Attachment C), and the Facility Condition form (answers RFC AW-035) for the Conventional Ammunition Facility (Summary) (page 1R of 61, Attachment B).

**3. Naval Surface Warfare Center, Dahlgren Division, Dahlgren, VA.**

Revised pages: 13-R (answers RFC AW-036), 16-R (answers RFC AW-038), and narrative clarifications to RFC's AW-037 & AW-039.

**4. Naval Surface Warfare Center, Indian Head Division, Indian Head, MD.**

Narrative clarifications to RFC's AW-041 & AW-042.

**Attachment**



DEPARTMENT OF THE NAVY  
OFFICE OF THE SECRETARY  
WASHINGTON, D.C. 20350-1000

94-09-26 09:39 RCVD

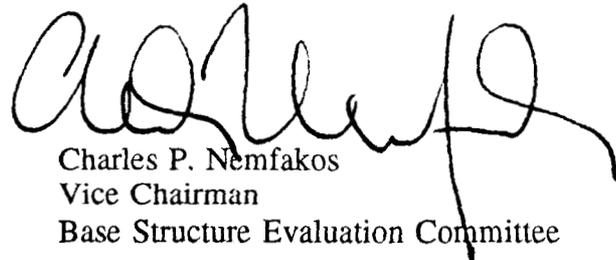
MM-0349-F7  
BSAT/MS  
26 September 1994

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GROUP

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Charles P. Nemfakos  
Vice Chairman  
Base Structure Evaluation Committee

Attachment

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Revised pages: AI5 R, AI101a R.

Revised APPENDIX A pages: Facility Condition form for the Electro-Optical & Reconnaissance System Test Facility (TAB 14), Additional Information form for the Ground Range Antenna Test Facility (TAB 16), Additional Information and Determination of Unconstrained Capacity forms for the Air Combat Environment Test and Evaluation Facility (TAB 26-page 1 & 2), Facility Condition form for the Test and Evaluation Hanger Space (TAB 35).

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**9. Naval Surface Warfare Center, Dahlgren Division, White Oak, MD.**

Responses to RFC #EC-024 for the Nuclear Weapons Radiation Effects Complex, and the Hypervelocity Wind Tunnel Complex.

**Attachment**





DEPARTMENT OF THE NAVY  
NAVAL AIR WARFARE CENTER  
NAVAL AIR WARFARE CENTER HEADQUARTERS  
1421 JEFFERSON DAVIS HWY  
ARLINGTON VA 22243

IN REPLY REFER TO

1000  
Ser NAWC-21C/

SEP 16 1994

From: Commander, Naval Air Warfare Center  
To: Distribution

Subj: RELEASE OF BASE REALIGNMENT AND CLOSURE DATA CALL IN  
THE ABSENCE OF THE COMMANDER

1. During the period 19-21 September I will be on travel.
2. Mr. Lewis L. Lundberg, Technical Director, Naval Air Warfare Center, is designated as acting as Acting Commander during this period. As such, he is authorized to release completed Base Realignment and Closure Data Calls and to provide certification for the data calls.

*W. E. Newman*  
W. E. NEWMAN

Distribution:  
COMNAVAIRWARCENWPNDIV  
COMNAVAIRWARCENACDIV  
NAVAIRWARTRASYS DIV



BRAC-95 CERTIFICATION

Reference: SECNAV NOTE 11000 dtd 8 Dec 93

In accordance with policy set forth by the Secretary of the Navy, personnel of the Department of the Navy, uniformed and civilian, who provide information for use in the BRAC-95 process are required to provide a signed certification that states "I certify that the information contained herein is accurate and complete to the best of my knowledge and belief."

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Each individual in your activity generating information for the BRAC-95 process must certify that information. Enclosure (1) is provided for individual certifications and may be duplicated as necessary. You are directed to maintain those certifications at your activity for audit purposes. For purposes of this certification sheet, the commander of the activity will begin the certification process and each reporting senior in the Chain of Command reviewing the information will also sign this certification sheet. This sheet must remain attached to this package and be forwarded up the Chain of Command. Copies must be retained by each level in the Chain of Command for audit purposes.

I certify the information contained herein is accurate and complete to the best of my knowledge and belief.

ACTIVITY COMMANDER

Thomas R. Darnell  
(Name (Please type or print))

  
Signature

Commanding Officer  
Title

14 September 1994  
Date

Naval Air Warfare Center, Aircraft Div.  
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

W. E. NEWMAN, RADM, USN

NAME (Please type or print)

COMMANDER

Title

NAVAL AIR WARFARE CENTER

Activity

W E Newman  
Signature

9/16/94  
Date

94-09-30 13:26 RCVD

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print)

Signature

Title

Date

Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

W. C. BOWES, VADM, USN

NAME (Please type or print)

COMMANDER

Title

NAVAL AIR SYSTEMS COMMAND

Activity

W C Bowes  
Signature

19 Sep 94  
Date

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

**DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)  
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)**

W. A. EARNER

NAME (Please type or print)

W A Earner  
Signature

Title

9/26/94  
Date

WC

*DATA CALL #11*  
BRAC-95 CERTIFICATION

Reference: SECNAVNOTE 11000 of 8 December 1993

In accordance with policy set forth by the Secretary of the Navy, personnel of the Department of the Navy, uniformed and civilian, who provide information for use in the BRAC-95 process are required to provide a signed certification that states "I certify that the information contained herein is accurate and complete to the best of my knowledge and belief."

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I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

ACTIVITY COMMANDER

CAPTAIN JOHN B. PATTERSON  
NAME (Please type or print)

*John B. Patterson*  
Signature

ACTING COMMANDER  
Title

9/14/94  
Date

NAVAL AIR WARFARE CENTER AIRCRAFT DIVISION PATUXENT RIVER, MD  
Activity



DEPARTMENT OF THE NAVY

NAVAL AIR WARFARE CENTER  
WEAPONS DIVISION  
CHINA LAKE, CALIFORNIA 93555-6001

IN REPLY REFER TO:

11000  
Ser C0014(08E000D)/7327  
13 Sept 94

94-09-30 13:25 RCVD

From: Commander, Naval Air Warfare Center Weapons Division  
To: Commander, Naval Air Warfare Center

Subj: BASE REALIGNMENT AND CLOSURE (BRAC) DATA CALL #13

- Ref:
- (a) CNO ltr 11000 Ser N441/4U594482 of 8 Apr 94
  - (b) Results of BRAC-95 Audit at NAWC China Lake of 27 Jul 94
  - (c) BSAT Request for Clarification # A/W-009 of 31 Aug 94
  - (d) BSAT Request for Clarification # A/W-010 of 19 Aug 94
  - (e) BSAT Request for Clarification # A/W-011 of 19 Aug 94
  - (f) BSAT Request for Clarification # A/W-015 of 2 Sep 94
  - (g) BSAT Request for Clarification # A/W-016 of 31 Aug 94
  - (h) BSAT Request for Clarification # A/W-019 of 31 Aug 94
  - (i) BSAT Request for Clarification # A/W-026 of 31 Aug 94
  - (j) BSAT Request for Clarification # A/W-029 of 31 Aug 94

- Encl:
- (1) Revised Pages for BRAC '95 Data Call #13 as of 13 September 1994 for NAWCWPNS China Lake
  - (2) COMNAWCWPNS Certification for Revised Pages for BRAC '95 Data Call #13 for the China Lake site

1. We responded to the subject Data Call per reference (a) on 11 May 1994. Reference (b) is the results of the Naval Audit Service review of Naval Air Warfare Center Weapons Division (NAWCWPNS) China Lake BRAC '95 Data Call #13. References (c) through (j) are requests for correction or clarification of the subject Data Call which came from the Base Structure Analysis Team. Also, after further review of Data Call #13 by NAWCWPNS personnel, some additional changes were made, and are submitted herein.

2. Enclosures (1) and (2) are submitted as the NAWCWPNS China Lake revised response to BRAC '95 Data Call #13 as of 13 September 1994 as per requested in references (b) through (j) as well as additional changes by NAWCWPNS personnel.

3. If there are questions on this data submission, please contact Matt Anderson at DSN 469-1839 or (619) 927-1839.

  
D. B. MCKINNEY





DEPARTMENT OF THE NAVY  
OFFICE OF THE SECRETARY  
WASHINGTON, D.C. 20350-1000

94-09-30 13:26 RCVD

MM-0358-F7  
BSAT/MS  
30 September 1994

MEMORANDUM FOR CO-CHAIRS, TEST AND EVALUATION JOINT CROSS-SERVICE  
GROUP

SUBJECT: PROVISION OF CERTIFIED NAVY DATA TO BRAC 95 TEST AND  
EVALUATION JOINT CROSS-SERVICE GROUP

In compliance with the Internal Control Plan for Managing the Identification of DoD Cross-Service Opportunities as Part of the DoD 1995 Base Realignment and Closure Process, dated 13 April 1994 and as authorized by the BRAC 95 Steering Group by memorandum dated 5 August 1994, I am forwarding the enclosed data and information to be used for analysis by the Test and Evaluation Joint Cross-Service Group. This data was obtained by the Department of the Navy (DoN) in response to the Test and Evaluation Joint Cross-Service Group Guidance Package issued on 31 March 1994 and was certified in accordance with the DoN BRAC 95 certification policy and procedure.

The documents enclosed consist of a certified true copy of the revised data call response received from the activities listed on the attachment. If further revisions are necessary another formal transmission will be made by DoN.

Charles P. Nemfakos  
Vice Chairman  
Base Structure Evaluation Committee

Attachment

**1. Naval Air Warfare Center, Weapons Division, China Lake, CA**

Revised pages: 4R, 5R, 10R, 11R, 16R, 17R, 19R, 20R, 24R, 26R thru 30R, and 47R thru 185R.

Revised APPENDIX A pages: 1, 2, 3, 10R, 11R, 14R, 16R, 27R, 29R, 35R, 36R, 45R, 47R, 48R, 51R, 53R, 56R, 73R, 74R, 75R, 107R, 126R, 127R, 135R, 142R, 144R, 165R, 171R, 172R, 177R, 179R, 181R, 182R, 188R, 194R, 195R, 196R, 229R, 247R, 253R, 265R, 270R, 293R, 295R, 302R, 306R, 317R, 330R, 339R, 342R, 345R, 350R, 364R, 367R, 376R, 401R, 404R, 409R, 435R, 446R, 453R, 495R, 501R, 508R, 513R, 530R, 532R, 544R, and 545R. These revisions include responses to RFC's: A/W-009, 010, 011, 015, 016, 019, 026, and 029

**2. Naval Air Warfare Center, Aircraft Division, Indianapolis, IN**

Responses to RFC EC-025 for: Electronic Warfare Facility, and the ALQ-170 Lab.

**3. Naval Air Warfare Center, Aircraft Division, Patuxent River, MD**

Responses to RFC EC-025 for: Electronics Warfare/Avionics Flight Test Facility, Antenna Testing Laboratory Automated System (ATLAS), Combat Identification Systems, Ground Range Antenna Test Facility (GRATF), Communications Test and Evaluation Laboratory (COMTEL), Surveillance & Topographical Radar Systems (STARS) Laboratory, Air Combat Environment Test and Evaluation Facility (ACETEF), Chesapeake Test Range (CTR), Telemetry Data Systems Facility, Airborne Instrumentation Support Facility, Target Support Facility, and the Test and Evaluation Data Processing.

**4. Naval Air Warfare Center, Weapons Division, Point Mugu, CA**

Revised pages: 3R, 120R, 121R, 158R, 159R, 174R, 206R, 218R, and 219R



DEPARTMENT OF THE NAVY  
OFFICE OF THE SECRETARY  
WASHINGTON, D.C. 20350-1000

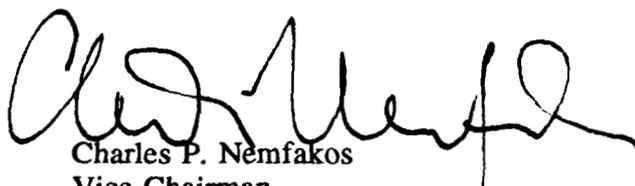
MM-0331-F6  
BSAT/MS  
12 September 1994

MEMORANDUM FOR CO-CHAIRS, TEST AND EVALUATION JOINT CROSS-SERVICE  
GROUP

SUBJECT: PROVISION OF CERTIFIED NAVY DATA TO BRAC 95 TEST AND  
EVALUATION JOINT CROSS-SERVICE GROUP

In compliance with the Internal Control Plan for Managing the Identification of DoD Cross-Service Opportunities as Part of the DoD 1995 Base Realignment and Closure Process, dated 13 April 1994 and as authorized by the BRAC 95 Steering Group by memorandum dated 5 August 1994, I am forwarding the enclosed data and information to be used for analysis by the Test and Evaluation Joint Cross-Service Group. This data was obtained by the Department of the Navy (DoN) in response to the Test and Evaluation Joint Cross-Service Group Guidance Package issued on 31 March 1994 and was certified in accordance with the DoN BRAC 95 certification policy and procedure.

The documents enclosed consist of a certified true copy of the revised data call response received from the activities listed on the attachment. If further revisions are necessary another formal transmission will be made by DoN.

  
Charles P. Nemfakos  
Vice Chairman  
Base Structure Evaluation Committee

Attachment

**1. Naval Air Warfare Center, Weapons Division, China Lake, CA.**

Revised pages: 4, 146, 147, 364, and 367.

**2. Naval Air Warfare Center, Weapons Division, Point Mugu, CA.**

Revised pages: 3, 63, 64, and 227.

**3. Naval Air Warfare Center, Aircraft Division, Patuxent River, MD.**

Revised pages: AI103, AI103a, AI103b, AI103c, AI167, General Information & Historical Workload forms for the Surveillance and Topographical Analysis Radar Systems, Historical Workload form for the Electro-Optical & Reconnaissance System Test Facility, Historical Workload & Determination of Unconstrained Capacity forms for the Chesapeake Test Range, Historical Workload form for the Project Beartrap Lab, and Historical Workload form for the Acoustic Test Facility.

**4. AEGIS Combat Systems Center, Wallops Island, VA.**

Revised pages: 7, 13, 17, Historical Workload form, General Information form, and Additional Information form.

**5. Naval Surface Warfare Center, Crane Division, Crane, IN**

Revised pages: Determination of Unconstrained Capacity forms for both the Ordnance Radiographic Facility (page 23 of 61), and the Ordnance Environmental Test Facility (page 57 of 61).

**6. Naval Surface Warfare Center, Port Hueneme Division, Port Hueneme, CA.**

Revised pages: 40, 45, 61, 73, 74, and 76.



DEPARTMENT OF THE NAVY  
OFFICE OF THE SECRETARY  
WASHINGTON, D.C. 20350-1000

MM-0328-F6  
BSAT/MS  
9 September 1994

MEMORANDUM FOR CO-CHAIRS, TEST AND EVALUATION JOINT CROSS-SERVICE  
GROUP

SUBJECT: PROVISION OF CERTIFIED NAVY DATA TO BRAC 95 TEST AND  
EVALUATION JOINT CROSS-SERVICE GROUP

In compliance with the Internal Control Plan for Managing the Identification of DoD Cross-Service Opportunities as Part of the DoD 1995 Base Realignment and Closure Process, dated 13 April 1994 and as authorized by the BRAC 95 Steering Group by memorandum dated 5 August 1994, I am forwarding the enclosed data and information to be used for analysis by the Test and Evaluation Joint Cross-Service Group. This data was obtained by the Department of the Navy (DoN) in response to the Test and Evaluation Joint Cross-Service Group Guidance Package issued on 30 March 1994 and was certified in accordance with the DoN BRAC 95 certification policy and procedure.

The enclosed document is a certified true copy of the data call response received from the Naval Air Warfare Center, Aircraft Division, Warminster. The only changes authorized for the enclosed data call response will be any technical corrections made in response to errors identified by internal DoN verification checks, or for any additional clarifying information requested by the Test and Evaluation Joint Cross-Service Group. In either circumstance, another formal transmission will be made by DoN for any such data submitted to the Test and Evaluation Joint Cross-Service Group.

A handwritten signature in black ink, appearing to read "C. P. Nemfakos", is written over the typed name and title.

Charles P. Nemfakos  
Vice Chairman  
Base Structure Evaluation Committee

Enclosure



DEPARTMENT OF THE NAVY  
OFFICE OF THE SECRETARY  
WASHINGTON, D.C. 20350-1000

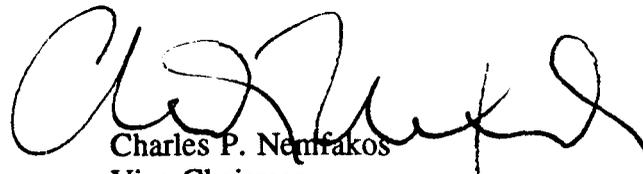
MM-0289-F6  
BSAT/MS  
8 August 1994

MEMORANDUM FOR CO-CHAIRS, TEST AND EVALUATION JOINT CROSS-SERVICE  
GROUP

SUBJECT: PROVISION OF CERTIFIED NAVY DATA TO BRAC 95 TEST AND  
EVALUATION JOINT CROSS-SERVICE GROUP

In compliance with the Internal Control Plan for Managing the Identification of DoD Cross-Service Opportunities as Part of the DoD 1995 Base Realignment and Closure Process, dated 13 April 1994 and as authorized by the BRAC 95 Steering Group by memorandum dated 5 August 1994, I am forwarding the enclosed data and information to be used for analysis by the Test and Evaluation Joint Cross-Service Group. This data was obtained by the Department of the Navy (DoN) in response to the Test and Evaluation Joint Cross-Service Group Guidance Package issued on 30 March 1994 and was certified in accordance with the DoN BRAC 95 certification policy and procedure.

The documents enclosed consist of a certified true copy of the data call responses received from the activities listed on the attachment [except as noted]. The only changes authorized for the enclosed data call responses will be any technical corrections made in response to errors identified by internal DoN verification checks, or for any additional clarifying information requested by the Test and Evaluation Joint Cross-Service Group. In either circumstance, another formal transmission will be made by DoN for any such data submitted to the Test and Evaluation Joint Cross-Service Group.

  
Charles P. Nemfakos  
Vice Chairman  
Base Structure Evaluation Committee

Attachment

**1. NAVAL AIR WARFARE CENTER, WEAPONS DIVISION, CHINA LAKE, CA**

Certified and forwarded by the activity on 13 May 1994

Certified and forwarded by OPNAV on 27 May 1994

**2. NAVAL AIR WARFARE CENTER, WEAPONS DIVISION, POINT MUGU, CA**

Certified and forwarded by the activity on 13 May 1994

Certified and forwarded by OPNAV on 27 May 1994

**3. NAVAL AIR WARFARE CENTER, AIRCRAFT DIVISION,  
PATUXENT RIVER, MD**

Certified and forwarded by the activity on 13 May 1994

Certified and forwarded by OPNAV on 27 May 1994

**4. NAVAL RESEARCH LABORATORY, WASHINGTON, DC**

Certified and forwarded by the activity on 6 July 1994

Certified and forwarded by OPNAV on 30 July 1994

**5. NAVAL SURFACE WARFARE CENTER, CARDEROCK DIVISION,  
BETHESDA, MD**

Certified and forwarded by the activity on 10 May 1994

Certified and forwarded by OPNAV in May 1994

**ATTACHMENT**

**6. NAVAL SURFACE WARFARE CENTER, CRANE DIVISION, CRANE, IN**

Certified and forwarded by the activity on 6 May 1994, and revised on 1 June 1994

Certified and forwarded by OPNAV on 27 May 1994, and revised on 8 July 1994

**7. NAVAL SURFACE WARFARE CENTER, CRANE DIVISION, LOUISVILLE, KY**

Certified and forwarded by the activity on 6 May 1994

Certified and forwarded by OPNAV on 23 May 1994

**8. NAVAL SURFACE WARFARE CENTER, DAHLGREN DIVISION,  
DAHLGREN, VA**

Certified and forwarded by the activity on 10 May 1994

Certified and forwarded by OPNAV on 20 May 1994

**9. NAVAL SURFACE WARFARE CENTER, INDIAN HEAD DIVISION,  
INDIAN HEAD, MD**

Certified and forwarded by the activity on 8 May 1994

Certified and forwarded by OPNAV on 20 May 1994

**10. NAVAL SURFACE WARFARE CENTER, PORT HUENEME DIVISION,  
PORT HUENEME, CA**

Certified and forwarded by the activity on 23 May 1994

Certified and forwarded by OPNAV on 2 June 1994

**ATTACHMENT**

**11. NAVAL SURFACE WARFARE CENTER, DAHLGREN DIVISION, WHITE OAK,  
MD**

Certified and forwarded by the activity on 9 May 1994

Certified and forwarded by OPNAV on 20 May 1994

**12. NAVAL WARFARE ASSESSMENT DIVISION, CORONA, CA**

Certified and forwarded by the activity on 5 May 1994

Certified and forwarded by OPNAV on 2 June 1994

**13. PACIFIC MISSILE RANGE FACILITY, BARKING SANDS, HI**

Certified and forwarded by the activity on 4 May 1994

Certified and forwarded by OPNAV on 20 June 1994

**14. ATLANTIC FLEET WEAPONS TRAINING FACILITY, ROOSEVELT ROADS,  
PR**

Certified and forwarded by the activity on 4 May 1994

Certified and forwarded by OPNAV on 2 June 1994

**15. COMMANDER, OPERATIONAL TEST & EVALUATION FORCE, NORFOLK,  
VA**

Certified and forwarded by the activity on 26 May 1994

Certified and forwarded by OPNAV on 13 June 1994

**ATTACHMENT**

**16. AEGIS COMBAT SYSTEMS CENTER, WALLOPS ISLAND, VA**

Certified and forwarded by the activity on 10 May 1994

Certified and forwarded by OPNAV on 2 June 1994

**17. NAVAL AIR WARFARE CENTER, AIRCRAFT DIVISION, DETACHMENT  
WARMINSTER, PA**

No response received to date.

**18. NAVAL AIR WARFARE CENTER, AIRCRAFT DIVISION, INDIANAPOLIS,  
ID**

Certified and forwarded by the activity on 7 July 1994

Certified and forwarded by OPNAV on 25 July 1994

**19. NAVAL AIR WARFARE CENTER, AIRCRAFT DIVISION, LAKEHURST, NJ**

Certified and forwarded by the activity on 29 June 1994

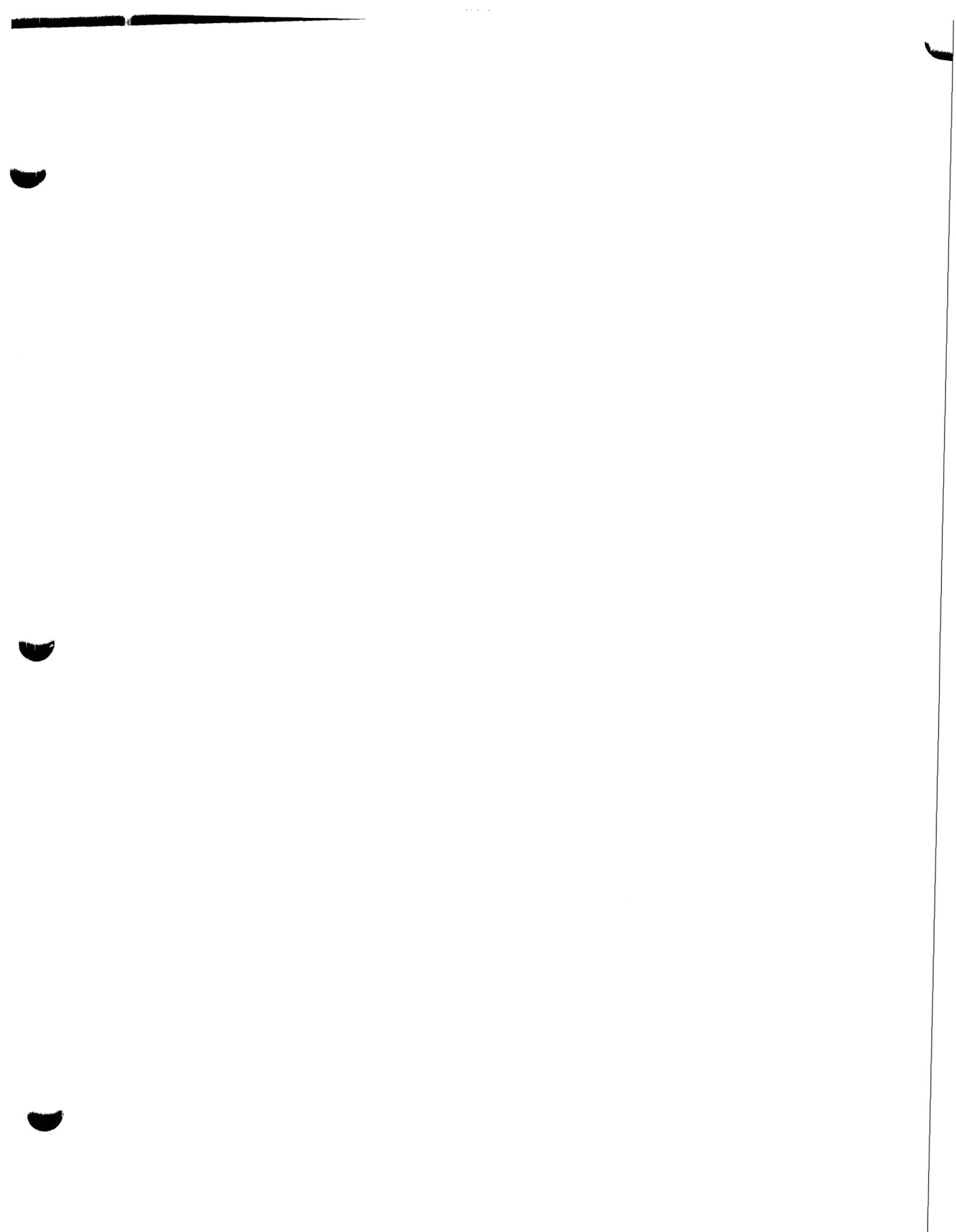
Certified and forwarded by OPNAV on 25 July 1994

**20. NAVAL COMMAND, CONTROL AND OCEAN SURVEILLANCE CENTER,  
IN-SERVICE ENGINEERING, EAST COAST DIVISION, CHARLESTON  
DETACHMENT, ST. INIGOES**

Certified and forwarded by the activity on 26 July 1994

Certified and forwarded by OPNAV on 6 August 1994

**ATTACHMENT**





DEPARTMENT OF THE AIR FORCE  
WASHINGTON DC



OFFICE OF THE ASSISTANT SECRETARY

OCT 13 1994

MEMORANDUM FOR THE CHAIRMAN, JOINT CROSS-SERVICE GROUP FOR  
TEST & EVALUATION

SUBJECT: Air Force Input to the Joint Cross-Service Group (JCSG) for Test & Evaluation

Provided at attachment 2 is an Air Force validated data submission to the JCSG for Test & Evaluation. This submission is in addition to the data submitted on 5 Oct 94 (Atch 3). The data has been collected and certified in accordance with the Air Force Internal Control Plan.

Attachment 1 is a list of the data we are providing. Data provided at attachment 2 in the form of Air Staff worksheets, Audit-related, and/or Request For Clarification responses should be incorporated as "pen and ink" changes. Questions can be referred to Lt Col Mark Bruggemeyer or Maj Michael Wallace, HQ USAF/RTR, 54578.

JAMES F. BOATRIGHT  
Deputy Assistant Secretary of the Air Force  
(Installations)

Attachments:

1. List of Air Force Test & Evaluation Data Provided
2. Joint Test & Evaluation Data Changes
3. Air Force Input to Test & Evaluation JCSG (w/o Atchs), 5 Oct 94

**LIST OF AIR FORCE TEST & EVALUATION DATA PROVIDED**

**ACTIVITY**

1. Two Test & Evaluation JCSG RFCs

AV 060 & AV 061

PLACE HOLDER

FOR

JOINT DATA SUBMISSION



DEPARTMENT OF THE AIR FORCE  
WASHINGTON DC



5 OCT 1994

OFFICE OF THE ASSISTANT SECRETARY

MEMORANDUM FOR THE CHAIRMAN, JOINT CROSS-SERVICE GROUP FOR  
TEST & EVALUATION

SUBJECT: Air Force Input to the Joint Cross-Service Group (JCSG) for Test & Evaluation

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JAMES F. BOATRIGHT  
Deputy Assistant Secretary of the Air Force  
(Installations)

Attachments:

1. List of Air Force Test & Evaluation Data Provided
2. Joint Test & Evaluation Data Changes
3. Air Force Input to Test & Evaluation JCSG (w/o Atchs), 23 Sep 94

**LIST OF OUTSTANDING AIR FORCE TEST & EVALUATION DATA**

**ACTIVITY**

1. Edwards AFB

Change 3



DEPARTMENT OF THE AIR FORCE  
WASHINGTON DC



5 OCT 1994

OFFICE OF THE ASSISTANT SECRETARY

**MEMORANDUM FOR THE CHAIRMAN, JOINT CROSS-SERVICE GROUP FOR  
TEST & EVALUATION**

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**JAMES F. BOATRIGHT**  
Deputy Assistant Secretary of the Air Force  
(Installations)

**Attachments:**

1. List of Air Force Test & Evaluation Data Provided
2. Joint Test & Evaluation Data Changes
3. Air Force Input to Test & Evaluation JCSG (w/o Atchs), 23 Sep 94

**LIST OF AIR FORCE TEST & EVALUATION DATA PROVIDED**

**ACTIVITY**

1. Two Test & Evaluation JCSG RFCs
2. Twenty HQ ACC Audit Related Correction Worksheets

AV 055 & AV 058  
Nellis (one)  
Tyndall (five)  
Kirtland (fourteen)

PLACE HOLDER

FOR

JOINT DATA SUBMISSION



DEPARTMENT OF THE AIR FORCE  
WASHINGTON DC



22 SEP 1994

OFFICE OF THE ASSISTANT SECRETARY

**MEMORANDUM FOR THE CHAIRMAN, JOINT CROSS-SERVICE GROUP FOR  
TEST & EVALUATION**

**SUBJECT: Air Force Input to the Joint Cross-Service Group (JCSG) for Test & Evaluation**

Provided at attachment 2 is an Air Force validated data submission to the JCSG for Test & Evaluation. This submission is in addition to the data submitted on 22 Sep 94 (Atch 3). The data has been collected and certified in accordance with the Air Force Internal Control Plan.

Attachment 1 is a list of the data we are providing. Data provided at attachment 2 in the form of Air Staff worksheets, Audit-related, and/or Request For Clarification responses should be incorporated as "pen and ink" changes. The Test & Evaluation Supplemental Data Call is complete. Questions can be referred to Lt Col Mark Bruggemeyer or Maj Michael Wallace, HQ USAF/RTR, 54578.

**JAMES F. BOATRIGHT**  
Deputy Assistant Secretary of the Air Force  
(Installations)

**Attachments:**

1. List of Air Force Test & Evaluation Data Provided
2. Joint Test & Evaluation Data Changes
3. Air Force Input to Test & Evaluation JCSG (w/o Atchs), 22 Sep 94



DEPARTMENT OF THE AIR FORCE  
WASHINGTON DC



22 SEP 1994

OFFICE OF THE ASSISTANT SECRETARY

MEMORANDUM FOR THE CHAIRMAN, JOINT CROSS-SERVICE GROUP FOR  
TEST & EVALUATION

SUBJECT: Air Force Input to the Joint Cross-Service Group (JCSG) for Test & Evaluation

Provided at attachment 2 is an Air Force validated data submission to the JCSG for Test & Evaluation. This submission is in addition to the data submitted on 22 Sep 94 (Atch 3). The data has been collected and certified in accordance with the Air Force Internal Control Plan.

Attachment 1 is a list of the data we are providing. Data provided at attachment 2 in the form of Air Staff worksheets, Audit-related, and/or Request For Clarification responses should be incorporated as "pen and ink" changes. The Test & Evaluation Supplemental Data Call is complete. Questions can be referred to Lt Col Mark Bruggemeyer or Maj Michael Wallace, HQ USAF/RTR, 54578.

JAMES F. BOATRIGHT  
Deputy Assistant Secretary of the Air Force  
(Installations)

Attachments:

1. List of Air Force Test & Evaluation Data Provided
2. Joint Test & Evaluation Data Changes
3. Air Force Input to Test & Evaluation JCSG (w/o Atchs), 22 Sep 94

## LIST OF AIR FORCE TEST & EVALUATION DATA PROVIDED

### ACTIVITY

1. Test & Evaluation Supplemental Data Call (Single Page Summary)
2. Test & Evaluation Supplemental Data Call (Supporting Documentation)
3. Test & Evaluation JCSG RFCs (Eight): AV 045, EC 021, EC 023, A/W 071,  
A/W 073, A/W 081, A/W 082, A/W 084
4. One AF/CEVP Correction Worksheet, 23 Sep 94



DEPARTMENT OF THE ARMY  
OFFICE OF THE CHIEF OF STAFF  
200 ARMY PENTAGON  
WASHINGTON DC 20310-0200



REPLY TO  
ATTENTION OF

23 SEP 94

DACS-TAB

MEMORANDUM FOR THE CHAIRMAN, TEST AND EVALUATION JOINT  
CROSS-SERVICE WORKING GROUP

SUBJECT: T&E Requests for Clarification and Corrected Data Submission

The enclosed T&E data is provided in accordance with the Defense Base Closure and Realignment Act of 1990, as amended, which requires certification of the accuracy and completeness of all information provided to the Commission and the Secretary of Defense.

The attached data clarification responses to T&E RFCs AW064, AW065, AW068, AW074 and AV050 have been certified at both the Installation and the Major Command level. The information contained in this report is true and complete to the best of my knowledge and belief.

If we can be of further assistance, please contact The Army Basing Study Office, T&E representative, LTC Jack Marriott, 697-1765.

*John A. Marriott, LTC, GS*  
MICHAEL G. JONES  
Colonel, U.S. Army  
Director, The Army Basing Study

FOR OFFICIAL USE ONLY

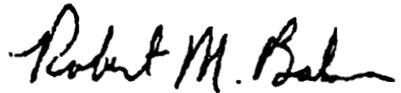
**WHITE SANDS MISSILE RANGE  
BRAC Data Call -- Test and Evaluation Supplement  
(White Sands Missile Range Geographic Management Area)**

20 September 1994

**CERTIFICATION STATEMENT**

This report provides supplemental information, as requested by the Army T&E BRAC Office, to the WSMR Geographic Management Area BRAC 95 -- Test and Evaluation Data Call. The specific questions answered in this report are: A/W-064, A/W-065, A/W-068, A/W-074, and a series of questions concerning BRAC Data Call 7 that were received telephonically from Mr. Holloway on 16 September.

The information contained in the attached report at this time is accurate and complete to the best of my knowledge and belief.



**ROBERT M. BAKER**  
Colonel, Corps of Engineers  
Deputy Commander

FOR OFFICIAL USE ONLY



DEPARTMENT OF THE AIR FORCE  
WASHINGTON DC



94-09-22 18:40 VD

22 SEP 1994

OFFICE OF THE ASSISTANT SECRETARY

MEMORANDUM FOR THE CHAIRMAN, JOINT CROSS-SERVICE GROUP FOR  
TEST & EVALUATION

SUBJECT: Air Force Input to the Joint Cross-Service Group (JCSG) for Test & Evaluation

Provided at attachment 2 is an Air Force validated data submission to the JCSG for Test & Evaluation. This submission is in addition to the data submitted on 19 Sep 94 (Atch 3). The data has been collected and certified in accordance with the Air Force Internal Control Plan. Attachment 1 is a list of the data we are providing. Data provided at attachment 2 in the form of Air Staff worksheets and/or Request For Clarification responses should be incorporated as "pen and ink" changes. Outstanding data is listed at attachment 4. When the remaining information is available, I will forward it to you under separate cover. Questions can be referred to Lt Col Mark Bruggemeyer or Maj Michael Wallace, HQ USAF/RTR, 54578.

JAMES F. BOATRIGHT  
Deputy Assistant Secretary of the Air Force  
(Installations)

Attachments:

1. List of Air Force Test & Evaluation Data Provided
2. Joint Test & Evaluation Data Changes
3. Air Force Input to Test & Evaluation JCSG (w/o Atchs), 19 Sep 94
4. List of Outstanding Air Force Test & Evaluation Data

**LIST OF AIR FORCE TEST & EVALUATION DATA PROVIDED**

ACTIVITY

1. Test & Evaluation JCSG RFCs (Eleven)

AV 048, EC 022, EC 030, EC 031, EC 033, A/W 008  
A/W 070, A/W 077, A/W 078, A/W 080, A/W 083

PLACE HOLDER

FOR

JOINT DATA SUBMISSION



DEPARTMENT OF THE AIR FORCE  
WASHINGTON DC



19 SEP 1994

OFFICE OF THE ASSISTANT SECRETARY

MEMORANDUM FOR THE CHAIRMAN, JOINT CROSS-SERVICE GROUP FOR  
TEST & EVALUATION

SUBJECT: Air Force Input to the Joint Cross-Service Group (JCSG) for Test & Evaluation

Provided at attachment 2 is an Air Force validated data submission to the JCSG for Test & Evaluation. This submission is in addition to the data submitted on 15 Sep 94 (Atch 3). The data has been collected and certified in accordance with the Air Force Internal Control Plan.

Attachment 1 is a list of the data we are providing. Data provided at attachment 2 in the form of Request For Clarification responses should be incorporated as "pen and ink" changes.

Outstanding data is listed at attachment 4. When the remaining information is available, I will forward it to you under separate cover. Questions can be referred to Lt Col Mark Bruggemeyer or Maj Michael Wallace, HQ USAF/RTR, 54578.

JAMES F. BOATRIGHT  
Deputy Assistant Secretary of the Air Force  
(Installations)

Attachments:

1. List of Air Force Test & Evaluation Data Provided
2. Joint Test & Evaluation Data Changes
3. Air Force Input to Test & Evaluation JCSG (w/o Atchs), 15 Sep 94
4. List of Outstanding Air Force Test & Evaluation Data

(example Air Staff Certification memorandum)

MEMORANDUM FOR HQ USAF/XXXX

SUBJ: Validation of Laboratory Joint Cross Service Group Data Call

TO: HQ USAF/RTR

This letter is to certify the Laboratory Joint Cross Service Group Data Calls listed at attachment 1. All required bases were reviewed except as noted (atch 2); changes or data corrections are itemized by base at attachment 3. The data is certified accurate and complete to the best of my knowledge.

JOE P. ACTION  
Lt Col, USAF  
Program Analyst, XXXX Section

3 Atch  
1. XXXX Data Call  
2. Bases Evaluated List  
3. Data correction list

1st Ind: XXXX

TO: RTR

Attached is the data required for the 1995 Joint Cross Service Group. I certify it is accurate and complete to the best of my knowledge and belief.

TOP DOG  
Colonel, USAF  
Division Chief XXXX

3 Atch  
1. XXXX data call  
2. Bases Evaluated list  
3. Data correction list

**LIST OF OUTSTANDING AIR FORCE TEST & EVALUATION DATA**

ACTIVITY

QUESTION

- |  |  |
|--|--|
| 1. Test & Evaluation JCSG RFCs (Eight)   | AV-045, EC-021, EC-023, A/W-071,<br>A/W-073, A/W-081, A/W-082, & A/W 084 |
| 2. HQ AFOTEC Supplemental Data Call Submission, 22 Aug 94                                  |  |
| 3. HQ ACC Supplemental Data Call Submission, 19 Aug 94                                     |  |
| 4. HQ AFMC Supplemental Data Call Submission (Unclassified portion), 26 Aug 94             |  |
| 5. HQ AFMC Supplemental Data Call Submission (Confidential portion - Eglin AFB), 19 Aug 94 |  |
| 6. HQ AFOTEC Supplemental Data Call Update, 30 Aug 94                                      |  |



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS AIR FORCE MATERIEL COMMAND  
WRIGHT-PATTERSON AIR FORCE BASE, OHIO

1 SEP 1994

MEMORANDUM FOR HQ USAF/RTR

FROM: HQ AFMC/XP  
4375 Chidlaw Rd, Ste 6  
Wright-Patterson AFB OH 45433-5006

SUBJECT: Air Logistics Center Response to Base Realignment and Closure (BRAC) '95  
Test and Evaluation (T&E) Data Call

1. We have reviewed and forwarded all data received from the Air Force Materiel Command Air Logistics Centers for the BRAC '95 Test and Evaluation Data Call. The inputs include the initial (31 Mar 94), and supplemental (21 Aug 94) data submissions from Sacramento Air Logistics Center, McClellan Air Force Base, California. We received no other Air Logistics Center submissions.

2. Statements from the center commanders are attached. All centers have determined their applicable workload in T&E and responded appropriately. I certify the ALC submissions are complete and accurate to the best of our ability, in accordance with the Air Force Internal Control Plan. This is a coordinated HQ AFMC/DO/XP letter.

*Keith Caudle*  
KEITH H. CAUDLE, Colonel, USAF  
Acting Director of Plans & Programs

Attachments

1. OC-ALC Letter
2. OO-ALC Letter
3. SA-ALC Letter
4. SM-ALC Letter
5. WR-ALC Letter

cc:  
HQ USAF/TER

Item 2

ISS 1-7



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS OKLAHOMA CITY AIR LOGISTICS CENTER (AFMC)  
TINKER AIR FORCE BASE, OKLAHOMA

26 JUL 1994

MEMORANDUM FOR HQ AFMC/XP  
4375 CHIDLAW ROAD, STE 6  
WRIGHT-PATTERSON AFB OH 45433-5006

FROM: OC-ALC/CC  
3001 Staff Dr  
Tinker AFB OK 73145-3001

SUBJECT: BRAC 95 Joint Cross Service Group Data Call for Test and Evaluation  
(T&E) (Your Memorandum, 12 Jul 94)

1. Subject memorandum requested a response identifying OC-ALC facilities which meet the T&E criteria in Section One of the subject data call. Section One states that data collection is required on each facility that has performed T&E and is still capable of performing T&E. OC-ALC/FM Memorandum, 3 May 94, responded to initial request stating that we have no applicable test functions related to T&E.

2. T&E was defined in Appendix A of data call as "any facility that is accountable to Military Department and/or OSD T&E management oversight. Operation and sustainment of these facilities are typically funded from 6.5 or procurement program elements ... support developmental and/or operational T&E ..." This type of function supports the acquisition of weapon systems.

3. The Air Logistics Centers were established for the sustainment (maintenance) of weapon systems, their components, and related software. The nature of maintenance or repair requires a capability for serviceability verification which, dependent on the component to be repaired, requires some form of test capability (i.e., engine test, fuel control test, air accessories test, etc.). The test capabilities or facilities are dedicated to support the sustainment of weapon systems and the Depot Maintenance Business Area (DMBA) funded workloads, not those specified under T&E. OC-ALC has not, in the past, utilized its resources as a T&E function and, thus, by the T&E data call scope does not "still" have the capability. While it is feasible that the ALCs could accommodate T&E requirements, any relocation of T&E workload the ALCs would require a case-by-case assessment to insure no impact to weapon system sustainment.

4. The facilities, equipment, and capabilities at OC-ALC were fully covered in the JCSG Depot Maintenance and Laboratory data calls. Any duplication between the two was avoided. Requirements for those assets were fully documented and impacts to weapon systems support (if capability was moved)

identified. Even though a secondary T&E capability does exist for measurement and integration (utilization of less than 10 personnel equivalents), any insistence that these capabilities/assets be duplicated in the T&E data call would be misleading and create confusion in the Base Closure and Realignment decision process. OC-ALC submits a negative response to T&E data call due to non-applicability.

*Kenneth E. Eickmann*

KENNETH E. EICKMANN  
Major General, USAF  
Commander



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS OGDEN AIR LOGISTICS CENTER (AFMC)  
HILL AIR FORCE BASE, UTAH

26 July 1994

MEMORANDUM FOR HQ AFMC/XPX

FROM: OO-ALC/CD  
7981 Georgia Street  
Hill AFB UT 84056-5824

SUBJECT: BRAC 95 Joint Cross Service Group Data Call for Test and Evaluation (T&E)

1. We have again reviewed Ogden ALC facilities, and have determined the Test and Evaluation (T&E) data call need not be completed. As previously reported, our facilities are used for the testing and evaluation of end items or components through the depot maintenance process. This testing and evaluation process is weapon system peculiar, and is in direct support of depot maintenance.
2. We can identify potential capacity at Ogden ALC to absorb T&E workload in conjunction with our depot maintenance facilities, but specifically maintain our position that the facilities cannot be relocated and maintain depot capability. Point of contact is Mr Dick Walter, OO-ALC/FMPC, DSN 458-1127.

  
THOMAS L. MINER  
Executive Director



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS SAN ANTONIO AIR LOGISTICS CENTER (AFMC)  
KELLY AIR FORCE BASE, TEXAS

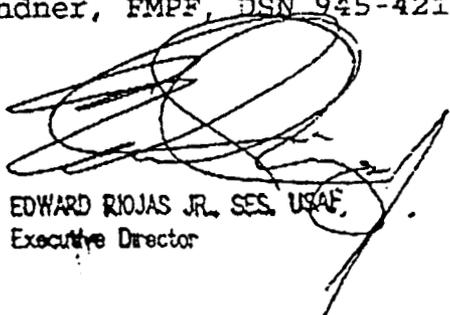
12 5 JUL 1994

MEMORANDUM FOR HQ AFMC/XP  
4375 Chidlaw Rd Ste 6  
Wright-Patterson AFB OH 45433-5006

FROM: SA-ALC/CD  
100 Moorman St Ste 1  
Kelly AFB TX 78241-5808

SUBJECT: BRAC 95 Joint Cross Service Group Data Call for Test  
and Evaluation (T&E) (Your Memo, 12 Jul 94)

1. The Test and Evaluation data call has again been reviewed and it has been verified this data call does not apply to SA-ALC. We have no unique or dedicated Test and Evaluation facilities that meet the T&E criteria.
2. Our point of contact is Ms Diana Lindner, FMPE, DSN 945-4211.



EDWARD RIOJAS JR., SES, USAF  
Executive Director



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS SACRAMENTO AIR LOGISTICS CENTER (AFMC)  
McCLELLAN AIR FORCE BASE, CALIFORNIA

MEMORANDUM FOR HQ AFMC/XPX

22 JUL 1994

FROM: SM-ALC/FMP  
3237 Peacekeeper Way, Suite 6  
McClellan AFB CA 95652-1049

SUBJECT: Joint Cross-Service Group (JCSG) T & E Data Call

1. As requested, we have reviewed our facilities, capabilities, and workloads to determine if additional data should be reported in the JCSG-T&E data call. This was done in light of the criteria for T&E with ten or more PEs' involvement, program office sponsorship, and program office funding. The review did not yield any new data to report, so our previous submission is still valid.

2. Data submitted earlier by SM-ALC included the workload of the 337th Test Squadron. The re-validation of this earlier submission should be complete by 25 Jul 94. Points of contact are Steve Bennett and Dean Eppley, SM-ALC/FMPB, DSN 633-1280 or 633-1281.

FOR THE COMMANDER

KENNETH R. PRIBYLA, Colonel, USAF  
Chief, Plans & Programs Integration Division  
Financial Management Directorate

cc:  
HQ AFMC/LGP  
HQ AFMC/DOP  
OC-ALC/FMP  
OO-ALC/FMP  
SA-ALC/FMP  
WR-ALC/FMP



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS WARNER ROBINS AIR LOGISTICS CENTER (AFMC)

26 July 1994

MEMORANDUM FOR HQ AFMC/XP  
4375 Chidlaw Road, Suite 6  
Wright-Patterson AFB OH 45433-5006

FROM: WR-ALC/cd  
215 Page Road, Suite 245  
Robins AFB GA 31098-1662

SUBJECT: BRAC 95 Joint Cross-Service Group Data Call for Test and Evaluation (T&E)

1. References:

- a. Your Memo, 12 Jul 94
- b. Your Msg, 201830Z Jul 94
- c. HQ USAF/RT Msg, 222138Z Jul 94
- d. VTC, 26 Jul 94

2. Based on the most recent guidance, the T&E Data Call does not apply to the Warner Robins Air Logistics Center.

3. My point of contact for the T&E Data Call is Mr. Douglas Shumate, WR-ALC/TIEL, DSN 468-4005. The alternate point of contact is Mr. Stan Finley, WR-ALC/TIEC, DSN 468-2669.

STEPHEN L. DAVIS  
Executive Director

Memorandum To T&E JWG Data Scoring Team

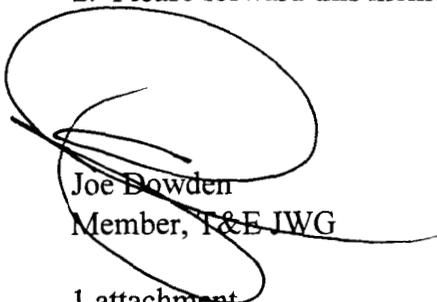
22 August 1994

From: J. Dowden

Subject: Changes to Air Force Certified Data

1. Certified data changes were incorporated into the Air Combat Command (ACC) and Air Force Flight Test Center (AFFTC) scoring books on Friday, 19 August 1994. A summary of the page changes is attached for your review and determination if data changes may alter functional value (FV) scores. Please circulate to all scoring members identified below and write in your initial by your name to confirm that you have reviewed the changes.

2. Please forward this memorandum to the data administrator after all have initialed off.

  
Joe Dowden  
Member, T&E IWG

1 attachment  
AF Certified Data Changes, 19 Aug. 94

CDR Mark Samuels	_____	I am aware of the changes but have not reviewed all of them as of 9/2/94
Mr Don DeYoung	<u>DSD</u>	will review with complete data response.
Col. Wes Heidenreich	<u>WH</u>	
Mr Robert Lee	<u>RL</u>	will review
Ms Sharon Brooks	<u>SLB</u>	haven't reviewed yet - will review w/ complete data response
Mr Tom Roller	<u>TR</u>	not reviewed yet
Mr David Prichard	<u>DP</u>	aware of chgs; not reviewed.
Mr Don Jeanblanc	<u>DJT</u>	will review.

DoDIG \_\_\_\_\_

**1 ---Air Force Certified Changes and Additions to T&E JCSG AF Certified Data  
8/22/94 ----- For Official Use Only**

<b>BOOK 313</b>	PAGES 22-27	REMOVED AND REPLACED- PE NUMBERS
	PAGE 28	R&R HISTORICAL WORKLOAD
	PAGE 34-35	R&R FACILITY WORKLOAD
	PAGE 29A	ADDED TO REPLACE 2.2.A WRITE-UP
	PAGE 33	R&R 3.1 OVER ARCHING MERIT
	PAGE 70	R&R additional information, personnel/equipment
	PAGE 64A,B,C, " "	ADD. Technical information & Unconstrained capacity USAF Weapons and Tactics Center
	PAGE 250A	ADDED FOR CHANGE TO 3.1.C.4
	PAGE 80A	ADD 2.1.A.1 DOCUMENTATION
	PAGE 156 A	ADD Full scale aerial targets historical workload
	PAGE 156B	ADD Sub scale aerial targets historical workload
	PAGE 80B	ADD, Document answer to 2.1.A.1
18 Aug. 1994		
<b>BOOK 301</b>	AFFTC PAGES 8,9	REPLACES OUTDATED VERSION
	AFFTC pages 8,9	REPLACES PAGES AFFTC 164,165
	AFFTC PAGE 11	REPLACES AFFTC PG 11
	AFFTC PG 54 (SEC 1)	REPLACES
	AFFTC SEC1 PG 57	REPLACES
	AFFTC SEC1 PG 61	REPLACES
	AFFTC SEC 1 PG63,64	REPLACES
	AFFTC SEC1 PG12,13,17, 55	REPLACES
	AFFTC SEC 1 PG 127	REPLACES DIRECTED ENERGY Q. UPDATE
	AFFTC SEC 1 PG 128, 128A, 129	UPDATE TO 3.4.B.1.C , REPLACES
	AFFTC SEC1 PG 131	NEW PG CTF FAC CONDITION
	AFFTC SEC 1 PG 135	REPLACES FAC COND OF MUNITIONS INTEG FAC
	AFFTC SEC 1 PG 138	REPLACES ARIA FAC CONDITION FORM
	AFFTC SEC 1 PG 139	REPLACES MAINT. TEST SPT FAC. COND.
	AFFTC SEC 1 PG 144,145	REPLACES RCC FAC COND
	AFFTC SEC 1 PG 147	REPLACES TEST MEASUREMENT FAC COND
	AFFTC SEC1 PG 153	SAR FAC COND- REPLACES
	AFFTC SEC 1 PG 151	REPLACES INSTR. PROP COMPLE FAC COND
	AFFTC SEC1 PG154	REPLACES EFTR FAC COND
	AFFTC SEC1 PG161,162,162A	NEW PAGES, AIRCRAFT CORROSION FAC COND, FUEL SYST. DOCK FAC COND, NDI FAC COND.
	AFFTC SEC1 165	REPLACE AFFTC UNCONSTRAINED CAPACITY
	AFFTC SEC2PG14	REPLACES TEMS GEN. INFO PAGE
	AFFTC SEC3 PG10	REPLACES PARACHUTE TEST COMPLEX ADD. INFO
	AFFTC SEC3 PG 5	REPLACES IPS 3.1.E.1.A, SPECIAL ACCESS ID
	AFFTC SEC3PG7	REPLACES CLARIFICATION ON INSTR.
	AFFTC SEC 3 PG 9	REPLACE, REVISED EQUIP. VALUE
	AFFTC SEC 3, PG 9	CLARIFICATION ON TECH DATA OF IPS
	AFFTC SEC 3, PG 13	REPLACE, CORRECTION OF EQUIP COST
	AFFTC SEC 3, PG8 NDI	REPLACE UNCONSTRAINED CAP -CORRECTIONS
	AFFTC SEC 3, NDI PG9	REPLACE, NEW EQUIP COST
	AFFTC SEC3 NDI, PG10	REPLACES HISTORICAL WORKLOAD
	AFFTC SEC3 NDI PG11	NEW ADD FAC COND.
	AFFTC	REPLACES CLARIFICATION

**2 ---Air Force Certified Changes and Additions to T&E JCSG AF Certified Data  
8/22/94 ----- For Official Use Only**

	SEC3TMDEPG2,3	
	AFFTC SEC3 PG 6	REPLACES SEC. 3.1.E.1
	SEC3 TMDE PG 8	CORRECTIONS TO GEN. INFO
	SEC3 TMDE PG 10	UPDATE TECH CAP. WRITE-UP
	SEC3 TMDE PG12	UPDATES DIRECT LABOR HOURS
	SEC3 TMDE PG14	REPLACES ADD. INFO, UPDATES EQUIP COST
	SEC 3 TMDE PG15	REPLACES FAC COND SHEET
	SEC4 MUN FAC, PG10	UPDATES FAC COND SHEET, EQUIP COST
	SEC4 TSP(SB)PG14	UPDATES UNCONSTRAINED CAP
	SEC4 TSP(SB) PG19,20	UPDATES ADDITIONAL INFO CHARTS
	SEC4 SAR (NB)PG11	REPLACES TECH INFO, CORRECTIONS
	SEC4 SAR (NB) PG7	REPLACES FAC COND. DATA
	SEC4 ARIA PG1	COVER PAGE REPLACE, ADD INFO
	SEC4 ARIA PG2	REPLACES 2.1.A.1-2.3.B.2 ADD INFO
	SEC 4 ARIA PG 9	REPLACES 8 CORRECTIONS TO WORKSHEET
	SEC4 ARIA PG 10	REPLACES , UPDATE TO REPLACEMENT COST
<b>BOOK302</b>	SEC5 GUNBUTTPG10	REPLACES, ADD INFO DATA CORRECTION
	SEC7 RMCCPG156	REPLACES 2.2 UPDATES WORKYEARS
	SEC7 RMCC PG158,158A,159	REPLACES, UPDATES
	SEC7 RMCC PG162,162A,162B	UPDATES SECT 3.1.D.1,3.1.D.2
	SEC7 RMCC PG164A,164B	UPDATES SECT 3.1.E.4
	SEC7 RMCC PGS170A,170B, 171	UPDATES ADDED FOR SEC 3.2.C.2 - 3.4
	SEC7 RMCC PG 174A, 174B	UPDATES TO SECTION 3.4.B.1.C REPLACES
	SEC 7 RMCC PG 176	REPLACES HISTORICAL WORKLOAD
	SEC 7 RMCC PG186	REPLACES GEN. INFO, UPDATES T&E %
	SEC 7 RMCC PG 187	REPLACES ADD INFO, NEW DATA
	SEC 7 RMCC PG 189A	ADDED TO UPDATE EQUIPMENT FAC COST
	SEC7 RMCC PG 190	FAC UPGRADES, NO CHANGE
	SEC7 EFTR PG94A	ADDS UPDATE TO LAST SENTENCE ON3.A.2
	SEC7 EFTR PG 96A,96B 96C	ADDS WRITE-UP ON DAGRAG
	SEC 7 EFTR PG102A,B	ADDED,REPLACES SECTION 3.1.3.4
	SEC 7 EFTR PG 112A	ADDED , REPLACES SECTION 3.1.H.8
	SEC 7 EFTR PG 114A	ADDED TO UPDATE 3.2.A.2
	SEC7 EFTR PG 118A	ADDED TO UPDATE 3.2.C.2
	SEC7 EFTR PG 119A	ADDED, NO TO ENERGY WEAPONS
	SEC7 EFTR PG 121A,B	ADDED UPDATES 3.4.B.1.C
<b>BOOK 303</b>	SEC8 CORR PG 16A	ADDED, FAC CONDITION OF CORROSION FAC
	SEC8 FUEL PG 51, 52, 53, 53A, 54,55,56,57,58,59	UPDATES, NEW DATA AND CLARIFICATION
	SEC8 M&M PG 100	REPLACED UPDATE
	SEC 8M&M PG 111A	ADDED, UPDATES SECTION 3.1.F.2





DEPARTMENT OF THE AIR FORCE  
WASHINGTON DC



OFFICE OF THE ASSISTANT SECRETARY

AUG 18 1994

MEMORANDUM FOR THE CHAIRMAN, JOINT CROSS-SERVICE GROUP FOR  
TEST & EVALUATION

SUBJECT: Air Force Input to the Joint Cross-Service Group for Test & Evaluation

Provided at attachment 1 is the validated Air Force submission to the JCSG for Test & Evaluation. The data has been collected and certified in accordance with the Air Force Internal Control Plan. The attached data consists of the corrected discrepancies identified in the Air Force validation process. Attachment 2 lists responses that are still not certified and being reviewed by the Air Staff. When the remaining information is available, I will forward it to you under separate cover completing the initial Air Force Test & Evaluation Joint Data Call. A supplemental data call is also outstanding and will be forwarded under separate cover when validated and certified. Questions can be referred to Lt Col Mark Bruggemeyer or Maj (s) Mike Wallace, HQ USAF/RTR, 54578.

JAMES F. BOATRIGHT  
Deputy Assistant Secretary of the Air Force  
(Installations)

Attachments:

1. Joint Test & Evaluation Data Changes
2. Outstanding Air Staff Review Items

## OUTSTANDING AIR STAFF REVIEW ITEMS

### ACTIVITY

1. Rome Laboratory Electromagnetic Environmental Effects Research Center Resubmission
2. Rome Laboratory Antenna Measurement & Analysis Facility Resubmission
3. WL-WPAFB Materials Directorate Facilities Resubmission
4. WL-WPAFB Avionics Directorate Facilities Resubmission
5. WL-WPAFB Flight Dynamics Directorate Facilities Resubmission
6. WL-WPAFB Aero Propulsion and Power Facilities Resubmission



DEPARTMENT OF THE AIR FORCE  
WASHINGTON DC



OFFICE OF THE ASSISTANT SECRETARY

AUG 09 1994

MEMORANDUM FOR THE CHAIRMAN, JOINT CROSS-SERVICE GROUP FOR  
TEST & EVALUATION

SUBJECT: Air Force Data Input to the Joint Cross-Service Group for Test & Evaluation

Attached is the validated Air Force submission to the JCSG for Test & Evaluation. The data has been collected and certified in accordance with the Air Force Internal Control Plan. This data set constitutes the bulk of the Air Force Joint Test & Evaluation information. Some discrepancies were identified during the recent validation process and will be resolved as soon as possible. When that information is available, I will forward it to you under separate cover. Questions can be referred to Lt Col Mark Bruggemeyer, HQ USAF/RTR, 54578.

JAMES F. BOATRIGHT  
Deputy Assistant Secretary of the Air Force  
(Installations)

Atch  
Test & Evaluation Joint Data

To: MR. JOE MOORE

From: D. Nation

Attached is the memo of transmittal to the T&E JCSG from the Air Force of the certified AF T&E JCSG BRAC '95 Data Call responses.

Please provide a copy of same to all interested and appropriately cleared parties.

Very Respectfully,  
D. Douglas Nation  
15 Aug 94  
1630.

— 2 pages total —

**AF/TE**

## **T&E JCSG TASKS/SCHEDULE**

- |  |               |
|--|---------------|
| <b>1. DATA SCREENING/SCORING PREP</b>                    | <b>11 AUG</b> |
| <b>2. CLARIFICATIONS ISSUED</b>                          | <b>17 AUG</b> |
| <b>3. CLARIFICATIONS RESPONSES (by fax)</b>              | <b>26 AUG</b> |
| <b>- (official)</b>                                      | <b>2 SEP</b>  |
| <b>4. SCORING COMPLETED</b>                              | <b>9 SEP</b>  |
| <b>5. FUNCTIONAL VALUE (FV) CALCULATED FOR ALL SITES</b> | <b>12 SEP</b> |
| <b>6. T&amp;E JCSG MEETING TO REVIEW FV RESULTS</b>      | <b>13 SEP</b> |
| <b>7. T&amp;E FV TO MIL DEPT</b>                         | <b>15 SEP</b> |
| <b>8. CAPACITY DATA COMPILED</b>                         | <b>15 SEP</b> |
| <b>9 MIL DEP MV TO JCSG</b>                              | <b>22 SEP</b> |
| <b>10 JCSG ALTERNATIVES TO MIL DEPTS</b>                 | <b>17 OCT</b> |





DEPARTMENT OF THE ARMY  
OFFICE OF THE CHIEF OF STAFF  
200 ARMY PENTAGON  
WASHINGTON DC 20310-0200



REPLY TO  
ATTENTION OF

DACS-TAB

MEMORANDUM FOR THE CHAIRMAN, TEST AND EVALUATION JOINT  
CROSS-SERVICE WORKING GROUP

SUBJECT: Supplemental T&E Data Submission

The enclosed supplemental T&E data is provided in accordance with the Defense Base Closure and Realignment Act of 1990, as amended, which requires certification of the accuracy and completeness of all information provided to the Commission and the Secretary of Defense.

The attached data clarification response to RFC AW/067 has been certified at both the Installation and the Major Command level. The information contained in this report is true and complete to the best of my knowledge and belief.

If we can be of further assistance, please contact The Army Basing Study Office, T&E representative, LTC Jack Marriott, 697-1765.

  
MICHAEL G. JONES  
Colonel, U.S. Army  
Director, The Army Basing Study

94-09-16 14:33 REF:



DEPARTMENT OF THE ARMY  
OFFICE OF THE CHIEF OF STAFF  
200 ARMY PENTAGON  
WASHINGTON DC 20310-0200



REPLY TO  
ATTENTION OF

12 OCT 94

DACS-TAB

MEMORANDUM FOR THE CHAIRMAN, TEST AND EVALUATION JOINT  
CROSS-SERVICE WORKING GROUP

SUBJECT: T&E Requests for Clarification and Corrected Data Submission

The enclosed T&E data is provided in accordance with the Defense Base Closure and Realignment Act of 1990, as amended, which requires certification of the accuracy and completeness of all information provided to the Commission and the Secretary of Defense.

The attached data clarification response to T&E RFC AW090, AW101, and AW102 has been certified at both the Installation and the Major Command level. The information contained in this report is true and complete to the best of my knowledge and belief.

If we can be of further assistance, please contact The Army Basing Study Office, T&E representative, LTC Jack Marriott, 697-1765.

  
MICHAEL G. JONES  
Colonel, U.S. Army  
Director, The Army Basing Study

94-10-12 16:49 RCVC

DEPARTMENT OF THE ARMY  
 HEADQUARTERS, U.S. ARMY TEST AND EVALUATION COMMAND  
 ABERDEEN PROVING GROUND, MARYLAND 21005-5055



REPLY TO  
 ATTENTION OF

AMSTE-TA-O (5-10c)

12 OCT 1994

MEMORANDUM FOR Commander, U.S. Army Materiel Command, ATTN: AMCRD-IT,  
 5001 Eisenhower Avenue, Alexandria, VA 22333-0001

SUBJECT: BRAC Data Call #7, Requests for Clarification

1. Enclosed are responses (hard copies only) to requests for clarification to  
 BRAC Data Call #7, Test and Evaluation as follows:

<u>TEST CENTER</u>	<u>RFC #</u>
WSMR	A/W101 A/W102

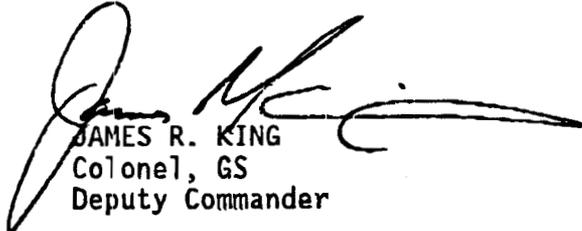
Modifications to A/W090

2. The information contained in these responses is accurate and complete to  
 the best of my knowledge and belief.

3. POC for this headquarters is Mr. James F. Fisher, AMSTE-TA-OP,  
 amstetao@apg-9.apg.army.mil, DSN 298-1421.

FOR THE COMMANDER:

Encls

  
 JAMES R. KING  
 Colonel, GS  
 Deputy Commander

FOR OFFICIAL USE ONLY

PROTECTIVE MARKING CAUTION:  
 UPON REMOVAL OF PROTECTIVE MARKING

**FOR OFFICIAL USE ONLY****WHITE SANDS MISSILE RANGE  
BRAC Data Call -- Test and Evaluation Supplement  
(WSMR Geographic Management Area)****6 October 1994****CERTIFICATION STATEMENT**

**This certification provides supplemental information, as requested telephonically by the Army T&E BRAC Office on 6 October, to the WSMR Geographic Management Area BRAC 95 -- T&E Data Call. This supplement specifically addresses question A/W-090.**

**White Sands Missile Range understands that the Cross-Service Team considers the Materiel Test function Test Hour response provided on 26 September to be non-responsive. We further understand that the desired Test Hour number would report only the actual range hours used for each test during the reporting period - using the definition that 1 test site for 1 hour = 1 Test Hour.**

**The data sheets attached to this certification provide the requested response.**

**The WSMR BRAC Action Officer and the Materiel Test Directorate BRAC Action Officer reviewed all available data, including that previously submitted to the Cross-Service team, and developed a new derivation of Test Hours from the available Direct Labor Hour data. This derivation is our best attempt at eliminating all "indirect" support (planning, research, administrative support, pre-test work ancillary to the actual test, post test analysis, etc.) for tests performed during the reporting period. The Test Hours reported on the attached form are our best estimate of "actual range time used" or hours spent performing actual tests on the 49+ launch complex and open air range test facilities used by the Materiel Test function.**

**The adjusted Test Hours reported on the attached data sheets appear to be high. WSMR believes this represents reality, as the Materiel Test function annually performs a very large number of individual tests on systems and system components, as directed by RDTE Program Managers, which require open air range time at one or more of the launch complexes and open air range test facilities. WSMR's geography d land mass give us the ability to operate a large number of sites simultaneously. This is evidenced by the fact that Materiel Test function uses 49+ permanently designated launch complexes on our**

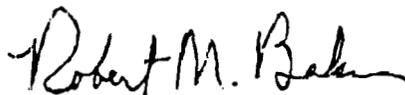
**FOR OFFICIAL USE ONLY**

6 October 1994

**CERTIFICATION STATEMENT**  
(continued)

southern boundary, as well as a large number of permanently occupied open air test complexes at other locations on the range.

Subject to the limitations described above, the information contained in the attached report at this time is accurate and complete to the best of my knowledge and belief.



ROBERT M. BAKER  
Colonel, Corps of Engineers  
Deputy Commander

attachment  
as

**FOR OFFICIAL USE ONLY**

## FOR OFFICIAL USE ONLY

WHITE SANDS MISSILE RANGE  
BRAC Data Call -- Test and Evaluation Supplement  
(WSMR Geographic Management Area)

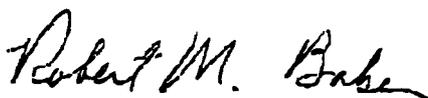
11 October 1994

## CERTIFICATION STATEMENT

This certification provides supplemental information, as requested telephonically by the Army T&E BRAC Office on 6 October 1994, to the WSMR Geographic Management Area BRAC 95 -- T&E Data Call. This supplement specifically addresses questions A/W-101 and 102.

Data sheets provided in response to question A/W-102 have been adjusted only on the Armaments/Weapons Test Hour line. With the exception of the National Range data sheets (where actual range time by test project was available), the data provided are derivations from our earlier submissions.

Subject to the limitations and constraints identified above, the information contained in the attached report at this time is accurate and complete to the best of my knowledge and belief.



ROBERT M. BAKER  
Colonel, Corps of Engineers  
Deputy Commander

attachment  
as

FOR OFFICIAL USE ONLY



DEPARTMENT OF THE ARMY  
OFFICE OF THE CHIEF OF STAFF  
200 ARMY PENTAGON  
WASHINGTON DC 20310-0200



REPLY TO  
ATTENTION OF

4 OCT 94

DACS-TAB

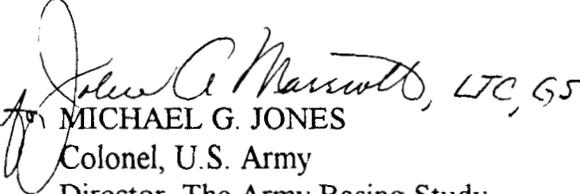
MEMORANDUM FOR THE CHAIRMAN, TEST AND EVALUATION JOINT  
CROSS-SERVICE WORKING GROUP

SUBJECT: T&E Requests for Clarification and Corrected Data Submission

The enclosed T&E data is provided in accordance with the Defense Base Closure and Realignment Act of 1990, as amended, which requires certification of the accuracy and completeness of all information provided to the Commission and the Secretary of Defense.

The attached data clarification response to T&E RFC AV059 has been certified at both the Installation and the Major Command level. The information contained in this report is true and complete to the best of my knowledge and belief.

If we can be of further assistance, please contact The Army Basing Study Office, T&E representative, LTC Jack Marriott, 697-1765.

  
MICHAEL G. JONES  
Colonel, U.S. Army  
Director, The Army Basing Study

94-10-04 09:14 RCVD

REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
HEADQUARTERS, U.S. ARMY TEST AND EVALUATION COMMAND  
ABERDEEN PROVING GROUND, MARYLAND 21005-5055



8 OCT 1994

AMSTE-TA-0 (5-10c)

MEMORANDUM FOR Commander, U.S. Army Materiel Command, ATTN: AMCRD-IT,  
5001 Eisenhower Avenue, Alexandria, VA 22333-0001

SUBJECT: BRAC Data Call #7, Requests for Clarification

1. Enclosed is a response (hard copies only) to a request for clarification to BRAC Data Call #7, Test and Evaluation as follows:

TEST CENTERREC #

WSMR (EPG)

AV-59

2. The information contained in these responses is accurate and complete to the best of my knowledge and belief.

3. POC for this headquarters is Mr. James F. Fisher, AMSTE-TA-OP, amstetao@apg-9.apg.army.mil, DSN 298-1421.

FOR THE COMMANDER:

  
GREG A. VIRGIL  
Colonel GS  
Chief of Staff

Encl

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## For Official Use Only

White Sands Missile Range  
BRAC Data Call Number 7—Test and Evaluation Supplement  
(US Army Electronic Proving Ground)

SEP 30 1994

### CERTIFICATION STATEMENT

The attached are responses to Requests for Clarification, Control Numbers: AV-59, Supplemental Information of the USAEPG Input to the WSMR BRAC 95 Data Call Number 7 Test and Evaluation Supplement. The information contained in the responses is accurate and complete to the best of my knowledge and belief.

*for Gary W. Parker, LTC, MC*  
for WAYNE L. SITLER  
COL, SC  
Commanding

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DEPARTMENT OF THE ARMY  
OFFICE OF THE CHIEF OF STAFF  
200 ARMY PENTAGON  
WASHINGTON DC 20310-0200



REPLY TO  
ATTENTION OF

1994-09-28

28 SEP 94

DACS-TAB (50-7)

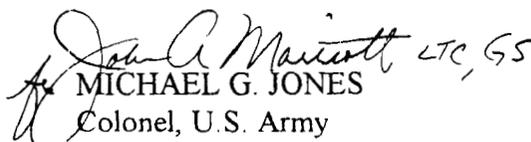
MEMORANDUM FOR THE CHAIRMAN, TEST AND EVALUATION JOINT  
CROSS-SERVICE WORKING GROUP

SUBJECT: Format of Supplemental T&E Data Submission

The enclosed supplemental T&E data is provided in accordance with the Defense Base Closure and Realignment Act of 1990, as amended, which requires certification of the accuracy and completeness of all information provided to the Commission and the Secretary of Defense.

The attached data is a compilation of the reported data into a composite table for use by the JCSG. It has been certified at both the Installation and the Major Command level. The information contained in this report is true and complete to the best of my knowledge and belief.

If we can be of further assistance, please contact The Army Basing Study Office, T&E representative, LTC Jack Marriott, 697-1765.

  
MICHAEL G. JONES  
Colonel, U.S. Army  
Director, The Army Basing Study



DEPARTMENT OF THE ARMY  
OFFICE OF THE CHIEF OF STAFF  
200 ARMY PENTAGON  
WASHINGTON DC 20310-0200



REPLY TO  
ATTENTION OF

28 SEP 94

DACS-TAB

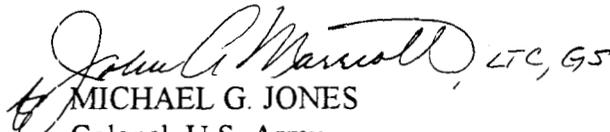
MEMORANDUM FOR THE CHAIRMAN, TEST AND EVALUATION JOINT  
CROSS-SERVICE WORKING GROUP

SUBJECT: T&E Requests for Clarification and Corrected Data Submission

The enclosed T&E data is provided in accordance with the Defense Base Closure and Realignment Act of 1990, as amended, which requires certification of the accuracy and completeness of all information provided to the Commission and the Secretary of Defense.

The attached data clarification response to T&E RFC AW090 has been certified at both the Installation and the Major Command level. The information contained in this report is true and complete to the best of my knowledge and belief.

If we can be of further assistance, please contact The Army Basing Study Office, T&E representative, LTC Jack Marriott, 697-1765.

  
MICHAEL G. JONES  
Colonel, U.S. Army  
Director, The Army Basing Study

1994-09-28



DEPARTMENT OF THE ARMY  
HEADQUARTERS, U.S. ARMY TEST AND EVALUATION COMMAND  
ABERDEEN PROVING GROUND, MARYLAND 21005-5055



REPLY TO  
ATTENTION OF

AMSTE-TA-0 (5-10c)

MEMORANDUM FOR Commander, U.S. Army Materiel Command, ATTN: AMCRD-IT,  
5001 Eisenhower Avenue, Alexandria, VA 22333-0001

SUBJECT: BRAC Data Call #7, Requests for Clarification

1. Enclosed is a response (hard copies only) to a request for clarification to BRAC Data Call #7, Test and Evaluation as follows:

TEST CENTER

REC #

WSMR (EPG)

A/W090

2. The information contained in these responses is accurate and complete to the best of my knowledge and belief.

3. POC for this headquarters is Mr. James F. Fisher, AMSTE-TA-OP, amstetao@apg-9.apg.army.mil, DSN 298-1421.

FOR THE COMMANDER:

*Greg A. Virgil*  
GREG A. VIRGIL  
Colonel GS  
Chief of Staff

Enc1

1994-09-28

PROTECTIVE MARKING CANCELLED  
UPON REMOVAL OF ENCLOSURE

FOR OFFICIAL USE ONLY

09/27/94 11:52

**FOR OFFICIAL USE ONLY****WHITE SANDS MISSILE RANGE  
BRAC Data Call -- Test and Evaluation Supplement  
(White Sands Missile Range Geographic Management Area)**

26 September 1994

**CERTIFICATION STATEMENT**

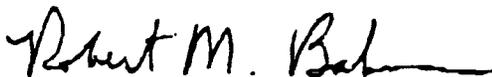
This report provides supplemental information, as requested by the Army T&E BRAC Office, to the WSMR Geographic Management Area BRAC 95 -- Test and Evaluation Data Call. This report specifically addresses question A/W-090.

The Test Hour data previously provided *includes* time spent on the Open Air Ranges preparing for and following up tests for the National Range, Material Test, and Warheads OARs. The data was reported this way for two reasons:

1. The time spent on the range for this work constrains or limits our sequential and simultaneous testing capability on the subject OAR and as a result is considered an integral part of each test. Additional open air testing located at WSMR as a result of BRAC would operate under the same constraints unless it could stage all preparation and followup in the range cantonment area or otherwise not impact OAR scheduling.
2. The data is not available in our RDTE databases to support a further breakdown of how our direct labor hours were used on any particular test, or what the specific start-stop times (Test Hours) were for each test completed on each of the WSMR Open Air Ranges.

As a result of the above constraints our calculation of Test Hours (specifically for the Material Test and Warheads OARs) may include time spent outside or off of the designated OAR accomplishing or performing test work. Because of our definition of what constitutes an Open Air Range at WSMR, we consider this to be an inconsequential issue, and no corrective factor has been applied to the previously reported Test Hour data.

Subject to the limitations described above, the information contained in the attached report at this time is accurate and complete to the best of my knowledge and belief.



ROBERT M. BAKER  
Colonel, Corps of Engineers  
Deputy Commander

FOR OFFICIAL USE ONLY 1994-09-28

REPLY TO  
ATTENTION OFDEPARTMENT OF THE ARMY  
OFFICE OF THE CHIEF OF STAFF  
200 ARMY PENTAGON  
WASHINGTON DC 20310-0200

26 SEP 94

DACs-TAB

MEMORANDUM FOR THE CHAIRMAN, TEST AND EVALUATION JOINT  
CROSS-SERVICE WORKING GROUP

SUBJECT: T&amp;E Requests for Clarification and Corrected Data Submission

The enclosed T&E data is provided in accordance with the Defense Base Closure and Realignment Act of 1990, as amended, which requires certification of the accuracy and completeness of all information provided to the Commission and the Secretary of Defense.

The attached data clarification response to T&E RFC EC036 has been certified at both the Installation and the Major Command level. The information contained in this report is true and complete to the best of my knowledge and belief.

If we can be of further assistance, please contact The Army Basing Study Office, T&E representative, LTC Jack Marriott, 697-1765.

*John C. Marriott, LTC, GS*  
for MICHAEL G. JONES  
Colonel, U.S. Army  
Director, The Army Basing Study



DEPARTMENT OF THE ARMY  
HEADQUARTERS, U.S. ARMY TEST AND EVALUATION COMMAND  
ABERDEEN PROVING GROUND, MARYLAND 21005-5055



REPLY TO  
ATTENTION OF

AMSTE-TA-0 (5-10c)

26 SEP 1994

MEMORANDUM FOR Commander, U.S. Army Materiel Command, ATTN: AMCRD-IT,  
5001 Eisenhower Avenue, Alexandria, VA 22333-0001

SUBJECT: BRAC Data Call #7, Requests for Clarification

1. Enclosed are responses (hard copies only) to requests for clarification to  
BRAC Data Call #7, Test and Evaluation as follows:

TEST CENTER

RFC #

WSMR (EPG)

EC036  
Unnumbered

2. The information contained in these responses is accurate and complete to  
the best of my knowledge and belief.

3. POC for this headquarters is Mr. James F. Fisher, AMSTE-TA-OP,  
amstetao@apg-9.apg.army.mil, DSN 298-1421.

FOR THE COMMANDER:

Enc1

*Greg A. Virgil, COL, GS, Chief of Staff*  
For: JAMES A. KING  
Colonel, GS  
Deputy Commander

PROJECTIVE MARKING SHOULD  
BE ON REMOVAL OF ENCLOSURE

FOR OFFICIAL USE ONLY

08/28/94 07:18  
09/23/94 14:57

602 533 0130

C2 DIV

0002  
0002

# For Official Use Only

White Sands Missile Range  
BRAC Data Call Number 7—Test and Evaluation Supplement  
(US Army Electronic Proving Ground)

SEP 23 1994

## CERTIFICATION STATEMENT

The attached are responses to Requests for Clarification, Control Numbers, EC-034, Supplemental Information of the USAEPG Input to the WSMR BRAC 95 Data Call Number 7—Test and Evaluation Supplement. The information contained in the responses is accurate and complete to the best of my knowledge and belief.



WAYNE L. SITTLER  
COL SC  
Commanding

For Official Use Only



DEPARTMENT OF THE ARMY  
HEADQUARTERS, U.S. ARMY TEST AND EVALUATION COMMAND  
ABERDEEN PROVING GROUND, MARYLAND 21005-5055



REPLY TO  
ATTENTION OF

AMSTE-TA-O (5-10c)

22 SEP 1994

MEMORANDUM FOR Commander, U.S. Army Materiel Command, ATTN: AMCRD-IT,  
5001 Eisenhower Avenue, Alexandria, VA 22333-0001

SUBJECT: BRAC Data Call #7, Requests for Clarification

1. Enclosed are responses (hard copies only) to requests for clarification to  
BRAC Data Call #7, Test and Evaluation as follows:

<u>TEST CENTER</u>	<u>REC #</u>
YPG	A/V050
WSMR (EPG)	A/W064 A/W065 A/W068 A/W074

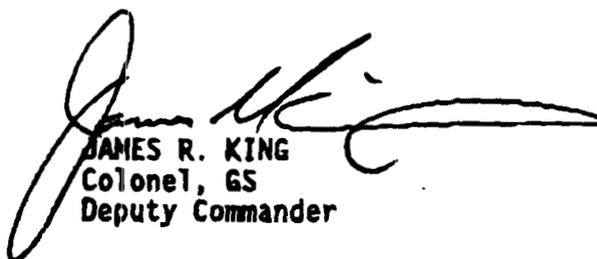
2. Additionally, written responses to questions received and answered  
telephonically on 16 Sep 94 by WSMR are forwarded.

3. The information contained in these responses is accurate and complete to  
the best of my knowledge and belief.

4. The TECOM point of contact is Mr. James F. Fisher, AMSTE-TA-OP,  
amstetao@apg-9.apg.army.mil, DSN 298-1421.

FOR THE COMMANDER:

Enc1



JAMES R. KING  
Colonel, GS  
Deputy Commander

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PROTECTIVE MARKING CANCELLED  
UPON REMOVAL OF ENCLOSURE



DEPARTMENT OF THE ARMY

UNITED STATES ARMY YUMA PROVING GROUND  
YUMA, ARIZONA 85365



REPLY TO  
ATTENTION OF  
STEYP-MT-EA (70-10r)

19 Sep 94

MEMORANDUM FOR Commander, U.S. Army Test and Evaluation Command, ATTN:  
AMSTE-TA, Aberdeen Proving Ground, MD 21005-5055

SUBJECT: BRAC Data Call #7, Request for Clarification AV-50

1. Enclosed is the Yuma Proving Ground response to the referenced data call. The information contained in this report is accurate and complete to the best of my knowledge and belief.
2. POC for this action is Scott Dellicker, STEYP-MT-EA, DSN 899-6102.

*fol* *Richard R. Walker* *WC, AD*  
 RICHARD R. WALKER *Acting CDR*  
 Colonel, Aviation  
 Commanding

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DEPARTMENT OF THE ARMY  
 HEADQUARTERS, U.S. ARMY TEST AND EVALUATION COMMAND  
 ABERDEEN PROVING GROUND, MARYLAND 21005-5055



REPLY TO  
 ATTENTION OF

AMSTE-TA-0 (5-10c)

26 SEP 1994

MEMORANDUM FOR Commander, U.S. Army Materiel Command, ATTN: AMCRD-IT,  
 5001 Eisenhower Avenue, Alexandria, VA 22333-0001

SUBJECT: BRAC Data Call #7, Requests for Clarification

1. Enclosed are responses (hard copies only) to requests for clarification to  
 BRAC Data Call #7, Test and Evaluation as follows:

TEST CENTER

REC #

WSMR (EPG)

EC036  
 Unnumbered

2. The information contained in these responses is accurate and complete to  
 the best of my knowledge and belief.

3. POC for this headquarters is Mr. James F. Fisher, AMSTE-TA-OP,  
 amstetao@apg-9.apg.army.mil, DSN 298-1421.

FOR THE COMMANDER:

Enc1

For: *Greg A. King, COL, GS, Chief of Staff*  
 JAMES A. KING  
 Colonel, GS  
 Deputy Commander

PROTECTIVE MARKING SHOULD  
 BE ON REMOVAL OF ENCLOSURE

FOR OFFICIAL USE ONLY

08/28/94 07:18  
09/23/94 14:57

602 533 0130

CR DIV

# For Official Use Only

White Sands Missile Range  
BRAC Data Call Number 7—Test and Evaluation Supplement  
(US Army Electronic Proving Ground)

SEP 28 1994

## CERTIFICATION STATEMENT

The attached are responses to Requests for Clarification, Control Numbers. EC-036, Supplemental Information of the USAEPG Input to the WSMR BRAC 95 Data Call Number 7—Test and Evaluation Supplement. The information contained in the responses is accurate and complete to the best of my knowledge and belief.



WAYNE L. SITTLER  
COL, SC  
Commanding

For Official Use Only

DIRECTORATE OF ENVIRONMENT & SAFETY  
WHITE SANDS MISSILE RANGE, NM 88002

FAX: (505) 678-8461 OR DSN: 258-8461



TO: Tom Roller

DATE: 26 Sep 94

OFC SYMBOL: 73-578-6592

SENDERS NAME: Gae Forsythe

# OF PAGES: 4 including this one

MESSAGE: Tom's answer to AW-90 attached. We really  
beat our heads against the wall on this one! Our  
collective best answer is attached

*Gae Forsythe*

preliminary AW-90

Horizontal lines for additional message content.



DEPARTMENT OF THE ARMY  
OFFICE OF THE CHIEF OF STAFF  
200 ARMY PENTAGON  
WASHINGTON DC 20310-0200



REPLY TO  
ATTENTION OF

94-09-26 10:47 RCVD

23 SEP 94

DACS-TAB

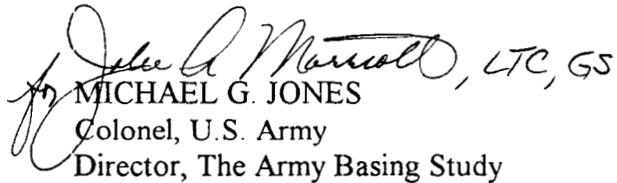
MEMORANDUM FOR THE CHAIRMAN, TEST AND EVALUATION JOINT  
CROSS-SERVICE WORKING GROUP

SUBJECT: T&E Requests for Clarification and Corrected Data Submission

The enclosed T&E data is provided in accordance with the Defense Base Closure and Realignment Act of 1990, as amended, which requires certification of the accuracy and completeness of all information provided to the Commission and the Secretary of Defense.

The attached data clarification responses to T&E RFCs EC012, EC013, EC014, EC015, and EC016 have been certified at both the Installation and the Major Command level. The information contained in this report is true and complete to the best of my knowledge and belief.

If we can be of further assistance, please contact The Army Basing Study Office, T&E representative, LTC Jack Marriott, 697-1765.

  
MICHAEL G. JONES  
Colonel, U.S. Army  
Director, The Army Basing Study



DEPARTMENT OF THE ARMY  
OFFICE OF THE CHIEF OF STAFF  
200 ARMY PENTAGON  
WASHINGTON DC 20310-0200



REPLY TO  
ATTENTION OF

94-09-26 10:48 RCVD

23 SEP 94

DACS-TAB

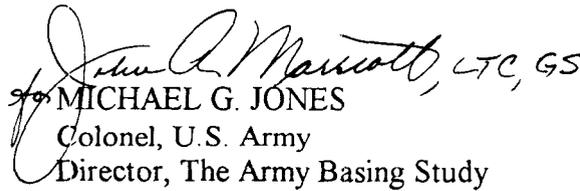
MEMORANDUM FOR THE CHAIRMAN, TEST AND EVALUATION JOINT  
CROSS-SERVICE WORKING GROUP

SUBJECT: T&E Requests for Clarification and Corrected Data Submission

The enclosed T&E data is provided in accordance with the Defense Base Closure and Realignment Act of 1990, as amended, which requires certification of the accuracy and completeness of all information provided to the Commission and the Secretary of Defense.

The attached data clarification responses to T&E RFCs AW050 and the clarification response to EC034 have been certified at both the Installation and the Major Command level. The information contained in this report is true and complete to the best of my knowledge and belief.

If we can be of further assistance, please contact The Army Basing Study Office, T&E representative, LTC Jack Marriott, 697-1765.

  
MICHAEL G. JONES  
Colonel, U.S. Army  
Director, The Army Basing Study

94-09-19 18:36 RCVD

94-09-

DACS-TAB

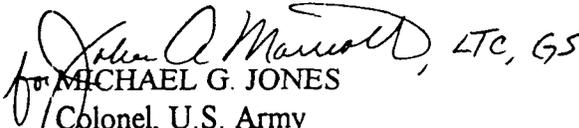
MEMORANDUM FOR THE CHAIRMAN, TEST AND EVALUATION JOINT  
CROSS-SERVICE WORKING GROUP

SUBJECT: Supplemental T&E Data Submission

The enclosed supplemental T&E data is provided in accordance with the Defense Base Closure and Realignment Act of 1990, as amended, which requires certification of the accuracy and completeness of all information provided to the Commission and the Secretary of Defense.

The attached data clarification response to RFCs EC 007, EC 011, EC 017, AW044, AW045, AW046, AW047, AW048, AW049, AW066, AW076, AW004, AW040, AW007, AW043, AV001, AV002, AV039, and AV040 has been certified at both the Installation and the Major Command level. The information contained in this report is true and complete to the best of my knowledge and belief.

If we can be of further assistance, please contact The Army Basing Study Office, T&E representative, LTC Jack Marriott, 697-1765.

  
MICHAEL G. JONES  
Colonel, U.S. Army  
Director, The Army Basing Study

## FOR OFFICIAL USE ONLY

WHITE SANDS MISSILE RANGE  
BRAC Data Call Number 7 - Test and Evaluation Supplement  
(White Sands Missile Range Geographic Management Area)

12 September 1994

## CERTIFICATION STATEMENT

This report provides a supplemental information, as requested by the Army T&E BRAC Office, to the WSMR Geographic Management Area BRAC 95 Data Call Number 7 -- Test and Evaluation Data Call. The specific questions answered in this report are: A/W-044, A/W-045, A/W-046, A/W-047, A/W-048, A/W-049, and A/W-066.

Test Hour data provided by WSMR was developed from two sources: a local unique data base maintained by the National Range Directorate on tests which required scheduling range land or air space; and engineering estimates developed for scheduled tests and workload which did not require land or air space on the range for test accomplishment. Where possible this data was compared with previously submitted data as a validity check. In some cases this check could not be performed.

WSMR is particularly concerned with reporting Test Hours at this point in the process since it reflects a change in the original BRAC Data Call Number 7 guidance, and since there is no standard DoD definition of Test Hours which accommodates all WSMR operations. Comparability of the provided Test Hour data with other installations or across the services may be poor.

Within the constraints identified above, the information contained in the attached report at this time is accurate and complete to the best of my knowledge and belief.

  
GEORGE A. ORLICKI  
Technical Director / Chief Scientist

FOR OFFICIAL USE ONLY



**DEPARTMENT OF THE ARMY**  
**HEADQUARTERS, U.S. ARMY TEST AND EVALUATION COMMAND**  
**ABERDEEN PROVING GROUND, MARYLAND 21005-5055**



REPLY TO  
ATTENTION OF

AMSTE-TA-0 (5-10c)

MEMORANDUM FOR Commander, U.S. Army Materiel Command, ATTN: AMCRD-IT,  
5001 Eisenhower Avenue, Alexandria, VA 22333-0001

SUBJECT: BRAC Data Call #7, Requests for Clarification

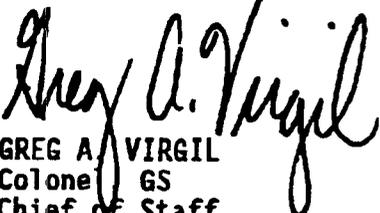
1. Enclosed are responses (hard copies only) to requests for clarification to BRAC Data Call #7, Test and Evaluation as follows:

<u>TEST CENTER</u>	<u>REC #</u>
WSMR (EPG)	EC007 EC011 EC017
WSMR	A/W044 A/W045 A/W046 A/W047 A/W048 A/W049 A/W066
YPG	A/W076

2. The information contained in these responses is accurate and complete to the best of my knowledge and belief.

3. POC for this headquarters is Mr. James F. Fisher, AMSTE-TA-OP, amstetao@apg-9.apg.army.mil, DSN 298-1421.

FOR THE COMMANDER:

  
 GREG A. VIRGIL  
 Colonel GS  
 Chief of Staff

Encl

**FOR OFFICIAL USE ONLY**

PROTECTIVE MARKING CANCELLED  
UPON REMOVAL OF ENCLOSURE



DEPARTMENT OF THE ARMY  
OFFICE OF THE CHIEF OF STAFF  
200 ARMY PENTAGON  
WASHINGTON DC 20310-0200



REPLY TO  
ATTENTION OF

19 SEP 94

DACS-TAB

MEMORANDUM FOR THE CHAIRMAN, TEST AND EVALUATION JOINT  
CROSS-SERVICE WORKING GROUP

SUBJECT: T&E Requests for Clarification and Corrected Data Submission

The enclosed T&E data is provided in accordance with the Defense Base Closure and Realignment Act of 1990, as amended, which requires certification of the accuracy and completeness of all information provided to the Commission and the Secretary of Defense.

The attached data clarification response to the Army Audit Agency's review of the previous T&E data calls and RFCs EC 007, EC 011, EC 017, AW044, AW045, AW046, AW047, AW048, AW049, AW066, AW076, AW004, AW040, AW007, AW043, AV001, AV002, AV039, and AV040 have been certified at both the Installation and the Major Command level. The information contained in this report is true and complete to the best of my knowledge and belief.

If we can be of further assistance, please contact The Army Basing Study Office, T&E representative, LTC Jack Marriott, 697-1765.

*for* *John C. Marriott, LTC, GS*  
MICHAEL G. JONES  
Colonel, U.S. Army  
Director, The Army Basing Study



DEPARTMENT OF THE ARMY  
OFFICE OF THE CHIEF OF STAFF  
200 ARMY PENTAGON  
WASHINGTON DC 20310-0200



REPLY TO  
ATTENTION OF

21 SEP 94

DACS-TAB

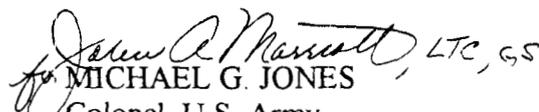
MEMORANDUM FOR THE CHAIRMAN, TEST AND EVALUATION JOINT  
CROSS-SERVICE WORKING GROUP

SUBJECT: T&E Requests for Clarification and Corrected Data Submission

The enclosed T&E data is provided in accordance with the Defense Base Closure and Realignment Act of 1990, as amended, which requires certification of the accuracy and completeness of all information provided to the Commission and the Secretary of Defense.

The attached data clarification responses to T&E RFCs EC 001, EC 003, EC 008, EC010, EC012, EC013, EC014, EC015, EC016, EC034, AV003, AV004, AV005, AV006, AV007, AV008, AV051, and AV049 have been certified at both the Installation and the Major Command level. The information contained in this report is true and complete to the best of my knowledge and belief.

If we can be of further assistance, please contact The Army Basing Study Office, T&E representative, LTC Jack Marriott, 697-1765.

  
MICHAEL G. JONES, LTC, GS  
Colonel, U.S. Army  
Director, The Army Basing Study



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
**OFFICE OF THE CHIEF OF STAFF**  
**WASHINGTON, DC 20310-0200**



August 2, 1994

**MEMORANDUM FOR THE CHAIRMAN, TEST AND EVALUATION JOINT WORKING  
GROUP**

Subject: Test and Evaluation Joint Cross-Service Group Data Call Submission

The enclosed Test and Evaluation (T&E) data call is provided in accordance with the Defense Base Closure and Realignment Act of 1990, as amended, which requires certification of the accuracy and completeness of all information provided to the Commission and the Secretary of Defense.

The attached data call has been certified at both the Installation and the Major Command level. The information contained in this report is true and complete to the best of my knowledge and belief.

If we can be of further assistance, please contact The Army Basing Study Office T&E representative, MAJ Jack Marriott, xx71765.

**MICHAEL G. JONES**  
Colonel, U. S. Army  
Director, The Army Basing Study



DEPARTMENT OF THE ARMY  
OFFICE OF THE CHIEF OF STAFF  
WASHINGTON, DC 20310-0200



REPLY TO  
ATTENTION OF

DACS-TAB

MEMORANDUM FOR THE CHAIRMAN, TEST AND EVALUATION JOINT  
CROSS-SERVICE WORKING GROUP

SUBJECT: Supplemental T&E Data Submission

The enclosed supplemental T&E data is provided in accordance with the Defense Base Closure and Realignment Act of 1990, as amended, which requires certification of the accuracy and completeness of all information provided to the Commission and the Secretary of Defense.

The attached data call has been certified at both the Installation and the Major Command level. The information contained in this report is true and complete to the best of my knowledge and belief.

If we can be of further assistance, please contact The Army Basing Study Office, T&E representative, LTC Jack Marriott, 697-1765.

*John A. Marriott, LTC, SS*  
for MICHAEL G. JONES  
Colonel, U.S. Army  
Director, The Army Basing Study

DACS-TAB

SUBJECT: Supplemental T&E Data Submission

The following Requests for Clarification have been received by this office and forwarded to the T&E JCSG:

<u>AV</u>	*001	ATTC	<u>EC</u>	001	WEPG	<u>A/W</u>	*001	YPG
	*002	ATTC		003	WEPG		*002	YPG
	*003	WEPG		008	WEPG		*003	YPG
	*004	WEPG		010	WEPG		*004	RTTC
	*005	WEPG		012	WEPG		007	YPG
	*006	WEPG		013	WEPG		040	RTTC
	*007	WEPG		014	WEPG		043	CSTA
	*008	WEPG		015	WEPG		044	WSMR
	039	ATTC		016	WEPG		045	WSMR
	040	ATTC		007	WEPG		046	WSMR
				011	WEPG		047	WSMR
				017	WEPG		048	WSMR
							049	WSMR
							*050	OPTEC

\* Denotes response received and forwarded to JCSG



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OFFICE OF THE SECRETARY OF DEFENSE

WASHINGTON, D.C. 20301

02 NOV 1994

MEMORANDUM FOR TRI-SERVICE BRAC GROUP

SUBJECT: Test and Evaluation (T&E) JCSG Inputs for Optimization Model Runs

Request the Tri-Department BRAC Group conduct initial runs with the linear optimization model in support of our T&E cross-service analysis. Included are Functional Values (Attachment 1) and authorization for running the previously provided Projected Workload, and Capacity (Attachment 2). Specific optimization model runs are to be made with these data are per our T&E Joint Cross-Service Group Analysis Plan dated 3 August 1994, as amended.

In accordance with our Analysis Plan, we anticipate conducting additional runs using these data and variations (e.g. sensitivity analysis) as required. These additional runs will be requested directly by our T&E Joint Working Group.

*John V. Bolino, for*  
John A. Burt

Co-Chairman

T&E Joint Cross-Service Group

A handwritten signature in cursive script, appearing to read "Philip E. Coyle".

Philip E. Coyle

Co-Chairman

T&E Joint Cross-Service Group

Attachments:

1. T&E Functional Values
2. T&E Projected Workload and Capacity

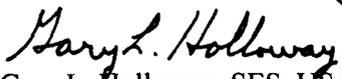
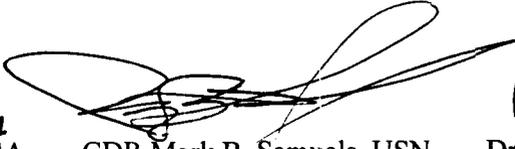
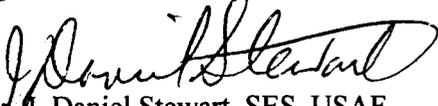
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2 November 1994

MEMORANDUM FOR T&E JCSG Co-Chairs

Subject: T&E JCSG Inputs for Optimization Model Runs

Attached are corrected (based upon DoD IG validation) Projected Workload and Capacity data required by the Tri-Department BRAC Group to conduct the initial runs with the linear optimization model. These data supercede that contained in our 19 October memorandum and were generated in accordance with the T&E Joint Cross-Service Group Analysis Plan, as amended, dated 3 August 1994.

 Gary L. Holloway, SES, USA T&E JCSWG Army Lead	 CDR Mark B. Samuels, USN T&E JCSWG Navy Lead	 Dr. J. Daniel Stewart, SES, USAF T&E JCSWG Air Force Lead
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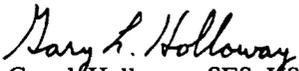
Coordination:	T&E JCSG Army Principal	Concur/Non-Concur
	T&E JCSG Navy Principal	<u>Concur</u> <i>YBH</i>
	T&E JCSG Air Force Principal	<u>Concur</u>
		<i>11/2/94</i>

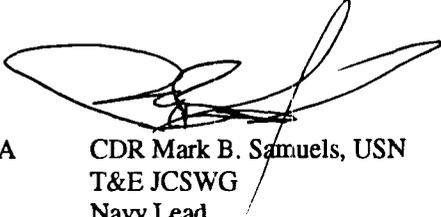
2 November 1994

MEMORANDUM FOR T&E JCSG Co-Chairs

Subject: T&E JCSG Inputs for Optimization Model Runs

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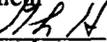
  
Gary I. Holloway, SES, USA  
T&E JCSWG  
Army Lead

  
CDR Mark B. Samuels, USN  
T&E JCSWG  
Navy Lead

  
Dr. J. Daniel Stewart, SES, USAF  
T&E JCSWG  
Air Force Lead

Coordination: T&E JCSG Army Principal  
T&E JCSG Navy Principal  
T&E JCSG Air Force Principal

Concur/Non-Concur

Concur   
Concur 

Attachment 1

2 November 1994

MEMORANDUM FOR T&E JCSG Co-Chairs

Subject: T&E JCSG Inputs for Optimization Model Runs

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*Gary L. Holloway*  
Gary L. Holloway, SES, USA  
T&E JCSWG  
Army Lead

CDR Mark B. Samuels, USN  
T&E JCSWG  
Navy Lead

*J. Daniel Stewart*  
Dr. J. Daniel Stewart, SES, USAF  
T&E JCSWG  
Air Force Lead

Coordination: T&E JCSG Army Principal  
T&E JCSG Navy Principal  
T&E JCSG Air Force Principal

Concur/Non-Concur  
Concur PHH  
11/2/94  
*JB*

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## FUNCTIONAL VALUES AIR FORCE ACTIVITIES

		Air Vehicles	Electronic Combat	Armament/ Weapons
AFDTC	REDCAP	-	15	-
	Eglin	56	65	82
	Holloman	33	29	30
	AFEWES	-	17	-
AFFTC	Edwards	85	52	-
	UTTR	46	-	-
AEDC	Tullahoma	18	-	16
476 WEG	Tyndall	49	-	-

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## FUNCTIONAL VALUES\* NAVY ACTIVITIES

		Air Vehicles	Electronic Combat	Armament/ Weapons
NAWC	China Lake	43	47	57
	Indianapolis	19	-	-
	Patuxent River	81	53 <sup>a</sup>	57
	Point Mugu	69	58	77
	Warminster	14	-	-
	WSMR	-	-	25
NSWC	Crane	-	17 <sup>b</sup>	13 <sup>c</sup>
	Dahlgren	25	-	17
	Indian Head	-	-	14

a - Pax River was 55    b - Crane was 15    c - Crane was 12  
\* Revised per IG validation process

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## FUNCTIONAL VALUES ARMY ACTIVITIES

		Air Vehicles	Electronic Combat	Armament/ Weapons
ATTC	Edwards	46	-	-
	Fort Rucker	34	-	-
RTTC	Redstone	-	-	21
	Arsenal	-	-	50
WSMR	WSMR	-	-	-
	EPG	44	47	-
YPG	YPG	35	-	29

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6 October 1994

MEMORANDUM FOR T&E JCSG Co-CHAIRS

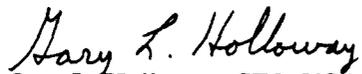
Subject: Functional Value Scoring Changes

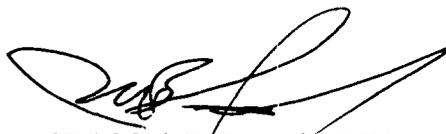
The JCSWG requests approval for the following two changes to the Analysis Plan regarding T&E functional value scoring questions and the associated scoring method/criteria:

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**Armament / Weapons Supersonic Area.** Scoring question 1.1.6, "What is the largest supersonic area? (length x width in NM)" attempted to evaluate the 2-dimensional extent of the supersonic area on a 0-Threshold basis. The Supplemental Data Call requested the straight line requirement for a supersonic corridor, but did not request the required area. Hence, lacking certified data with which to establish the threshold requirement, we request approval to score this question on a 0-Max basis.

Change pages for the Analysis Plan are attached.

  
Gary L. Holloway, SES, USA  
T&E JCSWG  
Army Lead

  
CDR Mark B. Samuels, USN  
T&E JCSWG  
Navy Lead

  
Dr. J. Daniel Stewart, SES, USAF  
T&E JCSWG  
Air Force Lead

concur / nonconcur

concur / nonconcur

John A. Burt  
Co-Chairman  
T&E Joint Cross-Service Group

Co-Chairman  
T&E Joint Cross-Service Group

Atchs: 1. Change page: EC-8, Change 1  
2. Change page:: A/W-2, Change 1

Copies to: T&E JCSG Army Principal  
T&E JCSG Navy Principal  
T&E JCSG Air Force Principal

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6 October 1994

2.5.7	Does the facility have specialized facilities to support conduct of test operations? (3.1.D.1)	2	N/Y
<b>2.6</b>	<b>Open Air Ranges (OAR)</b>	<b>100 Total</b>	
2.6.1	How many of the following spectra are available to test against (3.3.A.2, 3.3.B.4):		
	a. RF	3	N/Y
	b. EO	3	N/Y
	c. IR	3	N/Y
	d. MMW	3	N/Y
	e. UV	3	N/Y
	f. Laser?	3	N/Y
2.6.2	How many simultaneous threats can be simulated? (3.3.A.2)	11	0-Max
2.6.3	How many surface-to-air missile threats can be simulated simultaneously? (3.3.A.2)	11	0-Max
2.6.4	How many airborne interceptor threats can be simulated simultaneously? (3.3.A.2)	11	0-Max
2.6.5	How many anti-aircraft artillery threats can be simulated simultaneously? (3.3.A.2)	11	0-Max
2.6.6	Other than in questions 2.6.3, 2.6.4, and 2.6.5 above, how many other threats can be simulated simultaneously? (3.3.A.2)	11	0-Max
2.6.7	Are the available threat simulators geographically dispersed? (3.3.A.7)	11	N/Y

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6 October 1994

1.1.5	What altitude limits are associated with restricted airspace (including warning areas)? [Upper Limit - Lower Limit] Upper limit is capped at 100k feet. (3.1.G.3, 3.1.G.4, Data Forms)		
	a. Over land	5	0-Max
	b. Over sea	5	0-Max
1.1.6	What is the largest supersonic area? [length X width in nautical miles] (3.2.A.4, Data Forms)	10	0-Max
1.1.7	What is the minimum to maximum altitude within the supersonic corridor or area which is used to conduct testing? [Upper Limit - Lower Limit] Upper limit is capped at 100k feet. (3.2.A.3, Data Forms)	5	0-Max
<b>1.2</b>	<b>Topographical</b>	<b>100 Total</b>	
1.2.1	How many of the following types of topography and ground cover/vegetation exist within your test airspace? (3.1.H.1)		
	a. Mountainous	14	N/Y
	b. Forested or jungle	14	N/Y
	c. Cultivated lowland (farmland)	14	N/Y
	d. Swamp or riverine	14	N/Y
	e. Desert	14	N/Y
	f. Sea	30	N/Y

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A/W-2, Change 1

*10/7/94*  
6 October 1994  
1210

MEMORANDUM FOR T&E JCSG Co-CHAIRS

Subject: Functional Value Scoring Changes

The JCSWG requests approval for the following two changes to the Analysis Plan regarding T&E functional value scoring questions and the associated scoring method/criteria:

**Electronic Combat Geographic Dispersion.** Scoring question 2.6.7, "What is the geographic dispersion (width x depth, in NM) of available threat simulators? (3.3.A.7)" attempted to evaluate the technical capability of each open air range to present a representative slice (width and depth) of an enemy integrated air defense system. Unfortunately, data call responses provided highly inconsistent information (width only, foreign scenarios able to be accommodated, distances apart for threat simulators, etc.) and thus do not support evaluation of geographic dispersion on a relative size basis. Consequently, we request approval to score on a yes/no basis (instead of a 0-Max basis), giving full credit to facilities claiming any type of geographic dispersion and no credit to those claiming no dispersion.

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Change pages for the Analysis Plan are attached.

*Gary L. Holloway*  
Gary L. Holloway, SES, USA  
T&E JCSWG  
Army Lead

*CDR Mark B. Samuels*  
CDR Mark B. Samuels, USN  
T&E JCSWG  
Navy Lead

*Dr. J. Daniel Stewart*  
Dr. J. Daniel Stewart, SES, USAF  
T&E JCSWG  
Air Force Lead

concur / nonconcur

concur / nonconcur

02 ENTU  
OCT 07 1994

John A. Burt  
Co-Chairman  
T&E Joint Cross-Service Group

Co-Chairman  
T&E Joint Cross-Service Group

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2. Change page:: A/W-2, Change 1

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T&E JCSG Navy Principal  
T&E JCSG Air Force Principal

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6 October 1994

2.5.7	Does the facility have specialized facilities to support conduct of test operations? (3.1.D.1)	2	N/Y
2.6	<b>Open Air Ranges (OAR)</b>	<b>100 Total</b>	
2.6.1	How many of the following spectra are available to test against (3.3.A.2, 3.3.B.4):		
	a. RF	3	N/Y
	b. EO	3	N/Y
	c. IR	3	N/Y
	MMW	3	N/Y
	e. UV	3	N/Y
	f. Laser?	3	N/Y
2.6.2	How many simultaneous threats can be simulated? (3.3.A.2)	11	0-Max
2.6.3	How many surface-to-air missile threats can be simulated simultaneously? (3.3.A.2)	11	0-Max
2.6.4	How many airborne interceptor threats can be simulated simultaneously? (3.3.A.2)	11	0-Max
2.6.5	How many anti-aircraft artillery threats can be simulated simultaneously? (3.3.A.2)	11	0-Max
2.6.6	Other than in questions 2.6.3, 2.6.4, and 2.6.5 above, how many other threats can be simulated simultaneously? (3.3.A.2)	11	0-Max
2.6.7	Are the available threat simulators geographically dispersed? (3.3.A.7)	11	N/Y

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6 October 1994

1.1.5	<p>What altitude limits are associated with restricted airspace (including warning areas)? [Upper Limit - Lower Limit] Upper limit is capped at 100k feet. (3.1.G.3, 3.1.G.4, Data Forms)</p>	5	0-Max
	a. Over land		
	b. Over sea	5	0-Max
1.1.6	<p>What is the largest supersonic area? [length X width in nautical miles] (3.2.A.4, Data Forms)</p>	10	0-Max
1.1.7	<p>What is the minimum to maximum altitude within the supersonic corridor or area which is used to conduct testing? [Upper Limit - Lower Limit] Upper limit is capped at 100k feet. (3.2.A.3, Data Forms)</p>	5	0-Max
1.2	<b>Topographical</b>	<b>100 Total</b>	
1.2.1	<p>How many of the following types of topography and ground cover/vegetation exist within your test airspace? (3.1.H.1)</p>		
	a. Mountainous	14	N/Y
	b. Forested or jungle	14	N/Y
	c. Cultivated lowland (farmland)	14	N/Y
	d. Swamp or riverine	14	N/Y
	e. Desert	14	N/Y
	f. Sea	30	N/Y

6 October 1994

MEMORANDUM FOR T&E JCSG Co-CHAIRS

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Air Force Lead

concur / nonconcur

concur / nonconcur

*John A. Burt*  
John A. Burt  
Co-Chairman  
T&E Joint Cross-Service Group

*John A. Burt*  
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Atchs: 1. Change page: EC-8, Change 1  
2. Change page: A/W-2, Change 1

Copies to: T&E JCSG Army Principal  
T&E JCSG Navy Principal  
T&E JCSG Air Force Principal

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6 October 1994

2.5.7	Does the facility have specialized facilities to support conduct of test operations? (3.3.D.1)	2	N/Y
2.6	<b>Open Air Ranges (OAR)</b>	<b>100 Total</b>	
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	f. Laser?	3	N/Y
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2.6.3	How many surface-to-air missile threats can be simulated simultaneously? (3.3.A.2)	11	0-Max
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FOR OFFICIAL USE ONLY - CLOSE HOLD/SENSITIVE  
6 October 1994

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6 October 1994

MEMORANDUM FOR T&E JCSG Co-CHAIRS

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Dr. J. Daniel Stewart, SES, USAF  
T&E JCSWG  
Air Force Lead

concur / ~~nonconcur~~

*WWT 10/7/94*

concur / nonconcur

John A. Burt  
Co-Chairman  
T&E Joint Cross-Service Group

Co-Chairman  
T&E Joint Cross-Service Group

Atchs: 1. Change page: EC-8, Change 1  
2. Change page:: A/W-2, Change 1

Copies to: T&E JCSG Army Principal  
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T&E JCSG Air Force Principal

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6 October 1994

2.5.7	Does the facility have specialized facilities to support conduct of test operations? (3.1.D.1)	2	N/Y
<b>2.6</b>	<b>Open Air Ranges (OAR)</b>	<b>100 Total</b>	
2.6.1	How many of the following spectra are available to test against (3.3.A.2, 3.3.B.4):		
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	f. Laser?	3	N/Y
2.6.2	How many simultaneous threats can be simulated? (3.3.A.2)	11	0-Max
2.6.3	How many surface-to-air missile threats can be simulated simultaneously? (3.3.A.2)	11	0-Max
2.6.4	How many airborne interceptor threats can be simulated simultaneously? (3.3.A.2)	11	0-Max
2.6.5	How many anti-aircraft artillery threats can be simulated simultaneously? (3.3.A.2)	11	0-Max
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2.6.7	Are the available threat simulators geographically dispersed? (3.3.A.7)	11	N/Y

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6 October 1994

1.1.5	What altitude limits are associated with restricted airspace (including warning areas)? [Upper Limit - Lower Limit] Upper limit is capped at 100k feet. (3.1.G.3, 3.1.G.4, Data Forms)	5	0-Max
	a. Over land		
	b. Over sea	5	0-Max
1.1.6	What is the largest supersonic area? [length X width in nautical miles] (3.2.A.4, Data Forms)	10	0-Max
1.1.7	What is the minimum to maximum altitude within the supersonic corridor or area which is used to conduct testing? [Upper Limit - Lower Limit] Upper limit is capped at 100k feet. (3.2.A.3, Data Forms)	5	0-Max
1.2	<b>Topographical</b>	<b>100 Total</b>	
1.2.1	How many of the following types of topography and ground cover/vegetation exist within your test airspace? (3.1.H.1)		
	a. Mountainous	14	N/Y
	b. Forested or jungle	14	N/Y
	c. Cultivated lowland (farmland)	14	N/Y
	d. Swamp or riverine	14	N/Y
	e. Desert	14	N/Y
	f. Sea	30	N/Y

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6 October 1994

MEMORANDUM FOR T&E JCSG Co-CHAIRS

Subject: Functional Value Scoring Changes

The JCSWG requests approval for the following two changes to the Analysis Plan regarding T&E functional value scoring questions and the associated scoring method/criteria:

**Electronic Combat Geographic Dispersion.** Scoring question 2.6.7, "What is the geographic dispersion (width x depth, in NM) of available threat simulators? (3.3.A.7)" attempted to evaluate the technical capability of each open air range to present a representative slice (width and depth) of an enemy integrated air defense system. Unfortunately, data call responses provided highly inconsistent information (width only, foreign scenarios able to be accommodated, distances apart for threat simulators, etc.) and thus do not support evaluation of geographic dispersion on a relative size basis. Consequently, we request approval to score on a yes/no basis (instead of a 0-Max basis), giving full credit to facilities claiming any type of geographic dispersion and no credit to those claiming no dispersion.

**Armament / Weapons Supersonic Area.** Scoring question 1.1.6, "What is the largest supersonic area? (length x width in NM)" attempted to evaluate the 2-dimensional extent of the supersonic area on a 0-Threshold basis. The Supplemental Data Call requested the straight line requirement for a supersonic corridor, but did not request the required area. Hence, lacking certified data with which to establish the threshold requirement, we request approval to score this question on a 0-Max basis.

Change pages for the Analysis Plan are attached.

  
Gary L. Holloway, SES, USA  
T&E JCSWG  
Army Lead

  
CDR Mark B. Samuels, USN  
T&E JCSWG  
Navy Lead

  
Dr. J. Daniel Stewart, SES, USAF  
T&E JCSWG  
Air Force Lead

concur / nonconcur

concur / nonconcur

John A. Burt  
Co-Chairman  
T&E Joint Cross-Service Group

Co-Chairman  
T&E Joint Cross-Service Group

- Atchs: 1. Change page: EC-8, Change 1
- 2. Change page:: A/W-2, Change 1

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- T&E JCSG Navy Principal
- T&E JCSG Air Force Principal

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2.5.7	Does the facility have specialized facilities to support conduct of test operations? (3.1.D.1)	2	N/Y
2.6	<b>Open Air Ranges (OAR)</b>	<b>100 Total</b>	
2.6.1	How many of the following spectra are available to test against (3.3.A.2, 3.3.B.4):		
	a. RF	3	N/Y
	b. EO	3	N/Y
	c. IR	3	N/Y
	d. MMW	3	N/Y
	e. UV	3	N/Y
	f. Laser?	3	N/Y
2.6.2	How many simultaneous threats can be simulated? (3.3.A.2)	11	0-Max
2.6.3	How many surface-to-air missile threats can be simulated simultaneously? (3.3.A.2)	11	0-Max
2.6.4	How many airborne interceptor threats can be simulated simultaneously? (3.3.A.2)	11	0-Max
2.6.5	How many anti-aircraft artillery threats can be simulated simultaneously? (3.3.A.2)	11	0-Max
2.6.6	Other than in questions 2.6.3, 2.6.4, and 2.6.5 above, how many other threats can be simulated simultaneously? (3.3.A.2)	11	0-Max
2.6.7	Are the available threat simulators geographically dispersed? (3.3.A.7)	11	N/Y

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1.1.5	What altitude limits are associated with restricted airspace (including warning areas)? [Upper Limit - Lower Limit] Upper limit is capped at 100k feet. (3.1.G.3, 3.1.G.4, Data Forms)	5	0-Max
	a. Over land		
	b. Over sea	5	0-Max
1.1.6	What is the largest supersonic area? [length X width in nautical miles] (3.2.A.4, Data Forms)	10	0-Max
1.1.7	What is the minimum to maximum altitude within the supersonic corridor or area which is used to conduct testing? [Upper Limit - Lower Limit] Upper limit is capped at 100k feet. (3.2.A.3, Data Forms)	5	0-Max
1.2	<b>Topographical</b>	<b>100 Total</b>	
1.2.1	How many of the following types of topography and ground cover/vegetation exist within your test airspace? (3.1.H.1)		
	a. Mountainous	14	N/Y
	b. Forested or jungle	14	N/Y
	c. Cultivated lowland (farmland)	14	N/Y
	d. Swamp or riverine	14	N/Y
	e. Desert	14	N/Y
	f. Sea	30	N/Y

6 October 1994

MEMORANDUM FOR T&E JCSG Co-CHAIRS

Subject: Functional Value Scoring Changes

The JCSWG requests approval for the following two changes to the Analysis Plan regarding T&E functional value scoring questions and the associated scoring method/criteria:

**Electronic Combat Geographic Dispersion.** Scoring question 2.6.7, "What is the geographic dispersion (width x depth, in NM) of available threat simulators? (3.3.A.7)" attempted to evaluate the technical capability of each open air range to present a representative slice (width and depth) of an enemy integrated air defense system. Unfortunately, data call responses provided highly inconsistent information (width only, foreign scenarios able to be accommodated, distances apart for threat simulators, etc.) and thus do not support evaluation of geographic dispersion on a relative size basis. Consequently, we request approval to score on a yes/no basis (instead of a 0-Max basis), giving full credit to facilities claiming any type of geographic dispersion and no credit to those claiming no dispersion.

**Armament / Weapons Supersonic Area.** Scoring question 1.1.6, "What is the largest supersonic area? (length x width in NM)" attempted to evaluate the 2-dimensional extent of the supersonic area on a 0-Threshold basis. The Supplemental Data Call requested the straight line requirement for a supersonic corridor, but did not request the required area. Hence, lacking certified data with which to establish the threshold requirement, we request approval to score this question on a 0-Max basis.

Change pages for the Analysis Plan are attached.

*Gary L. Holloway*  
Gary L. Holloway, SES, USA  
T&E JCSWG  
Army Lead

*CDR Mark B. Samuels*  
CDR Mark B. Samuels, USN  
T&E JCSWG  
Navy Lead  
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*Dr. J. Daniel Stewart*  
Dr. J. Daniel Stewart, SES, USAF  
T&E JCSWG  
Air Force Lead

concur / nonconcur

concur / nonconcur

John A. Burt  
Co-Chairman  
T&E Joint Cross-Service Group

Co-Chairman  
T&E Joint Cross-Service Group

Atchs: 1. Change page: EC-8, Change 1  
2. Change page:: A/W-2, Change 1

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T&E JCSG Navy Principal  
T&E JCSG Air Force Principal

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6 October 1994

2.5.7	Does the facility have specialized facilities to support conduct of test operations? (3.4.D.1)	2	N/Y
<b>2.6</b>	<b>Open Air Ranges (OAR)</b>	<b>100 Total</b>	
2.6.1	How many of the following spectra are available to test against (3.3.A.2, 3.3.B.4):		
	a. RF	3	N/Y
	b. EO	3	N/Y
	c. IR	3	N/Y
	d. MMW	3	N/Y
	e. UV	3	N/Y
	f. Laser?	3	N/Y
2.6.2	How many simultaneous threats can be simulated? (3.3.A.2)	11	0-Max
2.6.3	How many surface-to-air missile threats can be simulated simultaneously? (3.3.A.2)	11	0-Max
2.6.4	How many airborne interceptor threats can be simulated simultaneously? (3.3.A.2)	11	0-Max
2.6.5	How many anti-aircraft artillery threats can be simulated simultaneously? (3.3.A.2)	11	0-Max
2.6.6	Other than in questions 2.6.3, 2.6.4, and 2.6.5 above, how many other threats can be simulated simultaneously? (3.3.A.2)	11	0-Max
2.6.7	Are the available threat simulators geographically dispersed? (3.3.A.7)	11	N/Y

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1.1.5	What altitude limits are associated with restricted airspace (including warning areas)? [Upper Limit - Lower Limit] Upper limit is capped at 100k feet. (3.1.G.3, 3.1.G.4, Data Forms)	5	0-Max
	a. Over land		
	b. Over sea	5	0-Max
1.1.6	What is the largest supersonic area? [length X width in nautical miles] (3.2.A.4, Data Forms)	10	0-Max
1.1.7	What is the minimum to maximum altitude within the supersonic corridor or area which is used to conduct testing? [Upper Limit - Lower Limit] Upper limit is capped at 100k feet. (3.2.A.3, Data Forms)	5	0-Max
1.2	<b>Topographical</b>	<b>100 Total</b>	
1.2.1	How many of the following types of topography and ground cover/vegetation exist within your test airspace? (3.1.H.1)		
	a. Mountainous	14	N/Y
	b. Forested or jungle	14	N/Y
	c. Cultivated lowland (farmland)	14	N/Y
	d. Swamp or riverine	14	N/Y
	e. Desert	14	N/Y
	f. Sea	30	N/Y

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7 October 1994

MEMORANDUM FOR T&E JCSG Co-CHAIRS

Subject: Threshold Values for Functional Value Scoring

The JCSWG has reviewed the certified responses from all three Services to the Supplemental Data Call and determined threshold values for Functional Value scoring. Request approval to use these values in DPAD for the scoring questions indicated below.

AIR VEHICLES

Question	Threshold	Driver
1.1.1 Sq mi land space available	40,000	USN: AEW, AF: B-2
1.1.2 Sq mile sea space available	40,000	USN: AEW, AF: B-2
1.1.4 Sq mi restricted/warning airspace	40,000	AF: B-2
1.1.6 Sq mi available airspace over land	40,000	USN: AEW, AF: B-2
1.1.7 Sq mi available airspace over water	40,000	USN: AEW, AF: B-2
1.1.8 Max straight line segment in the airspace	1200	AF: TIER II+UAV
1.1.11 Max straight line segment in the supersonic airspace	400	USN: AEW

ELECTRONIC COMBAT

Question	Threshold	Driver
1.1.1 Sq mi land space available	160,000	AF: B-1B
1.1.2 Sq mile sea space available	122,500	AF: B-1B
1.1.4 Sq mi restricted/warning airspace	100,000	AF: Bomber Penetrations
1.1.7 Sq mi available airspace over land	160,000	AF: B-1B
1.1.8 Sq mi available airspace over water	122,500	AF: B-1B
1.1.9 Max straight line segment in the airspace	660	USN: RWR, Jammers, ELINT

ARMAMENTS / WEAPONS

Question	Threshold	Driver
1.1.1 Sq mi restricted/warning airspace	50,000	USN: AEGIS/SM II
1.1.2 Sq mi DoD land space	21,000	AF: AIM-120C
1.1.3 Sq mi sea warning area space	50,000	USN: AEGIS/SM II

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1.1.4.a	Max straight line segment, A-A	220	AF: F-15
1.1.4.b	Max straight line segment, A-S	350	AF: B-2
1.1.4.c	Max straight line segment, S-A	240	USA: UDS 81398A

  
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Navy Lead

  
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concur / nonconcur

concur / nonconcur

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Co-Chairman  
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MEMORANDUM FOR T&E JCSWG Co-CHAIRS

Subject: Threshold Values for Functional Value Scoring

The JCSWG has reviewed the certified responses from all three Services to the Supplemental Data Call and determined threshold values for Functional Value scoring. Request approval to use these values in DPAD for the scoring questions indicated below.

AIR VEHICLES

Question	Threshold	Driver
1.1.1 Sq mi land space available	40,000	USN: AEW, AF: B-2
1.1.2 Sq mile sea space available	40,000	USN: AEW, AF: B-2
1.1.4 Sq mi restricted/warning airspace	40,000	AF: B-2
1.1.6 Sq mi available airspace over land	40,000	USN: AEW, AF: B-2
1.1.7 Sq mi available airspace over water	40,000	USN: AEW, AF: B-2
1.1.8 Max straight line segment in the airspace	1200	AF: TIER II+UAV
1.1.11 Max straight line segment in the supersonic airspace	400	USN: AEW

ELECTRONIC COMBAT

Question	Threshold	Driver
1.1.1 Sq mi land space available	160,000	AF: B-1B
1.1.2 Sq mile sea space available	122,500	AF: B-1B
1.1.4 Sq mi restricted/warning airspace	100,000	AF: Bomber Penetrations
1.1.7 Sq mi available airspace over land	160,000	AF: B-1B
1.1.8 Sq mi available airspace over water	122,500	AF: B-1B
1.1.9 Max straight line segment in the airspace	660	USN: RWR, Jammers, ELINT

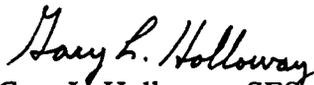
ARMAMENTS / WEAPONS

Question	Threshold	Driver
1.1.1 Sq mi restricted/warning airspace	50,000	USN: AEGIS/SM II
1.1.2 Sq mi DoD land space	21,000	AF: AIM-120C
1.1.3 Sq mi sea warning area space	50,000	USN: AEGIS/SM II

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1.1.4.a	Max straight line segment, A-A	220	AF: F-15
1.1.4.b	Max straight line segment, A-S	350	AF: B-2
1.1.4.c	Max straight line segment, S-A	240	USA: UDS 81398A

  
Gary L. Holloway, SES, USA  
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CDR Mark B. Samuels, USN  
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concur / nonconcur

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John A. Burt  
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MEMORANDUM FOR T&E JCSG Co-CHAIRS

Subject: Threshold Values for Functional Value Scoring

The JCSWG has reviewed the certified responses from all three Services to the Supplemental Data Call and determined threshold values for Functional Value scoring. Request approval to use these values in DPAD for the scoring questions indicated below.

AIR VEHICLES

Question	Threshold	Driver
1.1.1 Sq mi land space available	40,000	USN: AEW, AF: B-2
1.1.2 Sq mile sea space available	40,000	USN: AEW, AF: B-2
1.1.4 Sq mi restricted/warning airspace	40,000	AF: B-2
1.1.6 Sq mi available airspace over land	40,000	USN: AEW, AF: B-2
1.1.7 Sq mi available airspace over water	40,000	USN: AEW, AF: B-2
1.1.8 Max straight line segment in the airspace	1200	AF: TIER II+UAV
1.1.11 Max straight line segment in the supersonic airspace	400	USN: AEW

ELECTRONIC COMBAT

Question	Threshold	Driver
1.1.1 Sq mi land space available	160,000	AF: B-1B
1.1.2 Sq mile sea space available	122,500	AF: B-1B
1.1.4 Sq mi restricted/warning airspace	100,000	AF: Bomber Penetrations
1.1.7 Sq mi available airspace over land	160,000	AF: B-1B
1.1.8 Sq mi available airspace over water	122,500	AF: B-1B
1.1.9 Max straight line segment in the airspace	660	USN: RWR, Jammers, ELINT

ARMAMENTS / WEAPONS

Question	Threshold	Driver
1.1.1 Sq mi restricted/warning airspace	50,000	USN: AEGIS/SM II
1.1.2 Sq mi DoD land space	21,000	AF: AIM-120C
1.1.3 Sq mi sea warning area space	50,000	USN: AEGIS/SM II

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1.1.4.a	Max straight line segment, A-A	220	AF: F-15
1.1.4.b	Max straight line segment, A-S	350	AF: B-2
1.1.4.c	Max straight line segment, S-A	240	USA: UDS 81398A

*Gary L. Holloway*  
 Gary L. Holloway, SES, USA  
 T&E JCSWG  
 Army Lead

*CDR Mark B. Samuels*  
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 T&E JCSWG  
 Navy Lead

*J. Daniel Stewart*  
 Dr. J. Daniel Stewart, SES, USAF  
 T&E JCSWG  
 Air Force Lead

concur / nonconcur

concur / nonconcur

*John A. Burt*  
 John A. Burt  
 Co-Chairman  
 T&E Joint Cross-Service Group

03 ENTJ  
 07 1994

*N.C. [Signature]*  
 Co-Chairman  
 T&E Joint Cross-Service Group

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MEMORANDUM FOR T&E JCSG Co-CHAIRS

Subject: Threshold Values for Functional Value Scoring

The JCSWG has reviewed the certified responses from all three Services to the Supplemental Data Call and determined threshold values for Functional Value scoring. Request approval to use these values in DPAD for the scoring questions indicated below.

AIR VEHICLES

Question	Threshold	Driver
1.1.1 Sq mi land space available	40,000	USN: AEW, AF: B-2
1.1.2 Sq mile sea space available	40,000	USN: AEW, AF: B-2
1.1.4 Sq mi restricted/warning airspace	40,000	AF: B-2
1.1.6 Sq mi available airspace over land	40,000	USN: AEW, AF: B-2
1.1.7 Sq mi available airspace over water	40,000	USN: AEW, AF: B-2
1.1.8 Max straight line segment in the airspace	1200	AF: TIER II+UAV
1.1.11 Max straight line segment in the supersonic airspace	400	USN: AEW

ELECTRONIC COMBAT

Question	Threshold	Driver
1.1.1 Sq mi land space available	160,000	AF: B-1B
1.1.2 Sq mile sea space available	122,500	AF: B-1B
1.1.4 Sq mi restricted/warning airspace	100,000	AF: Bomber Penetrations
1.1.7 Sq mi available airspace over land	160,000	AF: B-1B
1.1.8 Sq mi available airspace over water	122,500	AF: B-1B
1.1.9 Max straight line segment in the airspace	660	USN: RWR, Jammers, ELINT

ARMAMENTS / WEAPONS

Question	Threshold	Driver
1.1.1 Sq mi restricted/warning airspace	50,000	USN: AEGIS/SM II
1.1.2 Sq mi DoD land space	21,000	AF: AIM-120C
1.1.3 Sq mi sea warning area space	50,000	USN: AEGIS/SM II

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1.1.4.a	Max straight line segment, A-A	220	AF: F-15
1.1.4.b	Max straight line segment, A-S	350	AF: B-2
1.1.4.c	Max straight line segment, S-A	240	USA: UDS 81398A

*Gary L. Holloway*  
 Gary L. Holloway, SES, USA  
 T&E JCSWG  
 Army Lead

*CDR Mark B. Samuels*  
 CDR Mark B. Samuels, USN  
 T&E JCSWG  
 Navy Lead

*Dr. J. Daniel Stewart*  
 Dr. J. Daniel Stewart, SES, USAF  
 T&E JCSWG  
 Air Force Lead

*Vered 10/7/94*  
 concur / ~~nonconcur~~

concur / nonconcur

OCT 04 1994  
 OCT 07 1994

John A. Burt  
 Co-Chairman  
 T&E Joint Cross-Service Group

Co-Chairman  
 T&E Joint Cross-Service Group

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 T&E JCSG Air Force Principal

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7 October 1994

MEMORANDUM FOR T&E JCSG Co-CHAIRS

Subject: Threshold Values for Functional Value Scoring

The JCSWG has reviewed the certified responses from all three Services to the Supplemental Data Call and determined threshold values for Functional Value scoring. Request approval to use these values in DPAD for the scoring questions indicated below.

AIR VEHICLES

Question	Threshold	Driver
1.1.1 Sq mi land space available	40,000	USN: AEW, AF: B-2
1.1.2 Sq mile sea space available	40,000	USN: AEW, AF: B-2
1.1.4 Sq mi restricted/warning airspace	40,000	AF: B-2
1.1.6 Sq mi available airspace over land	40,000	USN: AEW, AF: B-2
1.1.7 Sq mi available airspace over water	40,000	USN: AEW, AF: B-2
1.1.8 Max straight line segment in the airspace	1200	AF: TIER II+UAV
1.1.11 Max straight line segment in the supersonic airspace	400	USN: AEW

ELECTRONIC COMBAT

Question	Threshold	Driver
1.1.1 Sq mi land space available	160,000	AF: B-1B
1.1.2 Sq mile sea space available	122,500	AF: B-1B
1.1.4 Sq mi restricted/warning airspace	100,000	AF: Bomber Penetrations
1.1.7 Sq mi available airspace over land	160,000	AF: B-1B
1.1.8 Sq mi available airspace over water	122,500	AF: B-1B
1.1.9 Max straight line segment in the airspace	660	USN: RWR, Jammers, ELINT

ARMAMENTS / WEAPONS

Question	Threshold	Driver
1.1.1 Sq mi restricted/warning airspace	50,000	USN: AEGIS/SM II
1.1.2 Sq mi DoD land space	21,000	AF: AIM-120C
1.1.3 Sq mi sea warning area space	50,000	USN: AEGIS/SM II

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1.1.4.a Max straight line segment, S-A 220 AF: F-15  
1.1.4.b Max straight line segment, A-S 350 AF: B-2  
1.1.4.c Max straight line segment, S-A 240 USA: UDS 81398A

*Gary L. Holloway*

Gary L. Holloway, SES, USA  
T&E JCSWG  
Army Lead

*Mark B. Samuels*

CDR Mark B. Samuels, USN  
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concur / nonconcur

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7 October 1994

MEMORANDUM FOR T&E JCSG Co-CHAIRS

Subject: Threshold Values for Functional Value Scoring

The JCSWG has reviewed the certified responses from all three Services to the Supplemental Data Call and determined threshold values for Functional Value scoring. Request approval to use these values in DPAD for the scoring questions indicated below.

AIR VEHICLES

Question	Threshold	Driver
1.1.1 Sq mi land space available	40,000	USN: AEW, AF: B-2
1.1.2 Sq mile sea space available	40,000	USN: AEW, AF: B-2
1.1.4 Sq mi restricted/warning airspace	40,000	AF: B-2
1.1.6 Sq mi available airspace over land	40,000	USN: AEW, AF: B-2
1.1.7 Sq mi available airspace over water	40,000	USN: AEW, AF: B-2
1.1.8 Max straight line segment in the airspace	1200	AF: TIER II+UAV
1.1.11 Max straight line segment in the supersonic airspace	400	USN: AEW

ELECTRONIC COMBAT

Question	Threshold	Driver
1.1.1 Sq mi land space available	160,000	AF: B-1B
1.1.2 Sq mile sea space available	122,500	AF: B-1B
1.1.4 Sq mi restricted/warning airspace	100,000	AF: Bomber Penetrations
1.1.7 Sq mi available airspace over land	160,000	AF: B-1B
1.1.8 Sq mi available airspace over water	122,500	AF: B-1B
1.1.9 Max straight line segment in the airspace	660	USN: RWR, Jammers, ELINT

ARMAMENTS / WEAPONS

Question	Threshold	Driver
1.1.1 Sq mi restricted/warning airspace	50,000	USN: AEGIS/SM II
1.1.2 Sq mi DoD land space	21,000	AF: AIM-120C
1.1.3 Sq mi sea warning area space	50,000	USN: AEGIS/SM II

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1.1.4.a	Max straight line segment, A-A	220	AF: F-15
1.1.4.b	Max straight line segment, A-S	350	AF: B-2
1.1.4.c	Max straight line segment, S-A	240	USA: UDS 81398A

*Gary L. Holloway*  
 Gary L. Holloway, SES, USA  
 T&E JCSWG  
 Army Lead

*CDR Mark B. Samuels*  
 CDR Mark B. Samuels, USN  
 T&E JCSWG  
 Navy Lead

*Dr. J. Daniel Stewart*  
 Dr. J. Daniel Stewart, SES, USAF  
 T&E JCSWG  
 Air Force Lead

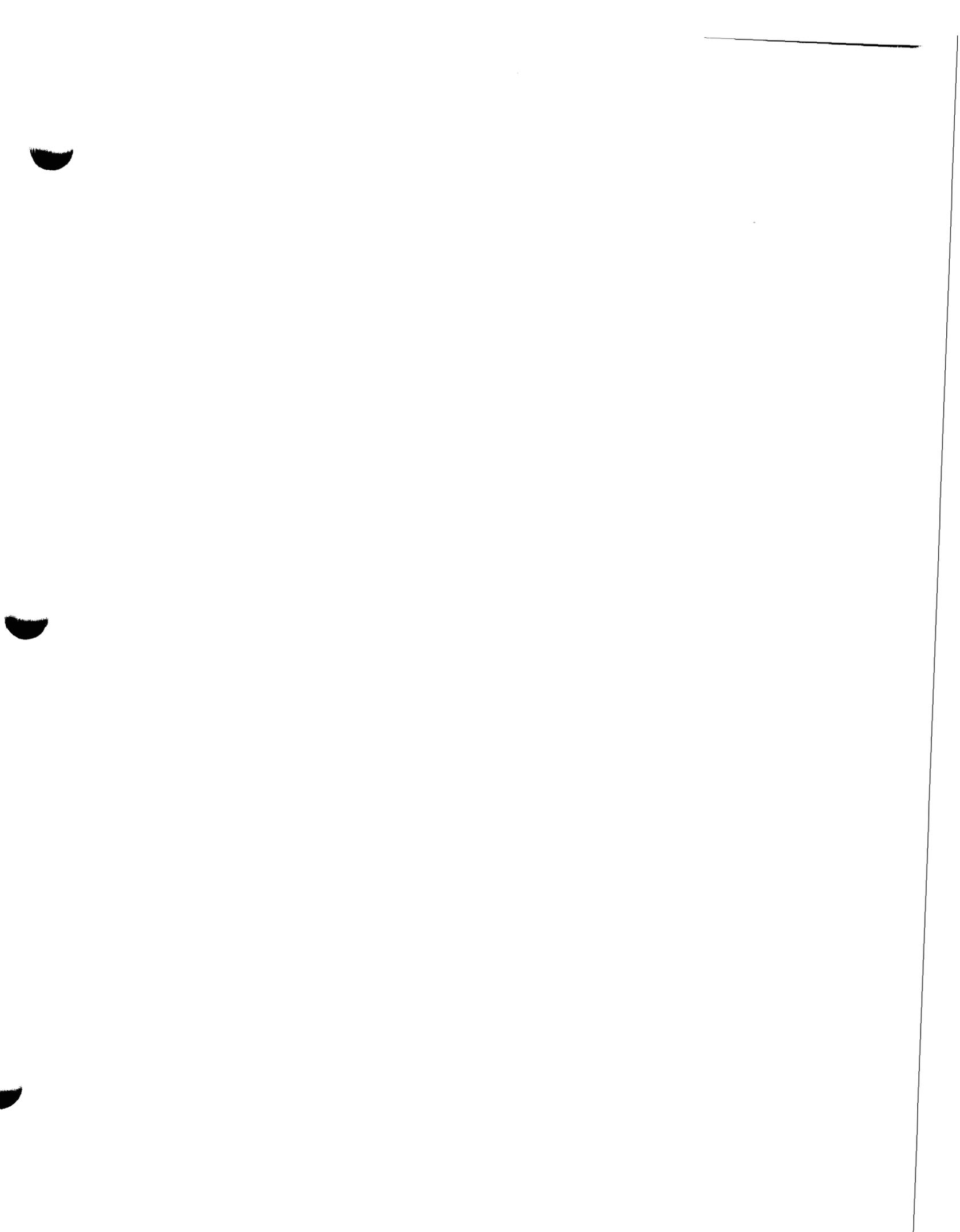
concur / nonconcur

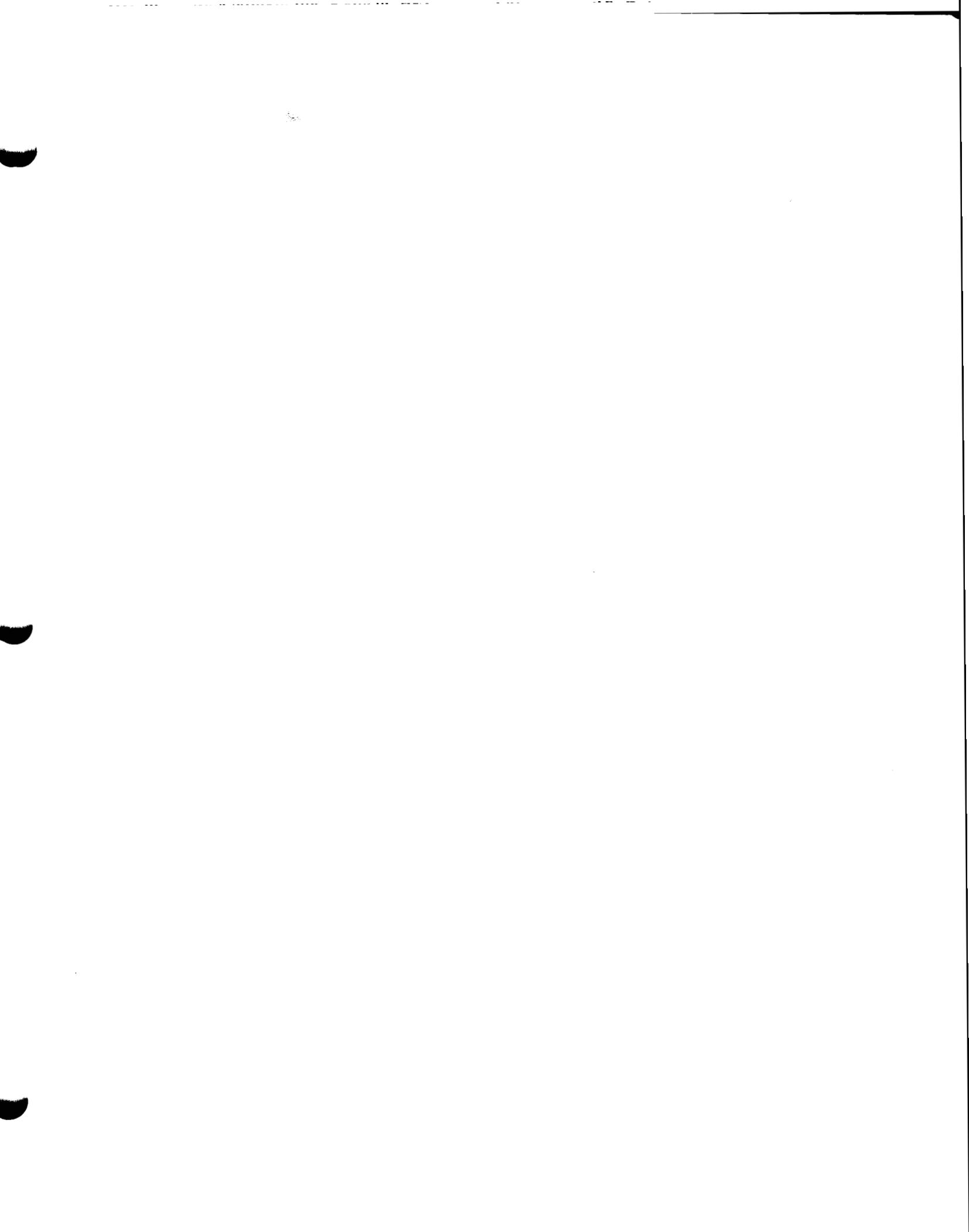
concur / nonconcur

John A. Burt  
 Co-Chairman  
 T&E Joint Cross-Service Group

Co-Chairman  
 T&E Joint Cross-Service Group

Copies to: T&E JCSG Army Principal  
 T&E JCSG Navy Principal  
 T&E JCSG Air Force Principal





Aberdeen Proving Ground

<u>Title</u>	<u>Total</u>	<u>A/V</u>	<u>A/W</u>	<u>EC</u>
1. Air Base Range &	35	0	0	35
2. Multi Spectral Signature Acquisition Systems	35	0	0	35

Redstone Arsenal

1. Component Test	42.5	0	29.4	0
2. Non-Destructive & Natural Environments	22.9	0	11.5	0
3. Small Missile Range	39.5	0	8.8	0
4. Induced Environmental	44.7	0	23.6	0

Army Aviation Technical Test Center (Fort Rucker)

1. Aviation Technical Test Center	100	0	0	0
2. Airworthiness Qualification Test Directorate	100	0	0	0

35

Donald R. Jenkins 8/12/94

Don J. [Signature] 8/12/94

R. [Signature] 8/12/94



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
U. S. ARMY COMBAT SYSTEMS TEST ACTIVITY  
ABERDEEN PROVING GROUND, MARYLAND 21005-5068



9 JUN 1994

STECS-RM-T (70)

MEMORANDUM FOR Commander, U.S. Army Test and Evaluation Command,  
ATTN: AMSTE-TA-O

SUBJECT: BRAC 95 Data Call #7 - Test and Evaluation -  
Replacement Submission

1. References:

- a. Memorandum, AMSTE-TA, 4 May 94, subject as above.
- b. E-mail message, STECS-RM-T, 19 May 94, subject as above.

2. The U.S. Army Combat Systems Test Activity submits the enclosed data package (three copies plus a disk copy in Word Perfect) to replace the package previously submitted on 3 Jun 94. We have included a section of data that was inadvertently omitted in the original submission. This data covers Air Base Range 8 as well as our Multispectral Signature Acquisition Systems capability.

3. The information contained in this report is accurate and complete to the best of my knowledge and belief.

4. The technical point of contact for this action is Mr. Frank Carlen, ext. 3-2325. The administrative point of contact is Mrs. Sue Sanderson, ext. 3-4639.

Encl  
as

*Done  
Sue*

*James Kriebel*

JAMES KRIEBEL  
Colonel, FA  
Commanding

GENERAL INFORMATION

Facility/Capability Title: Air Base Range 8

Origin Date: 11 Jan 94

Change Date: \_\_\_\_\_

Service: Army

Activity: CSTA

Location: APG, MD

T&E Functional Area: Electronic Warfare

UIC #: W4QUAA

T&E Test Facility Category: Measurement Facility

	<u>T&amp;E</u>	<u>S&amp;T</u>	<u>DE</u>	<u>IE</u>	<u>T&amp;D</u>	<u>OTHER</u>
PERCENTAGE USE:	<u>35</u>	<u>50</u>	<u>15</u>	_____	_____	_____
BREAKOUT BY FUNCTIONAL AREAS (%):						
Air Vehicles:	_____	_____	_____	_____	_____	_____
Armament/Weapons:	_____	_____	_____	_____	_____	_____
Electronic Combat:	<u>35</u>	<u>50</u>	<u>15</u>	_____	_____	_____
Other:	_____	_____	_____	_____	_____	_____

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## TECHNICAL INFORMATION

Page 2 of 6

**Facility/Capability Title:** Air Base Range 8

**Facility Description; Including Mission Statement:** Air Base Range 8, Aberdeen Proving Ground, MD includes a tower lift of 2000 lb payload capacity and a 0-120 ft height range. An emplaced turntable of 70 ton capacity can be viewed from the tower lift at depression angles of 0-35°. A second 70-ton turntable is relocatable up to the tower base to support depression angle measurement of greater than 60°. The entire facility is surrounded by mature vegetation for natural background and line-of-sight security. Instrumentation shelters are provided for working on systems. A dedicated data reduction shelter is available containing DOS and Unix-based systems. A new tank-sized maintenance facility is under development.

**Interconnectivity/Multi-Use of T&E Facility:** This US Army TECOM (T&E) facility is a cooperative effort between the US Army ARL (S&T), US Army TARDEC (D&E), contractors and TECOM. The ARL is external to the site under some operating conditions. The facility is constructed to maintain a natural background environment and thus allows the testing of targets supporting Signature Management Technology (SMT) applications. This facility is being brought on-line as a database node on the ARGUS network. Data collected in this facility supports the US Army T&E Database. Closing this facility would impact the Army Research Laboratory efforts in Millimeter Wave S&T, the US Army MICOM R&D being conducted at this facility and imaging Millimeter Wave Radar R&D.

Additional requirements for Land Combat Vehicle Testing is a Land Test Course to stress the vehicle systems in a controlled (albeit natural) environment. Therefore this facility requires the use of the Munson Test Course located at APG to effectively test the multispectral signature of Land Combat Systems.

**Type of Test Supported:** Tower Signature Measurements of: Close Combat, Heavy; Close Combat, Light; Fire Support; Combat Support; Combat Service Support; Threats; Surrogate Targets; Electronics Warfare; Land Vehicles; Guns and Ammunition; Targets.

**Summary of Technical Capabilities:** Signature measurements of Land Combat Vehicles covering passive imagery, and spectral radiometry, from the near ultraviolet through the far infrared. These measurements provide signatures of combat vehicles, systems, targets and camouflage. Radar cross sections and signatures are obtained with active systems operating in the 35 and 95 GHz millimeter wave regions. Inverse Synthetic Aperture Radar (ISAR) measurements. Acoustic signatures are obtained from 20 to 20,000 Hz.

**Keywords:** Multispectral, Signatures, Signature Management Technology, E-O, Visible, Color, Near-Infrared, Mid- and Far-Infrared, Radiometer, Millimeter Wave, Radar, Acoustics, ARGUS Database

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ADDITIONAL INFORMATION

Facility/Capability Title: Air Base Range 8

PERSONNEL

	93	94	95	96	97	98	99
Officer	0	0	0	0	0	0	0
Enlisted	0	0	0	0	0	0	0
Civilian	1	1	1	1	1	1	1
Contractor	0	0	0	0	0	0	0
Total	1	1	1	1	1	1	1

Total Square Footage: 1800

Test Area Square Footage: 1800

Office Space Square Footage: 0

Tonnage of Equipment: 300 (??)

Volume of Equipment: 150,000 cu. ft.

Annual Maintenance Cost: - 15K/yr

Estimated Moving Cost: \$ 1.5 M

CAPITAL EQUIPMENT INVESTMENT

Sources (PE)	88-93	94	95	96	97	98	Total
TECOM, Revitalization Plan	200			615		200	1.150

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FACILITY CONDITION

Page 4 of 6

Facility/Capability Title: Air Base Range 8

AGE: > 30 Yrs

REPLACEMENT VALUE: \$ 2.5 M

MAINTENANCE AND REPAIR BACKLOG: \$ 0

DATE OF LAST UPGRADE: November 1993

NATURE OF LAST UPGRADE: Upgrade power supply and turntable

MAJOR UPGRADES PROGRAMMED

1. UPGRADE TITLE: Air Base Range 8, Phase 1 - Instrumentation Gantry/Data Reduction Capability

TOTAL PROGRAMMED AMOUNT: \$615K

SUMMARY DESCRIPTION: Build and install an instrumentation lift braced into and supported by the existing tower structure. The additional height requirement is necessary to lift the multispectral instrumentation suite to a position which allows the correct look-down angle and the target to fill the systems field-of-view. This height is required for the Low Background testing of Advanced Technology Demonstrator systems. An on-site secure data reduction capability with associated alarms and physical security is required to reduce costs and time currently required in data reduction. This will permit data reduction on-site in NEAR real time and provide protection to support a data link to other activities (such as AMSAA and ARL).

2. UPGRADE TITLE: Air Base Range 8, Phase 2 - Develop enviromentally conscious, low background turntable.

TOTAL PROGRAMMED AMOUNT: \$200K

SUMMARY DESCRIPTION: Enhance and reconfigure the terrain and measurement area around the below-ground turntable to achieve the required reduction in ground return for the MMW signatures.

3. UPGRADE TITLE: Air Base Range 8, Phase 3 - Enhanced low background signature turntable.

TOTAL PROGRAMMED AMOUNT: \$525K

SUMMARY DESCRIPTION: Build and install an environmentally compatible turntable environment which permits multispectral signature data collection within the natural terrain of a foliated background. This system will allow the slant-path between target and sensor to remain constant while retaining a low/natural background.

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## HISTORICAL WORKLOAD

Facility/Capability Title: Air Base Range 8

### FISCAL YEAR

T&E FUNCTIONAL AREA		86	87	88	89	90	91	92	93
AIR VEHICLES	Direct Labor								
	Test Hours								
	Missions								
EC *	Direct Labor	1660	1620	1660	1620	1660	1660	1620	1430
	Test Hours	1560	1420	1560	1560	1560	1560	1560	1360
	Missions	???	???	???	???	???	???	???	???
ARMAMENT/WEAPONS	Direct Labor								
	Test Hours								
	Missions								
OTHER T&E	Direct Labor								
	Test Hours								
	Missions								
OTHER	Direct Labor								
	Test Hours								
	Missions								

\* Note: Mission element needs to be defined for Land Combat Vehicle Signature Testing.

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## DETERMINATION OF UNCONSTRAINED CAPACITY

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Facility/Capability Title: Air Base Range 8

Origin Date: 24 May 94

ANNUAL HOURS OF DOWNTIME	1	<u>3384</u>
AVERAGE DOWNTIME PER DAY (LINE 1 ÷ 365)	2	<u>9.27</u>
AVERAGE HOURS AVAILABLE PER DAY (24 - LINE 2)	3	<u>14.73</u>

TEST TYPES	TESTS AT ONE TIME	WORKLOAD PER TEST PER CAPABILITY HOUR	WORKLOAD PER CAPABILITY HOUR (LINE 5 X 6)	UNCONSTRAINED CAPABILITY PER DAY (LINE 3 X 2)
4	5	6	7	8
<u>Visible</u>	<u>1</u>	<u>3</u>	<u>3</u>	<u>54</u>
<u>Near-IR</u>	<u>1</u>	<u>2</u>	<u>2</u>	
<u>IR</u>	<u>2</u>	<u>3</u>	<u>6</u>	
<u>Spectral</u>	<u>1</u>	<u>2</u>	<u>2</u>	
<u>Acoustic</u>	<u>1</u>	<u>2</u>	<u>2</u>	
<u>"TYPICAL"</u>	<u>1</u>	<u>3</u>	<u>3</u>	
<b>TOTAL Σ</b>			<u>18</u>	<b>ANNUAL UNCONSTRAINED CAPACITY</b> <u>9 19710</u>

Capacity Rationale: This is NOT REALLY UNCONSTRAINED Capacity, since it does not consider the number of AVAILABLE hours in the day. Range 8 could support testing 24 hrs/day, 6 days/wk with 1 day/wk for maintenance. Signature measurements are TIME and ENVIRONMENT dependent. Thus, these type of measurements can only be collected over specified periods, or "windows", throughout any given 24-hour cycle.

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2

Facility/Capability Title: Air Base Range 8

**3.1.A Interconnectivity (MV I) - Measure of Merit:**

3.1.A.1 What percentage of total test workload in FY93 involved the real-time or near real-time exchange of data or control with another facility? List the facilities you interconnect to for test and identify how many are simultaneous activities. Identify these as to whether they are internal and external to the site.

ANSWER: None.

3.1.A.2 If your facility were to be closed, would there be an impact on another facility to which you are connected? Yes/no. If yes, explain.

ANSWER: Yes. This facility is a dual use facility, being used for testing and research. The Army Research Laboratories (ARL) are collocated at this facility and share overhead/modification costs.

**3.1.B Facility Condition (MV II) - Measure of Merit:**

ANSWER: See Facility Condition Form.

**3.1.C Environmental and Encroachment Carrying Capacity (MV II) - Measure of Merit:**

3.1.C.1 Do you have limiting (current or future) environmental and/or encroachment characteristics associated with the installation/facility? Yes/no. If yes, explain.

ANSWER: No.

3.1.C.2 How much could workload be increased before this limit would be reached? Express your answer as a percentage of your current workload.

ANSWER: N/A.

3.1.C.3 Do you currently operate under temporary permits of an environmental nature, or voluntary agreements (including treaties) of any sort that deal with the environment? If so, when do they expire? Please describe.

ANSWER: The EC Arena at Air Base Range 8 is not operating under temporary permits of an environmental nature, or voluntary agreements (including treaties).

3.1.C.4 What is the total population within a 50 mile radius? 100 mile radius? 150 mile radius? 200 mile radius?

ANSWER: We do not maintain, or have, population statistics as requested by paragraph 3.1.C.4. CSTA is located in the Baltimore Metro statistical area and is surrounded by the Maryland Counties of Harford, Cecil, Baltimore and Kent.

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3.1.C.5 Identify the commercial air/land/sea traffic routes, public use of air/land/sea space, and frequency of use for each that affects or could affect mission accomplishments in your air, land or sea space.

ANSWER: None.

3.1.C.5.A How many test missions per year are cancelled due to commercial or public use?

ANSWER: None.

3.1.C.6 What is the number of test missions that have been cancelled due to encroachment in each of the last two years?

ANSWER: None.

3.1.D Specialized Test Support Facilities and Targets (MV I) - Measure of Merit:

3.1.D.1 Do you have specialized facilities required to support you in conducting your test operations at your facility (e.g. Aerial delivery load build-up facilities; parachute drying towers/packing facilities; paratroop support facilities; specialized fuel storage and delivery systems; mission planning facilities; painting, washing facilities; and specialized maintenance facilities such as avionics intermediate shops)? Yes/no. If yes, please describe.

ANSWER: Yes. The Munson Test Course is a US unique road test course required to properly stress the land systems and any inherent/applied components. The Tank shops perform maintenance and repairs to land track vehicles required (and used) for prototype development.

3.1.D.2 Are specialized targets required to support this facility? Yes/no. If yes, explain.

ANSWER: No. Specialized targets are not required to support the facility, however specialized targets are used during the conduct of selected tests. However, specialized targets are available for use through the Foreign Systems Division as required for the test being conducted.

3.1.D.2.A Have the specialized targets been validated? Yes/no. If yes, by whom.

ANSWER: Yes. These specialized targets (surrogates) have been validated by FSTC and accredited by US Army TEMA, under DA.

3.1.E Expandability (MV III) - Measure of Merit:

3.1.E.1 Other than expandability inherent in unconstrained capacity, discussed earlier, are there any special aspects of this facility that enhances its ability to expand output within each T&E functional area? Yes/no. If yes, explain.

ANSWER: No.

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3.1.E.2 Are airspace, land and water areas--adjacent to areas under DoD control--available and/or suited for physical expansion to support new missions or increased footprints? Yes/no. If yes, identify by T&E functional area and test type.

ANSWER: No.

3.1.E.3 Is the facility equipped to support secure operations? Yes/no. If yes, to what level of classification (Confidential, Secret, Top Secret, Special Access Required)?

ANSWER: Yes. TS, SAR.

3.1.E.4 Are there any capital improvements underway or programmed in the 95 FYDP that would change your capacity/capability? Yes/no. If yes, explain.

ANSWER: Yes. A new maintenance building is programmed for 95 FYDP.

3.1.F Uniqueness (MV I) - Measure of Merit:

3.1.F.1 Is this a one-of-a-kind facility within the DoD? Yes/no. If yes, describe.

ANSWER: Yes, when effects of the environment are considered. This is the only such facility within DoD located in a temperate climate.

3.1.F.1.A Within the US Government? Yes/no. If yes, Describe.

ANSWER: Yes, see above.

3.1.F.1.B Within the US? Yes/no. If yes, describe.

ANSWER: Yes, see above.

3.1.F.2 Are you currently providing support to DoD users outside your Military Department? Yes/no. If yes, indicate percentage of total workload in FY92 and FY93 by Military Department.

ANSWER: Yes. Less than 5%.

3.1.G Available Air, Land and Sea Space (MV II) - Measure of Merit:

3.1.G.1 How many square miles of air, land and sea space are available to support test operations?

ANSWER: Air Space - 182 sqmi Area R4001A  
28 sqmi Area R4001B  
Total 210

Land - 54 sqmi  
Sea - 57 sqmi

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3.1.G.2 Who owns and/or controls the land under the Restricted Air Space you use?

ANSWER: CSTA plus APGSA (& Tenants) - Land - 62.8 sqmi.  
CSTA Controls through FAA - Water - 61.1 sqmi.

The remainder of the Restricted Air Space is mainly over the water surrounding APG.

3.1.G.3 How much of this is Restricted Air Space, and what altitude limits are associated with the restricted areas?

ANSWER: All Air Space is Restricted with Unlimited Altitude.

3.1.G.4 Do you have special use airspace other than supersonic airspace? Yes/no. If yes, for what types of test (e.g. terrain following radar)? Dimensions? Will it support simultaneous users? Yes/no.

ANSWER: Yes. Special use space is for Weapons/Ammunition/Radar tests.  
Yes. Total Air Space 210 sqmi.

3.1.G.5 Is the air space over land or water? List the number of square miles over each.

ANSWER: The air space is over both. Land - 62.8 sqmi  
Water - 61.1 sqmi

3.1.G.6 Identify known or projected airspace problems that may prevent accomplishing your mission.

ANSWER: Occasional General Aviation trespass violators.

3.1.G.7 What is the maximum straight line segment in your airspace, in nautical miles?

ANSWER: 22.5 Nautical Miles (R4001A to R4001B).

3.1.G.8 What public airspace have you used for overflight of weapons systems in the past? What was the nature of those tests? Do you anticipate being able to use that same public airspace for similar tests in the future?

ANSWER: None. N/A.

3.1.H.1 Describe the topography and ground cover/vegetation within your test airspace (include nap-of-the-earth capability). Identify all of the following that apply: mountains, forest/jungle, cultivated lowlands, desert, and sea. State the area of each in square miles.

ANSWER: Forest/shrub - 32 sqmi.  
Cultivated lowlands - 22.64 sqmi.  
Swamp - 8.16 sqmi.  
Sea - 61.08 sqmi.

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3.1.H.2 Are there features of the local geology or soil conditions that enhance or inhibit any type of test?

ANSWER: The terrain projects an Infrared background similar to that of North Korea and some areas of the European theatre.

3.1.H.3 Did you have to go to other geographical locations to satisfy test requirements? Yes/no and explain. If yes, provide as a percent of overall workload per year for the past 8 years.

ANSWER: Yes, certain distance requirements for secured line-of-sight precluded testing at CSTA. The percentage, as overall workload, was approximately 10% to 15%.

3.1.H.4 What is the number of days per year the average temperature is below 32 degrees F? Between 32 and 95 degrees F? Above 95 degrees F?

ANSWER: Below 32 degrees F - 39 days  
Between 32 and 95 degrees F - 326 days  
Above 95 degrees F - <1 days

3.1.H.5 What is the number of days per year the average relative humidity is below 30%? Between 30% and 80%? Above 80%?

ANSWER: Below 30% - 3 days  
Between 30% and 80% - 209 days  
Above 80% - 153 days

3.1.H.6 What is the number of test missions per year (1985 - 1993) cancelled due to weather?

ANSWER: None.

3.1.H.7 What is the number of test days per year (1985 - 1993) cancelled due to weather?

ANSWER: None.

3.1.H.8 What is the number of days per year the visibility is less than 1 mile? Between 1 mile and 3 miles? Greater than 3 miles?

ANSWER (a): Question does not correlate as asked. The actual question should be in terms of hours in a day. Thus this is the way this question has been answered. With respect to the way it was asked... None (all day long)!

ANSWER (b): Less than 1 mile - 3.1%  
Between 1 mile and 3 miles - 6.1%  
Greater than 3 miles - 90.8%

3.1.H.9 What is the average number of flying days available per year for flight test? Provide historical average from the past eight years.

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ANSWER: N/A.

3.1.H.10 What percentage of the time are your test operations restricted due to weather?

ANSWER: Approximately 5% to 10%.

## 3.3 ELECTRONIC COMBAT

### 3.3.A Threat Environment (MV I) - Measure of Merit:

3.3.A.1 What is the Number of threats simulated?

ANSWER: N/A.

3.3.A.2 How many types of threats can be simulated? What type (e.g. AI, AAA, SAM)? What is maximum signal density? Average density? What power level? What band? Radiated or injected?

ANSWER: No threats are simulated. This is a signature measurement facility for Land Combat Vehicles. Density, power band, etc. refers to radar, laser or other type of electronic jamming or communication device.

3.3.A.3 Are the threat software models and simulators validated? Yes/No. If yes, by whom?

ANSWER: There are no threat software models at this location.

3.3.A.4 Do you conduct open loop testing? Reactive? Closed loop? Yes/no for each.

ANSWER: No. No. No.

3.3.A.5 What is the threat representation (fidelity) and density?

ANSWER: Full scale physical models with fidelity in the IR and MMW sufficient for the SADARM program.

3.3.A.6 Are you capable of simulating land threats? Sea threats? Combined land/sea threats? Yes/no. If yes, describe.

ANSWER: Yes, land threats. These are full scale surrogates of a self-propelled howitzer and a tracked vehicle. These targets have been validated through FSTC (DIA) and the TEMA under the US Army.

3.3.A.7 What geographic dispersion can be simulated?

3.3.A.7.A Threat lay down? None. N/A.

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3.3.A.7.B Representative distance? None. N/A.

3.3.A.8 Are the threats moveable (i.e. dynamic) within a test scenario? Relocatable to new scenarios? Yes/no.

ANSWER: The surrogate threats are moveable.

3.3.A.9 Is the facility interlinked with off-site threats? Yes/no. If yes, how are you linked?

ANSWER: No. N/A.

3.3.A.10 Is there a limit on simultaneous users? Yes/no. If no, explain.

ANSWER: Yes.

3.3.B Test Article Support (MV II) - Measure of Merit:

3.3.B.1 Is there a size, weight, or other limitation on test operations the facility can support? Yes/no. If so, identify the limits and measures to remove them.

ANSWER: This facility supports ground vehicles up to 80 Tons and 30 feet in length. There is no current requirement to extend these limits beyond the current capability.

3.3.B.2 What is the number of simultaneous countermeasures that can be evaluated?

ANSWER: This facility has been used to evaluate up to three countermeasures, for Land Combat Vehicles, at one time.

3.3.B.3 What range of spectra can be tested and evaluated?

ANSWER: This facility is used to collect multispectral signatures of Land Combat Vehicles (including targets) in the UV, visible, Near-IR, Mid and Far-IR, 35 and 95 Ghz, and acoustical.

3.3.B.4 What are the available spectra?

ANSWER: The available spectra include: visible (Color and B&W), Near-IR, Mid-IR, Far-IR, 35 and 95 GHz and acoustic measurements of signatures.

3.3.B.5 Do you have a scene generation capability? Yes/no. If yes, describe.

ANSWER: No.

GENERAL INFORMATION

Facility/Capability Title: MultiSpectral Signature Acquisition Systems

Origin Date: 24 MAY 94

Service: ARMY

Activity: CSTA

Location: APG, MD

T&E Functional Area: Electronic Warfare

UIC #: W4QUAA

T&E Test Facility Category: Measurement Facility

	<u>T&amp;E</u>	<u>S&amp;T</u>	<u>DE</u>	<u>IE</u>	<u>T&amp;D</u>	<u>OTHER</u>
PERCENTAGE USE:	<u>35</u>	<u>50</u>	<u>15</u>	<u>    </u>	<u>    </u>	<u>    </u>
BREAKOUT BY FUNCTIONAL AREAS (%):						
Air Vehicles:	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
Armament/Weapons:	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>
Electronic Combat:	<u>35</u>	<u>50</u>	<u>15</u>	<u>    </u>	<u>    </u>	<u>    </u>
Other:	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>

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## TECHNICAL INFORMATION

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Facility/Capability Title: MultiSpectral Signature Acquisition Systems

Origin Date: 24 May 94

**Resource Description:** Mobility of all instrumentation/assets is provided via vans and trailers with dedicated uninterruptible power supply capabilities. A number of remote test support programs have been supported each year through FY94. A dedicated bucket truck is available to provide depression angles for close-in measurements. Pan and tilt mounts are used with these unique systems to collect Close-Range and Extended-Range signatures. Supported by a dedicated staff of Government professionals with a combined total of over 100 years applicable experience, including Signature Management Technology.

**Interconnectivity/Multi-Use of Resource:** This instrumentation has been effective in evaluating Signature Management Technology (SMT) Systems in the near- and far-field at remote locations. Instrumentation and facility requirements to test SMT on ground vehicles drives the state-of-the-art test capability and are the most expensive. Instrumentation and facilities designed to conduct measurements on SMT will meet the vast majority of ground system signature measurement test requirements. However, the converse is not true. Most instrumentation and facilities designed only to measure threat systems for weapons development will not meet the test requirements for SMT. This means the core signature measurement capability for DoD ground systems must be the site staffed and instrumented to conduct testing on SMT Systems.

**Type of Test Supported:** Signature measurements locally and remotely cover passive imagery of Land Combat Vehicles from the near ultraviolet through the far infrared. These measurements provide signatures of combat vehicles, systems, targets and camouflage. Radar cross sections and signatures are obtained with active systems operating in the 35 and 95 GHz millimeter wave regions. Radar modes include ISAR and Spot Raster Scan. Acoustic signatures are obtained from 20 to 20,000 Hz.

**Summary of Technical Capabilities:** By technology, instrumentation includes:

Ultraviolet: EG&G Model 880-1 Spectral Radiometer, 0.28-0.40  $\mu\text{m}$   
Visible: Cohu Model 4110 Imaging Camera, 0.4-0.7  $\mu\text{m}$   
Photo Research Model 714 Spectral Radiometer, 0.4-0.9  $\mu\text{m}$   
EG&G Model 880-1 Spectral Radiometer, 0.4-1.1  $\mu\text{m}$   
Tracor GIE RST-7611 Six-step Color Reflectance Standards  
Minolta CS-100 Chromameter  
Near-IR: Xybion Model IMC-201 Intensified Multispectral Camera, 0.4-0.9  $\mu\text{m}$   
EG&G Model 880-1 Spectral Radiometer, 0.4-1.1  $\mu\text{m}$   
Labsphere SRT-99-100 Reflectance Standard  
Tracor GIE RST-7607 Grey Scale Reflectance Standard  
Epyx 4MIP Interactive Image Analysis Software  
Mid- and Far-IR: Magnavox Imaging Dual Color Radiometer (DCR), 3-5 & 8-12  $\mu\text{m}$   
Agema Model 880 Imager, 3-5 & 8-12  $\mu\text{m}$   
Inframetrics Model 2100 Imaging Radiometer, 3-5 & 8-12  $\mu\text{m}$   
Barnes Model 12-550 Research Radiometer, 2.5-14  $\mu\text{m}$   
CI Model SR5000 Spectral Radiometer, 2.5-14  $\mu\text{m}$   
Silicon Graphics Indigo-2 Extreme Computer  
Sensor-View Software

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TECHNICAL INFORMATION

Page 2b of 6

Facility/Capability Title: Multispectral Signature Acquisition Systems

Millimeter MilliMeter Wave Instrument Radar System (MMWIRS), 35 & 95 GHz  
Wave: Inverse Synthetic Aperture Radar (ISAR)

OTHER:

Acoustic: B&K Microphones with TEAC Digital Recorders  
Larson-Davis Model 3100 Analyzer

Keywords: Multispectral, Signatures, Signature Management Technology, E-O, Visible, Color,  
Near-Infrared, Mid- and Far-Infrared, Radiometer, Millimeter Wave, Radar, ISAR,  
Acoustics

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## ADDITIONAL INFORMATION

Facility/Capability Title: MultiSpectral Signature Acquisition Systems

Origin Date: 24 May 94

**PERSONNEL**

	93	94	95	96	97	98	99
Officer	0	0	0	0	0	0	0
Enlisted	0	0	0	0	0	0	0
Civilian	11	10	9	9	9	9	9
Contractor	0	0	0	0	0	0	0
<b>Total</b>	<b>11</b>	<b>10</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>

Total Square Footage: 1800

Test Area Square Footage: N/A

Office Space Square Footage: 1800

Tonnage of Equipment: 300 (??)

Volume of Equipment: 150,000 cu. ft.

Annual Maintenance Cost: \$250 K/yr

Estimated Moving Cost: \$ 250 K

**CAPITAL EQUIPMENT INVESTMENT**

Sources (PE)	88-93	94	95	96	97	98	Total
TELRIPI, GTSMI				0.500	3.400	2.200	10.400 <sup>6.1</sup>
TECOM, TTI (665602)	2.500	0.674	0.634	0.700	0.150	0.450	6.668 <sup>5.103</sup>
TECOM, RDI (665602)		0.100			0.200		0.300
TECOM, METH (665602)		0.100			0.100		0.200
TECOM, SBIR (665502)		0.050					0.050
TECOM, PBS (53901220)			0.060		0.065		0.125 <sup>125</sup>
TECOM, MOD (665601)	0.500	0.200	0.300	0.200			1.200

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FACILITY CONDITION

Facility/Capability Title: MultiSpectral Signature Acquisition Systems

AGE: > 15 Yrs

REPLACEMENT VALUE: \$ 5.5 M

MAINTENANCE AND REPAIR BACKLOG: \$ 0

DATE OF LAST UPGRADE: October 1993

NATURE OF LAST UPGRADE: Addition of Millimeter Wave Instrumentation

MAJOR UPGRADES PROGRAMMED

1. UPGRADE TITLE: Multispectral Acquisition/Reduction System, DCR Focal Plane Array, Calibrated UV Imagery, Acoustic Signature Enhancements, Background Ground Truth Digitizing

TOTAL PROGRAMMED AMOUNT: \$ 3400K

SUMMARY DESCRIPTION: Continue development of capability to satisfy vehicle signature management technology for Land Combat Vehicle Measurements. Provides a high resolution multispectral signature measurement capability from the UV to the MMW. Integration of different sensors by developing a common acquisition/reduction system will provide a cost effective solution to vehicle signature testing.

2. UPGRADE TITLE: Integration of DCR Focal Plane Array, Development of Spectral Imager with Ground Resolution, Completion of Multispectral Acquisition/Reduction System (FOC), Integration of Visible Signature Instrumentation.

TOTAL PROGRAMMED AMOUNT: \$ 2200K

SUMMARY DESCRIPTION: Integrate system components to achieve Full Operational Capability (FOC). Continue the development of the Spectral Imager for exploitation of Land Combat Vehicle Technology in IR. Coboresight all Imagery to reduce requirements for image manipulation during simulation. Add Magnetic Signature capability.

HISTORICAL WORKLOAD

Facility/Capability Title: MultiSpectral Signature Acquisition Systems

FISCAL YEAR

T&E FUNCTIONAL AREA		86	87	88	89	90	91	92	93
AIR VEHICLES	Direct Labor								
	Test Hours								
	Missions								
EC *	Direct Labor	12528	13920	14790	14800	14928	13725	18332	16888
	Test Hours	2088	2320	2465	2467	2488	2287	3055	2815
	Missions	???	???	???	???	???	???	???	???
ARMAMENT/WEAPONS	Direct Labor								
	Test Hours								
	Missions								
OTHER T&E	Direct Labor								
	Test Hours								
	Missions								
OTHER	Direct Labor								
	Test Hours								
	Missions								

\* Note: Mission element needs to be defined for Land Combat Vehicle Signature Testing.

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## DETERMINATION OF UNCONSTRAINED CAPACITY

Page 6 of 6

Facility/Capability Title: MultiSpectral Signature Acquisition Systems

Origin Date: 24 May 94

ANNUAL HOURS OF DOWNTIME	1	<u>3384</u>
AVERAGE DOWNTIME PER DAY (LINE 1 ÷ 365)	2	<u>9.27</u>
AVERAGE HOURS AVAILABLE PER DAY (24 - LINE 2)	3	<u>14.73</u>

TEST TYPES	TESTS AT ONE TIME	WORKLOAD PER TEST PER CAPABILITY HOUR	WORKLOAD PER CAPABILITY HOUR (LINE 5 X 6)	UNCONSTRAINED CAPABILITY PER DAY (LINE 3 X Σ)
4	5	6	7	8
<u>Visible</u>	<u>1</u>	<u>3</u>	<u>3</u>	<u>78</u>
<u>Near-IR</u>	<u>1</u>	<u>2</u>	<u>2</u>	
<u>IR</u>	<u>3</u>	<u>3</u>	<u>9</u>	
<u>Spectral</u>	<u>2</u>	<u>2</u>	<u>4</u>	
<u>Acoustic</u>	<u>1</u>	<u>2</u>	<u>2</u>	
<u>"TYPICAL"</u>	<u>2</u>	<u>3</u>	<u>6</u>	
		TOTAL Σ	<u>26</u>	ANNUAL UNCONSTRAINED CAPACITY  <u>9 28470</u>

Capacity Rationale: This is NOT REALLY UNCONSTRAINED Capacity, since it does not consider the number of AVAILABLE hours in the day. The instrumentation is available for use in four separate mobile packages: the Visible/Near-IR; Mid- and Far-IR; Millimeter Wave; and Acoustics. Thus the systems are available for a 4 X 8 hour day, or 32 hours in a single day (starting in FY95) per example presented by the TERIB under "Task B, Resource; a. Time."

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Facility/Capability Title: MultiSpectral Signature Acquisition Systems

Origin Date: 24 May 94

3.3 ELECTRONIC COMBAT

3.3.A Threat Environment (MV I) - Measure of Merit:

3.3.A.1 What is the Number of threats simulated?

ANSWER: N/A.

3.3.A.2 How many types of threats can be simulated? What type (e.g. AI, AAA, SAM)? What is maximum signal density? Average density? What power level? What band? Radiated or injected?

ANSWER: No threats are simulated. This is a signature measurement capability for Land Combat Vehicles. Density, power band, etc. refers to radar, laser or other type of electronic jamming or communication device.

3.3.A.3 Are the threat software models and simulators validated? Yes/No. If yes, by whom?

ANSWER: There are no threat software models at this location.

3.3.A.4 Do you conduct open loop testing? Reactive? Closed loop? Yes/no for each.

ANSWER: No. No. No.

3.3.A.5 What is the threat representation (fidelity) and density?

ANSWER: Full scale physical models with fidelity in the IR and MMW sufficient for the SADARM program.

3.3.A.6 Are you capable of simulating land threats? Sea threats? Combined land/sea threats? Yes/no. If yes, describe.

ANSWER: Yes, land threats. These are full scale surrogates of a self-propelled howitzer and a tracked vehicle. These targets have been validated through FSTC (DIA) and the TEMA under the US Army.

3.3.A.7 What geographic dispersion can be simulated?

3.3.A.7.A Threat lay down? None. N/A.

3.3.A.7.B Representative distance? None. N/A.

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3.3.A.8 Are the threats moveable (i.e. dynamic) within a test scenario? Relocatable to new scenarios? Yes/no.

ANSWER: The surrogate threats are moveable.

3.3.A.9 Is the facility interlinked with off-site threats? Yes/no. If yes, how are you linked?

ANSWER: No. N/A.

3.3.A.10 Is there a limit on simultaneous users? Yes/no. If no, explain.

ANSWER: Yes.

3.3.B Test Article Support (MV II) - Measure of Merit:

3.3.B.1 Is there a size, weight, or other limitation on test operations the facility can support? Yes/no. If so, identify the limits and measures to remove them.

ANSWER: N/A. This capability supports multispectral signature measurements of land combat vehicles and ground targets .

3.3.B.2 What is the number of simultaneous countermeasures that can be evaluated?

ANSWER: This capability has been used to evaluate up to three countermeasures, for Land Combat Vehicles, at one time.

3.3.B.3 What range of spectra can be tested and evaluated?

ANSWER: This capability used to collect multispectral signatures of Land Combat Vehicles (including targets) in the UV, visible, Near-IR, Mid and Far-IR, 35 and 95 Ghz, and acoustical.

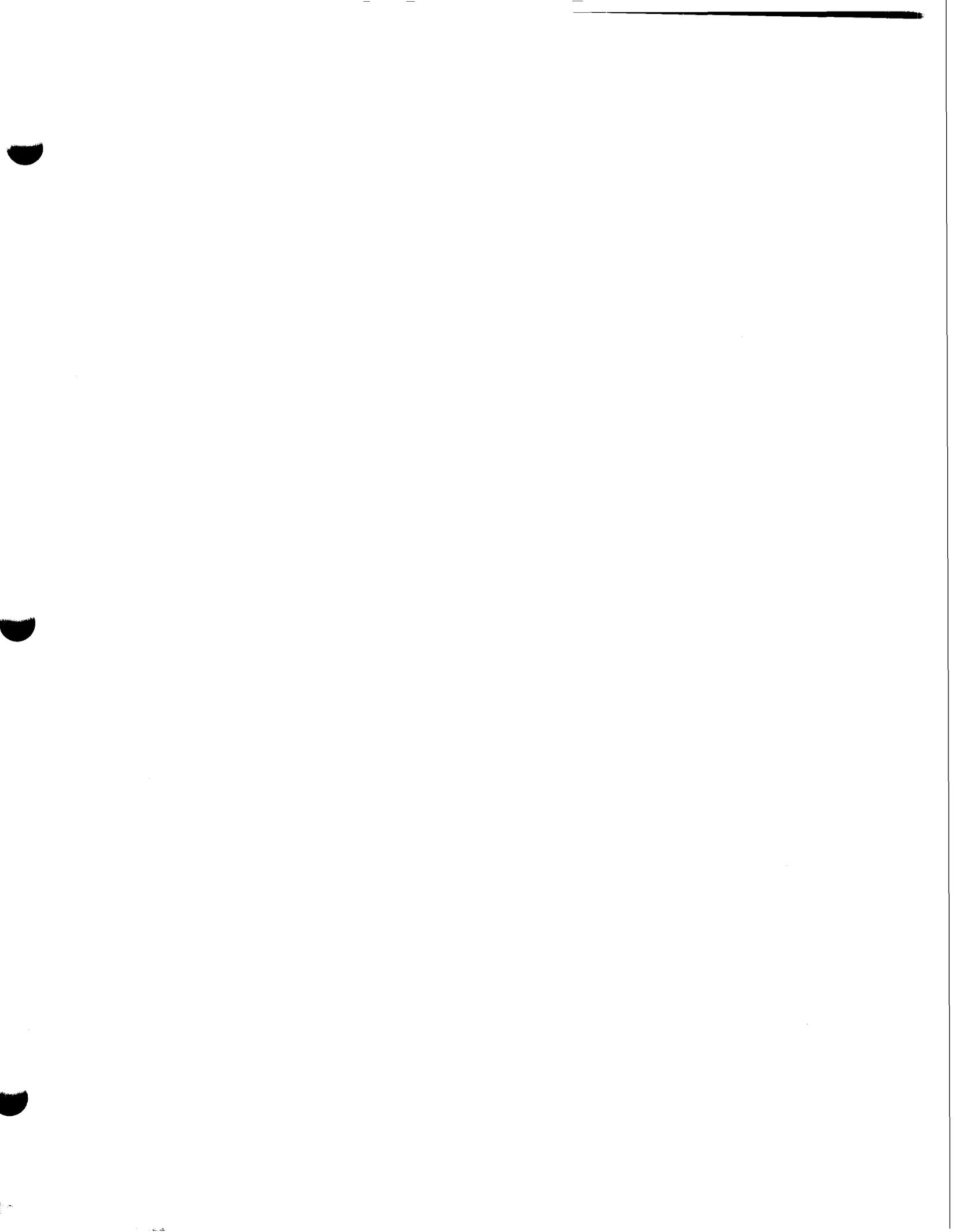
3.3.B.4 What are the available spectra?

ANSWER: The available spectra include: visible (Color and B&W), Near-IR, Mid-IR, Far-IR, 35 and 95 GHz and acoustic measurements of signatures.

3.3.B.5 Do you have a scene generation capability? Yes/no. If yes, describe.

ANSWER: No.

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REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
U. S. ARMY REDSTONE TECHNICAL TEST CENTER  
REDSTONE ARSENAL, ALABAMA 35898-8052

STERT-TE

02 June 1994

MEMORANDUM FOR Commander, U.S. Army Test and Evaluation Command,  
ATTN: AMSTE-TA, Mr. Brian Simmons, Aberdeen  
Proving Ground, MD 21005-5055

SUBJECT: RTTC Response to BRAC 95 Data Call #7 - Test and  
Evaluation

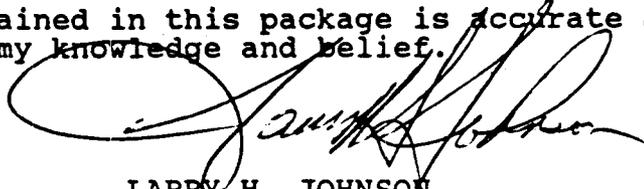
1. Reference memorandum from AMSTE-TA, Subject: BRAC 95 Data Call #7 - Test and Evaluation, dated 4 May 1994.
2. Enclosed as requested are three copies of completed questionnaires on four RTTC facilities (Enclosures 1-4). These four test facilities, Small Missile Range, Non-Destructive and Natural Environments, Induced Environments, and Component Test, comprise the total RTTC capability.
3. According to the guidance and definitions provided, RTTC has significant workload in only one of the three functional areas covered by this data call. That functional area is "Armament/Weapons". Approximately 30% of the RTTC workload is in the Armament/Weapons area; the remainder is shown as "Other".
4. The workload data provided in the questionnaires was obtained entirely from in-house RTTC records. The MICOM DFAS office was queried and stated that they had destroyed all their records for FY 89 and prior FY's. RTTC had copies of final year-end DFAS records for FY 87 - FY 89. This data (available at the Center level only) is included. The FY 91 - 93 data presented was obtained from the internal RTTC Financial Management Data Base since DFAS has no feasibly obtainable data below the Center level i.e. no data at the facility level.
5. The most complete and usable financial data available to RTTC is that for FY 92 and FY 93. The FY 87 data is incomplete and does not reflect the total FY 87 workload. Support contractor costs for FY 90 are not available due to the funds management procedures in place during FY 90. The same situation existed for a small part of the FY 91 data. Thus, the FY 91 workload is not completely reflected in the FY 91 data shown.
6. Enclosure 5 is a list (three copies) of programs (and their program elements) in the Armament/Weapons functional area. This list, provided by TECOM HQ, has been reviewed and annotated (by underline) to show those programs that have required or are expected to require testing/test support by RTTC. This enclosure is provided in response to the request of paragraph -2.1.B.1 of the questionnaire.

STERT-TE

SUBJECT: RTTC Response to BRAC 95 Data Call #7 - Test and Evaluation

7. A disk copy of the enclosed information in Word Perfect is also enclosed. RTTC POC for this action is Carl Roberts at DSN 746-3468.

8. The information contained in this package is accurate and complete to the best of my knowledge and belief.



6 Encls

LARRY H. JOHNSON  
Director  
Redstone Technical Test Center

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: COMPONENT TEST**

**SECTION 2: CAPACITY & TECHNICAL RESOURCES**

**2.1 WORKLOAD**

Annual workload will be reported in units as follows: for open air ranges involving flight testing, report test hours and missions. For all other T&E facilities direct labor hours and test hours must be reported; if available, missions must be reported. If an estimation of test hours based on direct labor hours is necessary, refer to the instructions for Determination of Unconstrained Capacity on page 28.

**2.1.A Historical Workload**

**-2.1.A.1** What amount of workload have you performed each year from FY86-93? Use the Historical Workload Form provided in Appendix A of this package.

**Response:** See Attached Form

**2.1.B Forecasted Workload**

**-2.1.B.1** Identify all appropriations (by program element) that generated a requirement for testing or test support, or are expected to generate a requirement for testing/test support in your Military Department (by functional areas of air vehicles, Electronic Combat (EC), armament/weapons, and other test) for FY92, FY93, and each year in the FY95 FYDP. The Military Departments will provide total funding amounts appropriated for all PEs identified in each functional area shown above.

**Response:** A list of program elements provided by TECOM HQ has been annotated to indicate the ones which require testing/test support from RTTC. The annotated list has been returned to TECOM HQ.

**-2.1.B.2** What amount of test work was performed at your facility (in workyears by functional areas of air vehicles, electronic combat, armament/weapons, other tests, and other) in FY92 & FY93?

**Response:**

AIR VEHICLES	NA	NA
ELECTRONIC COMBAT	NA	NA
ARMAMENT/WEAPONS	97.9	116.8
OTHER T&E	98.0	84.5
OTHER	NA	NA

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: COMPONENT TEST**

**2.2 UNCONSTRAINED CAPACITY**

**-2.2.A** Unconstrained capacity is the maximum capacity of this facility, assuming manpower and consumable supplies (excluding utilities) are unlimited, but allowing for expected downtime (maintenance, weather, darkness (daylight), holidays, etc.). Provide your response by filling out the Determination of Unconstrained Capacity Form in accordance with the instructions in Appendix A.

**Response:** See attached form.

**-2.2.B** Is this capacity limited by the physical characteristics of the facility itself, safety or health considerations, commercial utility availability, etc.?

**Response:** Yes

**2.3 TECHNICAL RESOURCES**

**-2.3.A** Does the facility have a specified war-time or contingency role established in approved war plans? Yes/no

**Response:** No role in war-time or contingency in an approved War Plan.

**-2.3.B** Does the facility provide a T&E product or service, without which irreparable harm would be imposed on the test mission of the host installation?

**Response:** Yes

**-2.3.B.1** On the test mission of any other activity?

**Response:** Yes

**-2.3.B.2** On any other mission deemed critical to the operational effectiveness of the armed forces of the United States?

**Response:** Yes

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: COMPONENT TEST**

**SECTION 3: MEASURES OF MERIT**

**3.1 OVER-ARCHING MEASURES OF MERIT**

The over-arching measures of merit are listed with accompanying questions (or data requirements) intended to elicit standard information upon which the cross-service analysis can be based, and on which the Joint Cross-Service Groups can base their reviews of the Military Department analysis. Additional specific measures of merit are shown under individual functional areas. The numbers in parentheses () before each measure of merit indicate the BRAC selection criteria for military value.

**3.1.A Interconnectivity (MV I) - Measure of Merit:** *Extent of linkage of this facility with other facilities and assessment of single-node failure potential.*

**-3.1.A.1** What percentage of total test workload in FY93 involved the real-time or near real time exchange of data or control with another facility? List the facilities you interconnect to for test and identify how many are simultaneous activities. Identify these as to whether they are internal and external to the site.

**Response:** 5%. A small percentage of the workload in 1993 involved the real-time or near real-time exchange of data with another facility; however the RTTC Component Test Facility is closely interconnected with the RTTC Induced Environment; RTTC Small Missile Flight; RTTC Non-Destructive and Natural Environmental facilities for test support. The synergism between these facilities allows comprehensive test programs to be conducted by relying on the support from the other RTTC capabilities to meet the overall test requirements. RTTC is also closely interconnected with the MICOM Research Development and Engineering Center (MRDEC) to provide technical test expertise and facility/capabilities for conduct of R&D programs. Likewise, the MRDEC provides technical systems design expertise to support RTTC test and failure analysis.

**-3.1.A.2** If your facility were to be closed, would there be an impact on other facilities to which you are connected? Yes/no. If yes, explain.

**Response:** Yes, cost and schedule impact would be substantial to MICOM. Test results would not be available to the Project Offices.

**3.1.B Facility Condition (MV II) - Measure of Merit:**  
*Current and planned status of the T&E facilities for supporting assigned test missions.*

**Response:** See attached form.

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: COMPONENT TEST**

**3.1.C Environmental and Encroachment Carrying Capacity (MV II) - Measure of Merit:** *Extent of current and future potential environmental and encroachment impacts on air, land, and sea space for testing.*

**-3.1.C.1** Do you have limiting (current or future) environmental and/or encroachment characteristics associated with the installation/facility? Yes/no. If yes, explain.

**Response:** Yes, Limited to 600,000 lbs of propellant burned in open air (static firing tests) per year.

**-3.1.C.2** How much could workload be increased before this limit would be reached? Express your answer as a percentage of your current workload.

**Response:** The work load could be increased by 20 times. The present annual amount of propellant burned is 30,000 lbs.

**-3.1.C.3** Do you currently operate under temporary permits of an environmental nature, or voluntary agreements (including treaties) of any sort that deal with the environment? If so, when do they expire? Please describe

**Response:** No

**-3.1.C.4** What is the total population within a 50 mile radius? 100 mile radius? 150 mile radius? 200 mile radius?

**Response:**

**POPULATION CHART FOR HUNTSVILLE, ALABAMA**

Population within 50 miles of Huntsville	850,000
Population within 100 miles of Huntsville	4,800,000
Population within 150 miles of Huntsville	6,500,000
Population within 200 miles of Huntsville	13,500,000

**-3.1.C.5** Identify the commercial air/land/sea traffic routes, public use of air/land/sea space, and frequency of use for each that affects or could affect mission accomplishment in your air, land, or sea space.

**Response:** Commercial air traffic.

**-3.1.C.5.A** How many test missions per year are canceled due to commercial or public use?

**Response:** 3

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: COMPONENT TEST**

**-3.1.C.6** What is the number of test missions that have been canceled due to encroachment in each of the last two years?

**Response:** 3

**3.1.D Specialized Test Support Facilities and Targets (MV I) - Measure of Merit:** *Extent to which specialized test support facilities and targets are available.*

**-3.1.D.1** Do you have specialized facilities that are required to support you in conducting your test operations at your facility (e.g. Aerial delivery load build-up facilities; parachute drying towers/packing facilities; paratroop support facilities; specialized fuel storage and delivery systems; mission planning facilities; corrosion control, painting, washing facilities; and specialized maintenance facilities such as avionics intermediate shops)? Yes/no. If yes, please describe.

**Response:** Specialized test support is required for 75% of the tests performed. Liquid and solid rocket motor test facility, thermal ablative, rocket motor dissection, electronic subsystem test, complex surface 3-axis characterization, MM wave anechoic chamber, laser range and surveillance vans.

**-3.1.D.2** Are specialized targets required to support this facility? Yes/no. If yes, explain.

**Response:** No

**-3.1.D.2.A** Have the specialized targets been validated? Yes/no. If yes, by whom?

**Response:** NA

**3.1.E Expandability (MV III) - Measure of Merit:** *Extent to which an installation/facility is able to expand to accommodate additional workload or new missions.*

**-3.1.E.1** Other than the expandability inherent in unconstrained capacity, discussed earlier, are there any special aspects of this facility that enhance its ability to expand output within each T&E functional area? Yes/no. If yes, explain.

**Response:** No

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: COMPONENT TEST**

**-3.1.E.1.A** Can you accept new T&E workload different from what you are currently performing? Yes/no. If yes, identify by T&E functional area and test type.

**Response: Yes**

Air vehicle-subsystems and component  
Electronic Combat-electrical and optical components

**-3.1.E.2** Are airspace, land, and water areas--adjacent to areas under DoD control--available and/or suited for physical expansion to support new missions or increased footprints? Yes/no. If yes, please explain.

**Response: No**

**-3.1.E.3** Is the facility equipped to support secure operations? Yes/no. If yes, to what level of classification (Confidential, Secret, Top Secret, Special Access Required)?

**Response: Yes, Confidential, Secret, Special Access Required**

**-3.1.E.4** Are there any capital improvements underway or programmed in the 95 FYDP that would change your capacity/capability? Yes/no. If yes, explain.

**Response: Yes, MM wave test facility.**

**3.1.F Uniqueness (MV I) - Measure of Merit:** *Extent to which the facility is one-of-a-kind.*

**-3.1.F.1** Is this a one-of-a-kind facility within the DoD? Yes/no. If yes, describe.

**Response: No**

**-3.1.F.1.A** Within the US Government? Yes/no. If yes, describe.

**Response: No**

**-3.1.F.1.B** Within the US? Yes/no. If yes, describe.

**Response: No**

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: COMPONENT TEST**

**-3.1.F.2** Are you currently providing support to DoD users outside your Military Department? Yes/no. If yes, indicate percentage of total workload in FY92 and FY93 by Military Department.

<b>Response:</b>	<b>% of work for:</b>	<b>Navy</b>	<b>Air Force</b>
	92	2%	2%
	93	2%	2%

**3.1.G Available Air, Land, and Sea Space (MV II) - Measure of Merit:** *Extent to which controlled test ranges satisfy weapon system test requirements.*

**-3.1.G.1** How many square miles of air, land, and sea space are available to support test operations?

**Response:** 1.4 sq. miles of land/air space.

**-3.1.G.2** Who owns and/or controls the land under the restricted airspace you use?

**Response:** RTTC

**-3.1.G.3** How much of this is Restricted Airspace, and what altitude limits are associated with the restricted areas?

**Response:** 1.4 sq. miles controlled to 30,000 ft.

**-3.1.G.4** Do you have special use airspace? Yes/no. If yes, for what types of tests (e.g. terrain following radar)? Dimensions? Will it support simultaneous users? Yes/no.

**Response:** No special use air space.

**-3.1.G.5** Is the airspace over land or water? List the number of square miles over each.

**Response:** 1.4 sq. miles over land.

**-3.1.G.6** Identify known or projected airspace problems that may prevent accomplishing your mission.

**Response:** None

**-3.1.G.7** What is the maximum straight line segment in your airspace in nautical miles?

**Response:** 4.5 nm vertical.

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: COMPONENT TEST**

**-3.1.G.8** What public airspace have you used for overflight of weapons systems in the past? What was the nature of those tests? Do you anticipate being able to use that same public airspace for similar tests in the future? Yes/no.

**Response:** None

**3.1.H Geographic/Climatological Features (MV II) - Measure of Merit:** *Extent to which types of climatic/geographic conditions represent world-wide operational conditions.*

**-3.1.H.1** Describe the topography and ground cover/vegetation within your test airspace (include nap-of-the-earth capability). Identify all of the following that apply: mountains, forest/jungle, cultivated lowland, swamp/riverine, desert, and sea. State the area of each in square miles.

**Response:** Hills, forest - 1 sq. mile; open lowlands - .4 sq. miles

**-3.1.H.2** Are there features of the local geology or soil conditions that enhance or inhibit any types of tests?

**Response:** No

**-3.1.H.3** Did you have to go to other geographical locations to satisfy test requirements? Yes/no and explain. If yes, provide as a percent of overall workload per year for the past 8 years.

**Response:** No

**-3.1.H.4** What is the number of days per year the average temperature is below 32 degrees F? Between 32 and 95 degrees? Above 95 degrees?

**Response:** 12, 353, 0

**-3.1.H.5** What is the number of days per year the average relative humidity is below 30 percent? Between 30 and 80 percent? Above 80 percent?

**Response:** 0, 317, 48

**-3.1.H.6** What is the number of test missions per year (1985 - 1993) canceled due to weather?

**Response:** 25 in 1993; 1985 to 1992 DNA

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: COMPONENT TEST**

**-3.1.H.7** What is the number of test days per year (1985 - 1993) canceled due to weather?

**Response:** 8 in 1993; 1985 to 1992 DNA

**-3.1.H.8** What is the number of days per year the visibility is less than 1 mile? Between 1 and 3 miles? Greater than 3 miles?

**Response:** NA

**-3.1.H.9** What is the average number of flying days available per year for flight test? Provide historical average from the past 8 years.

**Response:** NA

**-3.1.H.10** What percentage of the time are your test operations restricted due to weather?

**Response:** Operations are restricted 0.5% of the time due to weather.

**3.2 AIR VEHICLES**

This functional area includes facilities involved in the testing of all air vehicles/subsystems/components whether fixed wing or rotary wing and test of major subsystems (e.g., avionics, engines, and sensors). This includes flight testing and the testing involving pre- and post-flight preparation and processing of the air vehicle. Unmanned air vehicles and cruise missiles are included.

**3.2.A Supersonic Airspace (MV II) - Measure of Merit:** *Extent of range size of support weapon system requirements.*

**-3.2.A.1** Do supersonic corridors or areas exist? Yes/no.

**Response:** NA

**-3.2.A.2** Where are they located relative to your airfield?

**Response:** NA

**-3.2.A.3** At what altitude (upper and lower altitude)?

**Response:** NA

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: COMPONENT TEST**

**-3.2.A.4** Over land or water? What size and shape (length and width)?

**Response:** NA

**-3.2.A.5** Are there restrictions you must observe to use this space? Yes/no. If yes, explain.

**Response:** NA

**-3.2.A.6** What is the maximum number of simultaneous users?

**Response:** NA

**3.2.B Airfield and Facility Characteristics (MV II) - Measure of Merit:** *Extent of air vehicle infrastructure to support T&E operations.*

**-3.2.B.1** Provide a brief description of your airfield and support facilities, to include the following: number and azimuth of runways, elevation, runway length (excluding overrun), overrun length, terminal and/or landing aids, arresting cable (Yes/no, type), ramp area (in square feet), construction material (runway and ramps), load capability, and hanger space.

**Response:** NA

**-3.2.B.2** How close and how many emergency runways or airfields are in your area of operation?

**Response:** NA

**-3.2.B.3** Where is your airfield situated relative to working areas (airspace) for supporting test operations?

**Response:** NA

**-3.2.B.4** What makes your airfield unique or at least suited for supporting test operations?

**Response:** NA

**-3.2.B.5** Is there a size, weight, maintenance or mission limitation that would affect test operations? If so, describe the limitation(s).

**Response:** NA

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: COMPONENT TEST**

**-3.2.B.6** Including hangers and ramp space, how many fighter size aircraft could you support? Large multi-engine aircraft? Rotary wing? UAV? Cruise missiles?

**Response:** NA

**3.2.C Test Operations (MV II) - Measure of Merit:** *Extent of T&E operations that the airspace can accommodate.*

**-3.2.C.1** What types of air vehicle testing (fixed wing, rotary wing, unmanned vehicles, and cruise missiles) can be supported? (e.g. performance, handling qualities, fatigue life, static, wheels, and brakes, physical integration with external stores or avionics)

**Response:** NA

**-3.2.C.2** Do ground support facilities exist for pre-flight checkout or rehearsal of test missions?

**Response:** NA

**-3.2.C.3** What kinds, numbers of aircraft and mix can be supported (manned and unmanned)?

**Response:** NA

**-3.2.C.4** Does UAV and or rotary wing operations pose any limitation on other types of missions? If yes, explain.

**Response:** NA

**-3.2.C.5** What sorts of missions (e.g. air-to-air, air-to-ground, and refueling) can be flown within local airspace?

**Response:** NA

**-3.2.C.6** What is the maximum number of simultaneous missions you can support that require telemetry?

**Response:** NA

**-3.2.C.7** What is the largest number of simultaneous test missions you have supported in your airspace?

**Response:** NA

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: COMPONENT TEST**

**-3.2.C.8** Identify the number, types, and owners of aircraft at your installation.

**Response:** NA

**3.3 ELECTRONIC COMBAT**

This functional area includes facilities involved in the testing of stand-alone electronic combat systems and electronic combat subsystems that are normally integrated into other weapon systems. It includes the testing of systems or subsystems that have as their primary mission threat warning, testing of systems that provide countermeasures in the RF (radio frequency) spectrum against radars and other RF sensors, systems that provide countermeasures that are used against sensors in the electro-optical or infrared spectrum as well as testing of electronic and C<sup>3</sup> countermeasures.

**3.3.A Threat Environment (MV I) - Measure of Merit:** *Extent to which the capability satisfies weapon system requirements.*

**-3.3.A.1** What is the number of threats simulated?

**Response:** NA

**-3.3.A.2** How many simultaneous threats can be simulated? What type (e.g. AI, AAA, SAM)? What is maximum signal density? Average density? What power level? What band? Radiated or injected?

**Response:** NA

**-3.3.A.3** Are the threat software models and simulators (software/hardware) validated? Yes/no. If yes, by whom?

**Response:** NA

**-3.3.A.4** Do you conduct open loop testing? Reactive? Closed loop? Yes/no for each.

**Response:** NA

**-3.3.A.5** What is the threat representation (fidelity) and density?

**Response:** NA

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: COMPONENT TEST**

**-3.3.A.6** Are you capable of simulating land threats? Sea threats? Yes/no. If yes, describe.

**Response:** NA

**-3.3.A.7** What geographic dispersion can be simulated?

**Response:** NA

**-3.3.A.7.A** Threat lay down?

**Response:** NA

**-3.3.A.7.B** Representative distance?

**Response:** NA

**-3.3.A.8** Are the threats moveable (i.e. dynamic) within a test scenario? Relocatable to new scenarios? Yes/no.

**Response:** NA

**-3.3.A.9** Is the facility interlinked with off-size threats? Yes/no. If yes, how are you linked?

**Response:** NA

**-3.3.A.10** Is there a limit on simultaneous users? Yes/no. If no, explain.

**Response:** NA

**3.3.B Test Article Support (MV II) - Measure of Merit:** *Extent to which test support satisfies weapon system test requirements.*

**-3.3.B.1** Is there a size, weight, or other limitation on test operations the facility can support? Yes/no. If so, identify the limits and measures to remove them.

**Response:** NA

**-3.3.B.2** What is the number of simultaneous countermeasures that can be evaluated?

**Response:** NA

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: COMPONENT TEST**

**-3.3.B.3** What range of spectra can be tested and evaluated?

**Response:** NA

**-3.3.B.4** What are the available spectra?

**Response:** NA

**-3.3.B.5** Do you have a scene generation capability? Yes/no. If yes, describe.

**Response:** NA

**3.4 ARMAMENTS/WEAPONS**

This functional area includes facilities involved in the testing of the weapons portion of a weapon system. In those cases where the weapon system is composed almost exclusively of the weapon, it may include system-level and platform integration testing. In other cases, it addresses just the weapon subsystem (e.g., guidance and control, propulsion, warheads, and airframe), while the testing of the weapon system's vehicle is in another functional area.

**3.4.A Directed Energy (MV II) - Measure of Merit:** *Extent to which the facility satisfies directed energy weapon system test requirements.*

This includes testing of all types of directed energy weapons.

**-3.4.A.1** Do you currently test directed energy weapon systems? Yes/no. If yes, explain. Describe the power source(s) you have available. What is your maximum downrange distance?

**Response:** No

**3.4.B Rocket/Missile/Bomb System (MV II) - Measure of Merit:** *Extent capability satisfies weapon system test requirements.*

This includes the testing of all types of rocket, missile, and bomb systems at the system/subsystem/component level, both stand alone and integrated into the launch platform. This includes testing of air-to-air, air-to-surface, and surface-to-air missiles.

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: COMPONENT TEST**

**-3.4.B.1 Ground Space**

**-3.4.B.1.A** What is the area in square miles of the land and water space which you can use to conduct tests of live rocket, missile, or bomb systems?

**Response:** 1.4 sq. miles.

**-3.4.B.1.B** How many separate and distinct land and water test areas are available to conduct tests of live weapons? List them and the size of each in acres.

**Response:** 2 each, 1 sq. mile and .4 sq. miles.

**-3.4.B.1.C** What are the maximum ranges (nautical miles) you can test, by type weapon?

**Response:** NA

**3.4.B.2 Test Operations**

**-3.4.B.2.A** For each of your land and water ranges, how many test missions were scheduled in FY92 and FY93 that were required to use safety footprints comparable to those required for the following types of weapons:

- Unguided 2000 pound-class ballistic weapon

- live?

- inert?

- Guided weapon (e.g. GBU-24 class)

- live?

- inert?

- Stand-off weapon (e.g. AGM-130 class)

- live?

- inert?

- Short-range missile (e.g., AIM-9)

- below 5000 feet MSL

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: COMPONENT TEST**

- between 5000 and 20,000 feet MSL
- above 20,000 feet MSL
- Long-range missile (e.g., AIM-120)
  - below 5000 feet MSL
  - between 5000 and 20,000 feet MSL
  - above 20,000 feet MSL

**Response:** None

**-3.4.B.2.B** Were flight termination systems required? Yes/no.

**Response:** NA

**-3.4.B.2.C** If no missions were scheduled in a category, give the reason(s).

**Response:** Static tests of rocket/missile propulsion units and warheads only.

**-3.4.B.2.D** Were any scheduled missions canceled before the missions, or terminated/aborted during the mission because of encroachments into the safety footprint? Yes/no. If yes, how many per year.

**Response:** NA appears to pertain to flight test.

**CLOSE HOLD SENSITIVE**

CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)

**GENERAL INFORMATION**

FACILITY/CAPABILITY TITLE: Component Test ORIGIN DATE: \_\_\_\_\_

SERVICE: U.S. Army ORGANIZATION/ACTIVITY: RTTC LOCATION: RSA

T&E FUNCTIONAL AREA: Armaments/Weapons UIC = WIHTAA

T&E TEST FACILITY CATEGORY: Measurement Facility

PERCENTAGE USE:	T&E	S&T	DE	IE	T&D	OTHER
	<u>42.5</u>	<u>5.1</u>	<u>16.4</u>	<u>31.0</u>	<u>--</u>	<u>5.0</u>

BREAKOUT BY T&E FUNCTIONAL AREA (%):

AIR VEHICLE	_____	_____	_____	_____	_____	_____
ARMANENT/WEAPONS <sup>63</sup>	<u>29.4</u>	<u>1.3</u>	<u>--</u>	<u>16.0</u>	<u>--</u>	<u>--</u>
EC	_____	_____	_____	_____	_____	_____
OTHER <i>mix per RFA</i>	<u>13.1</u>	<u>3.8</u>	<u>16.4</u>	<u>15.0</u>	<u>--</u>	<u>5.0</u>
TOTAL	_____	_____	_____	_____	_____	_____

*29.4 / 46.7 = 63%*

TOTAL IN BREAKOUT MUST EQUAL "PERCENTAGE USE" ON FIRST LINE

CLOSE HOLD/SENSITIVE

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**GENERAL INFORMATION**

FACILITY/CAPABILITY TITLE: Non-Destructive and Natural Environments ORIGIN DATE: 5/25/94

SERVICE: A ORGANIZATION/ACTIVITY: RTTC LOCATION: RSA

T&E FUNCTIONAL AREA: Other UIC = WIHTAA

T&E TEST FACILITY CATEGORY: Measurement Facility

PERCENTAGE USE:	T&E	S&T	DE	IE	T&D	OTHER
	<u>22.9</u>	<u>16.4</u>	<u>33.0</u>	<u>12.1</u>	<u>--</u>	<u>15.6</u>

**BREAKOUT BY T&E FUNCTIONAL AREA (%):**

AIR VEHICLE

ARMAMENT/WEAPONS	<u>11.5</u>	<u>--</u>	<u>0.9</u>	<u>9.6</u>	<u>--</u>	<u>--</u>
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EC

OTHER	<u>11.4</u>	<u>16.4</u>	<u>32.1</u>	<u>2.5</u>	<u>--</u>	<u>15.6</u>
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TOTAL IN BREAKOUT MUST EQUAL "PERCENTAGE USE" ON FIRST LINE

**CLOSE HOLD/SENSITIVE**

**CLOSE HOLD SENSITIVE  
(RTTC TECOM)**

**TECHNICAL INFORMATION**

**FACILITY/CAPABILITY TITLE:** Non-Destructive and Natural Environments

**FACILITY DESCRIPTION, INCLUDING MISSION STATEMENT:** Mission: Plan, conduct, evaluate, and report natural climatic environment and non-destructive tests and explosive system assembly/disassembly services for missile systems hardware. Plan conduct, evaluate, and report tests of ground based sensor tracking/detection subsystems against airborne targets and ground targets in both clear and dirty battlefield environments.

**FACILITY DESCRIPTION:** Climatic test chambers capable of testing live missiles/warheads/propulsion systems to the complete spectrum of natural environments are available. A complete array of non-destructive measurement and inspection capabilities, including flash and normal x-ray, are available for test and assembly/disassembly operations. A 20,000 square foot hangar/laboratory to support airborne/ground sensor testing; a 2000 acre, 5 KM long outdoor sensors test area; and an elevated, hardstand/pad for air defense system tracking/acquisition tests are also included.

**INTERCONNECTIVITY/MULTI-USE OF T&E FACILITY:** This facility is interconnected with the Small Missile Facility, the Induced Environmental Facility, and the Component Test Facility; all elements of RTTC. Together these facilities provide the MICOM Research, Development, and Engineering Center (MRDEC) test services. Additionally, the RTTC group of facilities provides DIA's Missile and Space Intelligence Center (MSIC) with a local test/service capability.

**TYPE OF TEST SUPPORTED:** Missile systems and subsystem non-destructive testing, inspection, metrology/physical measurements, climatic testing, and assembly/disassembly. Sensor/seeker testing using airborne platforms, dirty battlefield/obscurant tests, and tests of air defense and other sensors against airborne and ground targets.

**SUMMARY OF TECHNICAL CAPABILITIES:** Conventional, high energy and flash x-ray, material inspection (dye penetrant, ultrasound, borescope, x-ray), physical measurements, missile system/subsystem assembly/disassembly and reverse engineering, climatic conditioning (temperature, humidity, dust, sand, solar radiation, altitude). Obscurants and countermeasures, airborne platforms, sensor/seeker data acquisition, threat and domestic ground targets operation and data collection, instrumentation design and development.

**KEYWORDS:** Climatic testing, x-ray, missile, weapons, explosives, environments, obscurants, sensors, seekers, dirty battlefield, targets, tanks, wheeled vehicles, airborne platforms, air defense

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**ADDITIONAL INFORMATION**

**FACILITY/CAPABILITY:** Non-Destructive and Natural Environments

**PERSONNEL**

	FY93	FY94	FY95	FY96	FY97	FY98	FY99
OFFICER	0	0	0	0	0	0	0
ENLISTED	0	0	0	0	0	0	0
CIVILIAN	29	29	27	26	24	24	24
CONTRACTOR	84	80	65	58	55	53	50
<b>TOTAL</b>	<b>113</b>	<b>109</b>	<b>92</b>	<b>84</b>	<b>79</b>	<b>77</b>	<b>74</b>

**TOTAL SQUARE FOOTAGE:** 148,766

**TEST AREA SQUARE FOOTAGE:** 137,770

**TONNAGE OF EQUIPMENT:** 2,097

**ANNUAL MAINTENANCE:** \$653.3K

**OFFICE SPACE SQUARE FOOTAGE:** 10,996

**VOLUME OF EQUIPMENT:** 1,330,936 (ft<sup>3</sup>)

**ESTIMATED MOVING COST:** \$4.8M

**CAPITAL EQUIPMENT INVESTMENT**

FY93	FY94	FY95	FY96	FY97	FY98	FY99
\$87K	\$0K	\$400K	\$250K	\$0K	DNA	DNA

**CLOSE HOLD/SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY CONDITION**

FACILITY/CAPABILITY TITLE: Non-Destructive and Natural Environments

AGE: 37 Years (approx.)

REPLACEMENT VALUE: \$65.1 M (includes equipment)

MAINTENANCE AND REPAIR BACKLOG: NA

DATE OF LAST UPGRADE: 1993-ongoing

NATURE OF LAST UPGRADE: Test Area 3 infrastructure improvements. Improvements are to be made to power distribution, control, and in place instrumentation for the sensor/seeker and dirty battlefield test areas.

**MAJOR UPGRADES PROGRAMMED**

1. UPGRADE TITLE:

Laser Shearography

TOTAL PROGRAMMED AMOUNT:

\$150K

SUMMARY DESCRIPTION:

Upgrade the material surface defect detection capability within the facility.

Increased precision and better efficiency will result.

2. UPGRADE TITLE:

Transmission Measurement Upgrade

TOTAL PROGRAMMED AMOUNT:

\$250K

SUMMARY DESCRIPTION:

Provide additional capability in the area of atmospheric transmission measurement

to support dirty battlefield detection and recognition testing and other testing

requiring obscurant characterization.

**CLOSE HOLD/SENSITIVE**

Encl 24 Encl  
67R

CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)

## FACILITY CONDITION

FACILITY/CAPABILITY TITLE: Non-Destructive and Natural Environments

AGE: 37 Years (approx.) REPLACEMENT VALUE: \$40.5M (includes equipment)

MAINTENANCE AND REPAIR BACKLOG: NA

DATE OF LAST UPGRADE: 1993-ongoing

NATURE OF LAST UPGRADE: Test Area 3 infrastructure improvements. Improvements are to be made to power distribution, control, and in place instrumentation for the sensor/seeker and dirty battlefield test areas.

### MAJOR UPGRADES PROGRAMMED

1. UPGRADE TITLE: Laser Shearography

TOTAL PROGRAMMED AMOUNT: \$150K

SUMMARY DESCRIPTION: Upgrade the material surface defect detection capability within the facility. Increased precision and better efficiency will result.

2. UPGRADE TITLE: Transmission Measurement Upgrade

TOTAL PROGRAMMED AMOUNT: \$250K

SUMMARY DESCRIPTION: Provide additional capability in the area of atmospheric transmission measurement to support dirty battlefield detection and recognition testing and other testing requiring obscurant characterization.

CLOSE HOLD/SENSITIVE

CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)

*historical workload (000) per person*

HISTORICAL WORKLOAD

FACILITY/CAPABILITY TITLE: Non-Destructive and Natural Environments

T&E FUNCTIONAL AREA	FISCAL YEAR									
	86	87	88	89	90	91	92	93		
AIR VEHICLES	DIRECT LABOR	NA	NA	NA	NA	NA	NA	NA	NA	NA
	TEST HOURS									
	MISSIONS									
EC	DIRECT LABOR	NA	NA	NA	NA	NA	NA	NA	NA	NA
	TEST HOURS									
	MISSIONS									
ARMAMENT/WEAPONS	DIRECT LABOR	DNA	159.2	161.2	186.9	DNA	58.1	72.7	57.7	
	TEST HOURS						9.683	12.12	9.617	
	MISSIONS'									
OTHER T&E	DIRECT LABOR	DNA	650.4	884.6	889.3	DNA	109.7	143.4	156.4	
	TEST HOURS									
	MISSIONS									
OTHER	DIRECT LABOR	NA	NA	NA	NA	NA	NA	NA	NA	NA
	TEST HOURS									
	MISSIONS									

*DEC  
AW  
004*

NA - NOT APPLICABLE  
DNA - DATA NOT AVAILABLE  
DATA FOR 1987, 1988, & 1989 IS AT THE RTTC LEVEL; NO BREAKOUT TO FACILITY LEVEL AVAILABLE

CLOSE HOLD/SENSITIVE

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**DETERMINATION OF UNCONSTRAINED CAPACITY**

FACILITY/CAPABILITY TITLE: Non-Destructive and Natural Environments

ANNUAL HOURS OF DOWNTIME	1. 2460
AVERAGE DOWNTIME PER DAY (LINE 1 ÷ 365)	2. 6.74
AVERAGE HOURS AVAILABLE PER DAY (24-LINE 2)	3. 17.26

TEST TYPES 4	TESTS AT ONE TIME 5	WORKLOAD PER TEST PER FACILITY HOUR 6	WORKLOAD PER FACILITY HOUR 7	UNCONSTRAINED CAPACITY PER DAY (LINE 3 x TOTAL Σ) 8 1553
Climatic Condition	9	6	54	
Material/Inspection	2	4	8	
Sensor/Seeker	1	18	18	
Asembly/Disassembl	2	2	4	
"TYPICAL"	1	6	6	
	15	TOTAL Σ	90	ANNUAL UNCONSTRAINED CAPACITY 9 567,000

**CLOSE HOLD/SENSITIVE**

CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)

## TECHNICAL INFORMATION

FACILITY/CAPABILITY TITLE: Component Test

### **FACILITY DESCRIPTION, INCLUDING MISSION STATEMENT:**

Facility Category: Measurement Facilities

Mission: To plan, conduct, evaluate, and report tests of electronic, electro-optical, mechanical, and propulsion systems, subsystems and components of Army weapon systems. Tests include design, developmental, evaluation, performance, qualification, safety, and environmental.

Facility Description: Component test facilities include four separate test operations at RTTC; Electronic Component, Electro-Optics Components, Mechanical Components, and Propulsion Static Tests. The first three of these each have a vast array of test equipment specialized for the particular class of components (radar, antenna, sensors, printed circuit boards, thermal batteries, gyroscopes, cable harnesses, night vision devices, lasers, optics, IR trackers, sights, pumps, actuators, filters, compressors, gears, and others). There is a major test area with several different size test stands, and a large central blockhouse dedicated to the static firing tests of both solid and liquid propellant propulsion systems, ignitors, gas generators and burst tests of rocket motor cases. Another test area located nearby is devoted to tests necessary for determining sensitivity of munitions, and for explosive classifications. Test capabilities include slow and fast cook-off, bullet and fragment impact, sympathetic detonation, and others.

### **INTERCONNECTIVITY/MULTI-USE OF T&E FACILITY:**

A small percentage of the workload in 1993 involved the real-time or near real-time exchange of data with another facility; however, the RTTC Component Test Facility is closely interconnected with the RTTC Induced Environment; RTTC Small Missile Flight; RTTC Non-Destructive and Natural Environmental facilities for test support. The synergism between these facilities allows comprehensive test programs to be conducted by relying on the support from the other RTTC capabilities to meet the overall test requirements. RTTC is also closely interconnected with the MICOM Research, Development and Engineering Center (MRDEC) to provide technical test expertise and facilities/capabilities for conduct of R&D programs. Likewise, the MRDEC provides technical systems design expertise to support RTTC test and failure analysis.

### **TYPE OF TEST SUPPORTED:**

Propulsion tests: Physical, electrical and optical properties determination, Shelf life, Safety, Qualification and performance

### **SUMMARY OF TECHNICAL CAPABILITIES:**

Mechanical, Electrical, Optical component, Performance and Verification tests, Propulsion tests, Shelf life tests, Safety, Advanced Computing capability. Test to any requirement covered by a MIL-STD.

### **KEYWORDS:**

Development test, Performance test, Qualification, Verification

CLOSE HOLD/SENSITIVE

CLOSE HOLD/SENSITIVE

	DNA	\$450K	\$400K	\$500K	\$350K	\$250K
FY99	FY98	FY97	FY96	FY95	FY94	FY93

CAPITAL EQUIPMENT INVESTMENT

ANNUAL MAINTENANCE:	\$1,200,000	ESTIMATED MOVING COST:	\$3,894,000
TONNAGE OF EQUIPMENT:	2169.5 tons	VOLUME OF EQUIPMENT:	924,400 cu. ft.
TEST AREA SQUARE FOOTAGE:	134,550 sq. ft.	OFFICE SPACE SQUARE FOOTAGE:	63,228
TOTAL SQUARE FOOTAGE:	247,728 sq. ft.		

TOTAL	198	192	164	150	141	137	131
CONTRACTOR	135	129	106	94	88	86	82
CIVILIAN	63	63	58	56	53	51	49
ENLISTED							
OFFICER							
	FY93	FY94	FY95	FY96	FY97	FY98	FY99

PERSONNEL

FACILITY/CAPABILITY TITLE:

Component Test

ADDITIONAL INFORMATION

CLOSE HOLD/SENSITIVE (RTTC/TECOM)

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY CONDITION**

**FACILITY/CAPABILITY TITLE:** Component Test

**AGE:** 37 years

**REPLACEMENT VALUE:** \$90.0M (including equipment)

**MAINTENANCE AND REPAIR BACKLOG:** None

**DATE OF LAST UPGRADE:** 1994

**NATURE OF LAST UPGRADE:** Construct a propulsion test stand

**MAJOR UPGRADES PROGRAMMED**

**1. UPGRADE TITLE:** Subsystem Test and Simulation Facility

**TOTAL PROGRAMMED AMOUNT:** \$800K

**SUMMARY DESCRIPTION:** Interconnect and facilitate component simulation tests

**2. UPGRADE TITLE:** Dynamic IR Scene Generator

**TOTAL PROGRAMMED AMOUNT:** \$75K

**SUMMARY DESCRIPTION:** IR guidance simulation engineering study

**CLOSE HOLD/SENSITIVE**

*End 4 to End  
45R*

CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)

### FACILITY CONDITION

FACILITY/CAPABILITY TITLE: Component Test

AGE: 37 years

REPLACEMENT VALUE: \$48M

MAINTENANCE AND REPAIR BACKLOG: None

DATE OF LAST UPGRADE: 1994

NATURE OF LAST UPGRADE: Construct a propulsion test stand

#### MAJOR UPGRADES PROGRAMMED

1. UPGRADE TITLE: MM-Wave test facility

TOTAL PROGRAMMED AMOUNT: \$290K

SUMMARY DESCRIPTION: Test and calibrate MM-Wave devices

2. UPGRADE TITLE: \_\_\_\_\_

TOTAL PROGRAMMED AMOUNT: \_\_\_\_\_

SUMMARY DESCRIPTION: \_\_\_\_\_

CLOSE HOLD/SENSITIVE

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

3. UPGRADE TITLE:

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**Thermal Ablative Test Stand Fabrication**

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TOTAL PROGRAMMED AMOUNT:

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**\$250K**

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SUMMARY DESCRIPTION:

---

**Test reentry and hypersonic nose cone/control surfaces**

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45a

**CLOSE HOLD/SENSITIVE**

CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)

HISTORICAL WORKLOAD (000) per person

FACILITY/CAPABILITY TITLE: Component Test

T&E FUNCTIONAL AREA	FISCAL YEAR												
	86	87	88	89	90	91	92	93					
AIR VEHICLES	DIRECT LABOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	TEST HOURS												
	MISSIONS												
EC	DIRECT LABOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	TEST HOURS												
	MISSIONS												
ARMAMENT/WEAPONS	DIRECT LABOR	DNA	159.2	161.2	186.9	DNA	176.5	204.3	243.8				
	TEST HOURS						35.3	40.92	48.76				
	MISSIONS												
OTHER T&E	DIRECT LABOR	DNA	650.4	884.6	889.3	DNA	202.8	204.6	176.4				
	TEST HOURS												
	MISSIONS												
OTHER	DIRECT LABOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	TEST HOURS												
	MISSIONS												

NA - NOT APPLICABLE  
DNA - DATA NOT AVAILABLE  
DATA FOR 1987, 1988 & 1989 IS AT THE RTTC LEVEL; NO BREAKOUT TO FACILITY LEVEL AVAILABLE

CLOSE HOLD/SENSITIVE

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**DETERMINATION OF UNCONSTRAINED CAPACITY**

FACILITY/CAPABILITY TITLE: Component Test

ANNUAL HOURS OF DOWNTIME	1.	820
AVERAGE DOWNTIME PER DAY (LINE 1 + 365)	2.	2.25
AVERAGE HOURS AVAILABLE PER DAY (24-LINE 2)	3.	21.75

TEST TYPES	TESTS AT ONE TIME	WORKLOAD PER TEST PER FACILITY HOUR	WORKLOAD PER FACILITY HOUR	UNCONSTRAINED CAPACITY PER DAY (LINE 3 x TOTAL Σ)
4	5	6	7	8
Propulsion	5	5	25	<b>ANNUAL UNCONSTRAINED CAPACITY</b>
Electrical	15	4	60	
Optical	10	5.4	54	
Mechanical	8	3	24	
"TYPICAL"	1	5	5	
		<b>TOTAL Σ</b>	<b>168</b>	9      1,333,719 hrs.

**CLOSE HOLD/SENSITIVE**

*End 5 to End 49*

CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)

**DETERMINATION OF UNCONSTRAINED CAPACITY**

FACILITY/CAPABILITY TITLE: Component Test

ANNUAL HOURS OF DOWNTIME	1.	820
AVERAGE DOWNTIME PER DAY (LINE 1 ÷ 365)	2.	2.25
AVERAGE HOURS AVAILABLE PER DAY (24-LINE 2)	3.	21.75

TEST TYPES	TESTS AT ONE TIME	WORKLOAD PER TEST PER FACILITY HOUR	WORKLOAD PER FACILITY HOUR	UNCONSTRAINED CAPACITY PER DAY (LINE 3 x TOTAL Σ)
		6	7	8
Propulsion	5		25	
Electrical	15	4	60	
Optical	10	5.4	54	
Mechanical	8	3	24	
"TYPICAL"	1	5	5	
	39		168	
		TOTAL Σ		
				9
				ANNUAL UNCONSTRAINED CAPACITY 1,333,710 <del>1,337,119</del>

CLOSE HOLD/SENSITIVE

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

FACILITY/CAPABILITY: NON-DESTRUCTIVE AND NATURAL ENVIRONMENTS

**SECTION 2: CAPACITY & TECHNICAL RESOURCES**

**2.1 WORKLOAD**

Annual workload will be reported in units as follows: for open air ranges involving flight testing, report test hours and missions. For all other T&E facilities direct labor hours and test hours must be reported; if available, missions must be reported. If an estimation of test hours based on direct labor hours is necessary, refer to the instructions for Determination of Unconstrained Capacity on page 28.

**2.1.A Historical Workload**

**-2.1.A.1** What amount of workload have you performed each year from FY86-93? Use the Historical Workload Form provided in Appendix A of this package.

**Response:** See Attached Form

**2.1.B Forecasted Workload**

**-2.1.B.1** Identify all appropriations (by program element) that generated a requirement for testing or test support, or are expected to generate a requirement for testing/test support in your Military Department (by functional areas of air vehicles, Electronic Combat (EC), armament/weapons, and other test) for FY92, FY93, and each year in the FY95 FYDP. The Military Departments will provide total funding amounts appropriated for all PEs identified in each functional area shown above.

**Response:** A list of program elements provided by TECOM HQ has been annotated to indicate the ones which require testing/test support from RTTC. The annotated list has been returned to TECOM HQ.

**-2.1.B.2** What amount of test work was performed at your facility (in workyears by functional areas of air vehicles, electronic combat, armament/weapons, other tests, and other) in FY92 & FY93?

**Response:**

AIR VEHICLE	NA	NA
ELECTRONIC COMBAT	NA	NA
ARMAMENT/WEAPONS	34.8	27.6
OTHER T&E	68.7	74.9
OTHER	NA	NA

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: NON-DESTRUCTIVE AND NATURAL ENVIRONMENTS**

**2.2 UNCONSTRAINED CAPACITY**

**-2.2.A Unconstrained capacity is the maximum capacity of this facility, assuming manpower and consumable supplies (excluding utilities) are unlimited, but allowing for expected downtime (maintenance, weather, darkness (daylight), holidays, etc.). Provide your response by filling out the Determination of Unconstrained Capacity Form in accordance with the instructions in Appendix A.**

**Response: See attached form.**

**-2.2.B Is this capacity limited by the physical characteristics of the facility itself, safety or health considerations, commercial utility availability, etc.?**

**Response: Yes**

**2.3 TECHNICAL RESOURCES**

**-2.3.A Does the facility have a specified war-time or contingency role established in approved war plans? Yes/no**

**Response: No**

**-2.3.B Does the facility provide a T&E product or service, without which irreparable harm would be imposed on the test mission of the host installation?**

**Response: Yes**

**-2.3.B.1 On the test mission of any other activity?**

**Response: Yes**

**-2.3.B.2 On any other mission deemed critical to the operational effectiveness of the armed forces of the United States?**

**Response: Yes**

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

FACILITY/CAPABILITY: NON-DESTRUCTIVE AND NATURAL ENVIRONMENTS

**SECTION 3: MEASURES OF MERIT**

**3.1 OVER-ARCHING MEASURES OF MERIT**

The over-arching measures of merit are listed with accompanying questions (or data requirements) intended to elicit standard information upon which the cross-service analysis can be based, and on which the Joint Cross-Service Groups can base their reviews of the Military Department analysis. Additional specific measures of merit are shown under individual functional areas. The numbers in parentheses () before each measure of merit indicate the BRAC selection criteria for military value.

**3.1.A Interconnectivity (MV I) - Measure of Merit:** *Extent of linkage of this facility with other facilities and assessment of single-node failure potential.*

**-3.1.A.1** What percentage of total test workload in FY93 involved the real-time or near real time exchange of data or control with another facility? List the facilities you interconnect to for test and identify how many are simultaneous activities. Identify these as to whether they are internal and external to the site.

**Response:** A small percentage of FY93 total workload involved real or near real time exchange of data with another facility. This facility is interconnected with the Small Missile Range Facility, the Induced Environmental Facility, and the Component Test Facility; all elements of RTTC. Together these facilities provide the MICOM Research, Development, and Engineering Center (MRDEC) technical test expertise and assistance with MRDEC programs. Additionally, the RTTC group of facilities provides DIA's Missile and Space Intelligence Center (MSIC) with local test capability and expertise in reverse engineering and assembly/disassembly of foreign weapons/weapons systems.

**-3.1.A.2** If your facility were to be closed, would there be an impact on other facilities to which you are connected? Yes/no. If yes, explain.

**Response:** Yes, MRDEC, and DIA would both lose their local test capability. As a result additional costs would be experienced by both of these groups as they would be forced to go TDY and ship hardware for testing to other facilities. For MRDEC, quick reaction testing would be lost, and with additional downtime during the inevitable problem solving phases of most technology explorations/developments, schedules would be impacted.

**3.1.B Facility Condition (MV II) - Measure of Merit:**

*Current and planned status of the T&E facilities for supporting assigned test missions.*

**Response:**

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: NON-DESTRUCTIVE AND NATURAL ENVIRONMENTS**

**3.1.C Environmental and Encroachment Carrying Capacity (MV II) - Measure of Merit:** *Extent of current and future potential environmental and encroachment impacts on air, land, and sea space for testing.*

**-3.1.C.1** Do you have limiting (current or future) environmental and/or encroachment characteristics associated with the installation/facility? Yes/no. If yes, explain.

**Response:** No

**-3.1.C.2** How much could workload be increased before this limit would be reached? Express your answer as a percentage of your current workload.

**Response:** NA

**-3.1.C.3** Do you currently operate under temporary permits of an environmental nature, or voluntary agreements (including treaties) of any sort that deal with the environment? If so, when do they expire? Please describe

**Response:** No

**-3.1.C.4** What is the total population within a 50 mile radius? 100 mile radius? 150 mile radius? 200 mile radius?

**Response:** 850K, 4800K, 6500K, 13500K

**-3.1.C.5** Identify the commercial air/land/sea traffic routes, public use of air/land/sea space, and frequency of use for each that affects or could affect mission accomplishment in your air, land, or sea space.

**Response:** None

**-3.1.C.5.A** How many test missions per year are canceled due to commercial or public use?

**Response:** None

**-3.1.C.6** What is the number of test missions that have been canceled due to encroachment in each of the last two years?

**Response:** NA

**3.1.D Specialized Test Support Facilities and Targets (MV I) - Measure of Merit:** *Extent to which specialized test support facilities and targets are available.*

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: NON-DESTRUCTIVE AND NATURAL ENVIRONMENTS**

**-3.1.D.1** Do you have specialized facilities that are required to support you in conducting your test operations at your facility (e.g. Aerial delivery load build-up facilities; parachute drying towers/packing facilities; paratroop support facilities; specialized fuel storage and delivery systems; mission planning facilities; corrosion control, painting, washing facilities; and specialized maintenance facilities such as avionics intermediate shops)? Yes/no. If yes, please describe.

**Response:** Yes, tactical vehicle maintenance/storage facilities, ammunition storage facilities, 41 climatic test chambers of varying sizes.

**-3.1.D.2** Are specialized targets required to support this facility? Yes/no. If yes, explain.

**Response:** Yes, foreign and domestic tracked and wheeled vehicles.

**-3.1.D.2.A** Have the specialized targets been validated? Yes/no. If yes, by whom?

**Response:** No, as they are still tactical.

**3.1.E Expandability (MV III) - Measure of Merit:** *Extent to which an installation/facility is able to expand to accommodate additional workload or new missions.*

**-3.1.E.1** Other than the expandability inherent in unconstrained capacity, discussed earlier, are there any special aspects of this facility that enhance its ability to expand output within each T&E functional area? Yes/no. If yes, explain.

**Response:** No

**-3.1.E.1.A** Can you accept new T&E workload different from what you are currently performing? Yes/no. If yes, identify by T&E functional area and test type.

**Response:** Yes, subsystem/component testing in the areas of Air Vehicles and EC.

**-3.1.E.2** Are airspace, land, and water areas--adjacent to areas under DoD control--available and/or suited for physical expansion to support new missions or increased footprints? Yes/no. If yes, please explain.

**Response:** No

**-3.1.E.3** Is the facility equipped to support secure operations? Yes/no. If yes, to what level of classification (Confidential, Secret, Top Secret, Special Access Required)?

**Response:** Confidential, Secret, Special Access Required

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: NON-DESTRUCTIVE AND NATURAL ENVIRONMENTS**

**-3.1.E.4** Are there any capital improvements underway or programmed in the 95 FYDP that would change your capacity/capability? Yes/no. If yes, explain.

**Response:** Yes, A laser Shearography system is planned for the purpose of improving the surface defect detection capability within the facility. Increased precision and better efficiency will result.

**3.1.F Uniqueness (MV I) - Measure of Merit:** *Extent to which the facility is one-of-a-kind.*

**-3.1.F.1** Is this a one-of-a-kind facility within the DoD? Yes/no. If yes, describe.

**Response:** No

**-3.1.F.1.A** Within the US Government? Yes/no. If yes, describe.

**Response:** No

**-3.1.F.1.B** Within the US? Yes/no. If yes, describe.

**Response:** No

**-3.1.F.2** Are you currently providing support to DoD users outside your Military Department? Yes/no. If yes, indicate percentage of total workload in FY92 and FY93 by Military Department.

**Response:** No

**3.1.G Available Air, Land, and Sea Space (MV II) - Measure of Merit:** *Extent to which controlled test ranges satisfy weapon system test requirements.*

**-3.1.G.1** How many square miles of air, land, and sea space are available to support test operations?

**Response:** 5.8

**-3.1.G.2** Who owns and/or controls the land under the restricted airspace you use?

**Response:** RTTC

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: NON-DESTRUCTIVE AND NATURAL ENVIRONMENTS**

**-3.1.G.3** How much of this is Restricted Airspace, and what altitude limits are associated with the restricted areas?

**Response:** 100%; 30,000 ft. MSL

**-3.1.G.4** Do you have special use airspace? Yes/no. If yes, for what types of tests (e.g. terrain following radar)? Dimensions? Will it support simultaneous users? Yes/no.

**Response:** No

**-3.1.G.5** Is the airspace over land or water? List the number of square miles over each.

**Response:** Land, see 3.1.G.1

**-3.1.G.6** Identify known or projected airspace problems that may prevent accomplishing your mission.

**Response:** None

**-3.1.G.7** What is the maximum straight line segment in your airspace in nautical miles?

**Response:** 3.5 nm

**-3.1.G.8** What public airspace have you used for overflight of weapons systems in the past? What was the nature of those tests? Do you anticipate being able to use that same public airspace for similar tests in the future? Yes/no.

**Response:** Air space within Huntsville International Airport's Terminal Control Area, Air Defense sensor testing against aerial platforms, yes.

**3.1.H Geographic/Climatological Features (MV II) - Measure of Merit:** *Extent to which types of climatic/geographic conditions represent world-wide operational conditions.*

**-3.1.H.1** Describe the topography and ground cover/vegetation within your test airspace (include nap-of-the-earth capability). Identify all of the following that apply: mountains, forest/jungle, cultivated lowland, swamp/riverine, desert, and sea. State the area of each in square miles.

**Response:** Forest jungle 1.0, cultivated lowland 4.8

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: NON-DESTRUCTIVE AND NATURAL ENVIRONMENTS**

**-3.1.H.2** Are there features of the local geology or soil conditions that enhance or inhibit any types of tests?

**Response:** No

**-3.1.H.3** Did you have to go to other geographical locations to satisfy test requirements? Yes/no and explain. If yes, provide as a percent of overall workload per year for the past 8 years.

**Response:** No

**-3.1.H.4** What is the number of days per year the average temperature is below 32 degrees F? Between 32 and 95 degrees? Above 95 degrees?

**Response:** 12, 353, 0

**-3.1.H.5** What is the number of days per year the average relative humidity is below 30 percent? Between 30 and 80 percent? Above 80 percent?

**Response:** 0, 317, 48

**-3.1.H.6** What is the number of test missions per year (1985 - 1993) canceled due to weather?

**Response:** DNA

**-3.1.H.7** What is the number of test days per year (1985 - 1993) canceled due to weather?

**Response:** DNA

**-3.1.H.8** What is the number of days per year the visibility is less than 1 mile? Between 1 and 3 miles? Greater than 3 miles?

**Response:** 25, 47, 293

**-3.1.H.9** What is the average number of flying days available per year for flight test? Provide historical average from the past 8 years.

**Response:** NA

**-3.1.H.10** What percentage of the time are your test operations restricted due to weather?

**Response:** DNA

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: NON-DESTRUCTIVE AND NATURAL ENVIRONMENTS**

**3.2 AIR VEHICLES**

This functional area includes facilities involved in the testing of all air vehicles/subsystems/components whether fixed wing or rotary wing and test of major subsystems (e.g., avionics, engines, and sensors). This includes flight testing and the testing involving pre- and post-flight preparation and processing of the air vehicle. Unmanned air vehicles and cruise missiles are included.

**3.2.A Supersonic Airspace (MV II) - Measure of Merit: *Extent of range size of support weapon system requirements.***

**-3.2.A.1 Do supersonic corridors or areas exist? Yes/no.**

**Response: NA**

**-3.2.A.2 Where are they located relative to your airfield?**

**Response: NA**

**-3.2.A.3 At what altitude (upper and lower altitude)?**

**Response: NA**

**-3.2.A.4 Over land or water? What size and shape (length and width)?**

**Response: NA**

**-3.2.A.5 Are there restrictions you must observe to use this space? Yes/no. If yes, explain.**

**Response: NA**

**-3.2.A.6 What is the maximum number of simultaneous users?**

**Response: NA**

**3.2.B Airfield and Facility Characteristics (MV II) - Measure of Merit: *Extent of air vehicle infrastructure to support T&E operations.***

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: NON-DESTRUCTIVE AND NATURAL ENVIRONMENTS**

**-3.2.B.1** Provide a brief description of your airfield and support facilities, to include the following: number and azimuth of runways, elevation, runway length (excluding overrun), overrun length, terminal and/or landing aids, arresting cable (Yes/no, type), ramp area (in square feet), construction material (runway and ramps), load capability, and hanger space.

**Response:** NA

**-3.2.B.2** How close and how many emergency runways or airfields are in your area of operation?

**Response:** NA

**-3.2.B.3** Where is your airfield situated relative to working areas (airspace) for supporting test operations?

**Response:** NA

**-3.2.B.4** What makes your airfield unique or at least suited for supporting test operations?

**Response:** NA

**-3.2.B.5** Is there a size, weight, maintenance or mission limitation that would affect test operations? If so, describe the limitation(s).

**Response:** NA

**-3.2.B.6** Including hangers and ramp space, how many fighter size aircraft could you support? Large multi-engine aircraft? Rotary wing? UAV? Cruise missiles?

**Response:** NA

**3.2.C Test Operations (MV II) - Measure of Merit:** *Extent of T&E operations that the airspace can accommodate.*

**-3.2.C.1** What types of air vehicle testing (fixed wing, rotary wing, unmanned vehicles, and cruise missiles) can be supported? (e.g. performance, handling qualities, fatigue life, static, wheels, and brakes, physical integration with external stores or avionics)

**Response:** NA

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: NON-DESTRUCTIVE AND NATURAL ENVIRONMENTS**

**-3.2.C.2** Do ground support facilities exist for pre-flight checkout or rehearsal of test missions?

**Response:** NA

**-3.2.C.3** What kinds, numbers of aircraft and mix can be supported (manned and unmanned)?

**Response:** NA

**-3.2.C.4** Does UAV and or rotary wing operations pose any limitation on other types of missions? If yes, explain.

**Response:** NA

**-3.2.C.5** What sorts of missions (e.g. air-to-air, air-to-ground, and refueling) can be flown within local airspace?

**Response:** NA

**-3.2.C.6** What is the maximum number of simultaneous missions you can support that require telemetry?

**Response:** NA

**-3.2.C.7** What is the largest number of simultaneous test missions you have supported in your airspace?

**Response:** NA

**-3.2.C.8** Identify the number, types, and owners of aircraft at your installation.

**Response:** NA

**3.3 ELECTRONIC COMBAT**

This functional area includes facilities involved in the testing of stand-alone electronic combat systems and electronic combat subsystems that are normally integrated into other weapon systems. It includes the testing of systems or subsystems that have as their primary mission threat warning, testing of systems that provide countermeasures in the RF (radio frequency) spectrum against radars and other RF sensors, systems that provide countermeasures that are used against sensors in the electro-optical or infrared spectrum as well as testing of electronic and C<sup>3</sup> countermeasures.

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: NON-DESTRUCTIVE AND NATURAL ENVIRONMENTS**

**3.3.A Threat Environment (MV I) - Measure of Merit:** *Extent to which the capability satisfies weapon system requirements.*

**-3.3.A.1** What is the number of threats simulated?

**Response:** NA

**-3.3.A.2** How many simultaneous threats can be simulated? What type (e.g. AI, AAA, SAM)? What is maximum signal density? Average density? What power level? What band? Radiated or injected?

**Response:** NA

**-3.3.A.3** Are the threat software models and simulators (software/hardware) validated? Yes/no. If yes, by whom?

**Response:** NA

**-3.3.A.4** Do you conduct open loop testing? Reactive? Closed loop? Yes/no for each.

**Response:** NA

**-3.3.A.5** What is the threat representation (fidelity) and density?

**Response:** NA

**-3.3.A.6** Are you capable of simulating land threats? Sea threats? Yes/no. If yes, describe.

**Response:** NA

**-3.3.A.7** What geographic dispersion can be simulated?

**Response:** NA

**-3.3.A.7.A** Threat lay down?

**Response:** NA

**-3.3.A.7.B** Representative distance?

**Response:** NA

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: NON-DESTRUCTIVE AND NATURAL ENVIRONMENTS**

**-3.3.A.8** Are the threats moveable (i.e. dynamic) within a test scenario? Relocatable to new scenarios? Yes/no.

**Response: NA**

**-3.3.A.9** Is the facility interlinked with off-size threats? Yes/no. If yes, how are you linked?

**Response: NA**

**-3.3.A.10** Is there a limit on simultaneous users? Yes/no. If no, explain.

**Response: NA**

**3.3.B Test Article Support (MV II) - Measure of Merit: *Extent to which test support satisfies weapon system test requirements.***

**-3.3.B.1** Is there a size, weight, or other limitation on test operations the facility can support? Yes/no. If so, identify the limits and measures to remove them.

**Response: NA**

**-3.3.B.2** What is the number of simultaneous countermeasures that can be evaluated?

**Response: NA**

**-3.3.B.3** What range of spectra can be tested and evaluated?

**Response: NA**

**-3.3.B.4** What are the available spectra?

**Response: NA**

**-3.3.P 5** Do you have a scene generation capability? Yes/no. If yes, describe.

**Response: NA**

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

FACILITY/CAPABILITY: NON-DESTRUCTIVE AND NATURAL ENVIRONMENTS

**3.4 ARMAMENTS/WEAPONS**

This functional area includes facilities involved in the testing of the weapons portion of a weapon system. In those cases where the weapon system is composed almost exclusively of the weapon, it may include system-level and platform integration testing. In other cases, it addresses just the weapon subsystem (e.g., guidance and control, propulsion, warheads, and airframe), while the testing of the weapon system's vehicle is in another functional area.

**3.4.A Directed Energy (MV II) - Measure of Merit:** *Extent to which the facility satisfies directed energy weapon system test requirements.*

This includes testing of all types of directed energy weapons.

**-3.4.A.1** Do you currently test directed energy weapon systems? Yes/no. If yes, explain. Describe the power source(s) you have available. What is your maximum downrange distance?

**Response:** No

**3.4.B Rocket/Missile/Bomb System (MV II) - Measure of Merit:** *Extent capability satisfies weapon system test requirements.*

This includes the testing of all types of rocket, missile, and bomb systems at the system/subsystem/component level, both stand alone and integrated into the launch platform. This includes testing of air-to-air, air-to-surface, and surface-to-air missiles.

**-3.4.B.1 Ground Space**

**-3.4.B.1.A** What is the area in square miles of the land and water space which you can use to conduct tests of live rocket, missile, or bomb systems?

**Response:** 5.8

**-3.4.B.1.B** How many separate and distinct land and water test areas are available to conduct tests of live weapons? List them and the size of each in acres.

**Response:** 2 Test Areas, 3205 acres, 500 acres

**-3.4.B.1.C** What are the maximum ranges (nautical miles) you can test, by type weapon?

**Response:** 0, both facilities test weapons system components and do not fly missiles

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: NON-DESTRUCTIVE AND NATURAL ENVIRONMENTS**

**3.4.B.2 Test Operations**

**-3.4.B.2.A For each of your land and water ranges, how many test missions were scheduled in FY92 and FY93 that were required to use safety footprints comparable to those required for the following types of weapons:**

**- Unguided 2000 pound-class ballistic weapon**

**- live?**

**- inert?**

**- Guided weapon (e.g. GBU-24 class)**

**- live?**

**- inert?**

**- Stand-off weapon (e.g. AGM-130 class)**

**- live?**

**- inert?**

**- Short-range missile (e.g., AIM-9)**

**- below 5000 feet MSL**

**- between 5000 and 20,000 feet MSL**

**- above 20,000 feet MSL**

**- Long-range missile (e.g., AIM-120)**

**- - below 5000 feet MSL**

**- between 5000 and 20,000 feet MSL**

**- above 20,000 feet MSL**

**Response: None of the testing conducted falls into any of the available categories.**

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: NON-DESTRUCTIVE AND NATURAL ENVIRONMENTS**

**-3.4.B.2.B** Were flight termination systems required? Yes/no.

**Response:** NA

**-3.4.B.2.C** If no missions were scheduled in a category, give the reason(s).

**Response:** No requests, also inadequate land area to accommodate, outside mission

**-3.4.B.2.D** Were any scheduled missions canceled before the missions, or terminated/aborted during the mission because of encroachments into the safety footprint? Yes/no. If yes, how many per year.

**Response:** NA

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

FACILITY/CAPABILITY: SMALL MISSILE RANGE

**SECTION 2: CAPACITY & TECHNICAL RESOURCES**

**2.1 WORKLOAD**

Annual workload will be reported in units as follows: for open air ranges involving flight testing, report test hours and missions. For all other T&E facilities direct labor hours and test hours must be reported; if available, missions must be reported. If an estimation of test hours based on direct labor hours is necessary, refer to the instructions for Determination of Unconstrained Capacity on page 28.

**2.1.A Historical Workload**

**-2.1.A.1** What amount of workload have you performed each year from FY86-93? Use the Historical Workload Form provided in Appendix A of this package.

**Response:** See Attached Form

**2.1.B Forecasted Workload**

**-2.1.B.1** Identify all appropriations (by program element) that generated a requirement for testing or test support, or are expected to generate a requirement for testing/test support in your Military Department (by functional areas of air vehicles, Electronic Combat (EC), armament/weapons, and other test) for FY92, FY93, and each year in the FY95 FYDP. The Military Departments will provide total funding amounts appropriated for all PEs identified in each functional area shown above.

**Response:** A list of program elements provided by TECOM HQ has been annotated to indicate the ones which require testing/test support from RTTC. The annotated list has been returned to TECOM HQ.

**-2.1.B.2** What amount of test work was performed at your facility (in workyears by functional areas of air vehicles, electronic combat, armament/weapons, other tests, and other) in FY92 & FY93?

**Response:**

	FY92	FY93
AIR VEHICLES	NA	NA
ELECTRONIC COMBAT	NA	NA
ARMAMENT/WEAPONS	8.1	9.7
OTHER T&E	101.6	100.7
OTHER	NA	NA

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: SMALL MISSILE RANGE**

**2.2 UNCONSTRAINED CAPACITY**

**-2.2.A** Unconstrained capacity is the maximum capacity of this facility, assuming manpower and consumable supplies (excluding utilities) are unlimited, but allowing for expected downtime (maintenance, weather, darkness (daylight), holidays, etc.). Provide your response by filling out the Determination of Unconstrained Capacity Form in accordance with the instructions in Appendix A.

**Response:** See Attached Form

**-2.2.B** Is this capacity limited by the physical characteristics of the facility itself, safety or health considerations, commercial utility availability, etc.?

**Response:** Yes

**2.3 TECHNICAL RESOURCES**

**-2.3.A** Does the facility have a specified war-time or contingency role established in approved war plans? Yes/no

**Response:** No

**-2.3.B** Does the facility provide a T&E product or service, without which irreparable harm would be imposed on the test mission of the host installation?

**Response:** Yes

**-2.3.B.1** On the test mission of any other activity?

**Response:** Yes

**-2.3.B.2** On any other mission deemed critical to the operational effectiveness of the armed forces of the United States?

**Response:** Yes

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: SMALL MISSILE RANGE**

**SECTION 3: MEASURES OF MERIT**

**3.1 OVER-ARCHING MEASURES OF MERIT**

The over-arching measures of merit are listed with accompanying questions (or data requirements) intended to elicit standard information upon which the cross-service analysis can be based, and on which the Joint Cross-Service Groups can base their reviews of the Military Department analysis. Additional specific measures of merit are shown under individual functional areas. The numbers in parentheses ( ) before each measure of merit indicate the BRAC selection criteria for military value.

**3.1.A Interconnectivity (MV I) - Measure of Merit:** *Extent of linkage of this facility with other facilities and assessment of single-node failure potential.*

**-3.1.A.1** What percentage of total test workload in FY93 involved the real-time or near real time exchange of data or control with another facility? List the facilities you interconnect to for test and identify how many are simultaneous activities. Identify these as to whether they are internal and external to the site.

**Response:** A small percentage of the FY93 workload involved real or near real-time exchange of data with another facility. This facility is interconnected with the Nondestructive and Natural Environments Facility, the Induced Environmental Facility, and the Component Test Facility; all elements of RTTC. Together these facilities provide the MICOM Research, Development, and Engineering Center (MRDEC) technical test expertise and assistance with MRDEC programs. Additionally, the RTTC group of facilities provides DIA's Missile and Space Intelligence Center (MSIC) with a local test capability.

**-3.1.A.2** If your facility were to be closed, would there be an impact on other facilities to which you are connected? Yes/no. If yes, explain.

**Response:** Yes. MRDEC and DIA would both lose their local test capability. As a result additional costs would be experienced by both of these groups as they would be forced to go TDY and ship hardware for testing to other facilities. For MRDEC and DIA, quick reaction testing would be lost, and with additional downtime during the inevitable problem solving phases of most technology explorations/developments, schedules would be impacted.

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: SMALL MISSILE RANGE**

**3.1.B Facility Condition (MV II) - Measure of Merit:**

*Current and planned status of the T&E facilities for supporting assigned test missions.*

**Response:** See Attached Form

**3.1.C Environmental and Encroachment Carrying Capacity (MV II) - Measure of Merit:** *Extent of current and future potential environmental and encroachment impacts on air, land, and sea space for testing.*

**-3.1.C.1** Do you have limiting (current or future) environmental and/or encroachment characteristics associated with the installation/facility? Yes/no. If yes, explain.

**Response:** No

**-3.1.C.2** How much could workload be increased before this limit would be reached? Express your answer as a percentage of your current workload.

**Response:** Not Applicable

**-3.1.C.3** Do you currently operate under temporary permits of an environmental nature, or voluntary agreements (including treaties) of any sort that deal with the environment? If so, when do they expire? Please describe

**Response:** No

**-3.1.C.4** What is the total population within a 50 mile radius? 100 mile radius? 150 mile radius? 200 mile radius?

<b>Response:</b>	50 mile	-	850,000
	100 mile	-	4,800,000
	150 mile	-	6,500,000
	200 mile	-	13,500,000

**-3.1.C.5** Identify the commercial air/land/sea traffic routes, public use of air/land/sea space, and frequency of use for each that affects or could affect mission accomplishment in your air, land, or sea space.

**Response:** None

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: SMALL MISSILE RANGE**

**-3.1.C.5.A** How many test missions per year are canceled due to commercial or public use?

**Response:** None

**-3.1.C.6** What is the number of test missions that have been canceled due to encroachment in each of the last two years?

**Response:** Not Applicable

**3.1.D Specialized Test Support Facilities and Targets (MV I) - Measure of Merit:**  
*Extent to which specialized test support facilities and targets are available.*

**-3.1.D.1** Do you have specialized facilities that are required to support you in conducting your test operations at your facility (e.g. Aerial delivery load build-up facilities; parachute drying towers/packing facilities; paratroop support facilities; specialized fuel storage and delivery systems; mission planning facilities; corrosion control, painting, washing facilities; and specialized maintenance facilities such as avionics intermediate shops)? Yes/no. If yes, please describe.

**Response:** Yes. Range Control Blockhouses, Ammunition Storage Bunkers

**-3.1.D.2** Are specialized targets required to support this facility? Yes/no. If yes, explain.

**Response:** Yes, Tactical Foreign Tracked and Wheeled Vehicles

**-3.1.D.2.A** Have the specialized targets been validated? Yes/no. If yes, by whom?

**Response:** No, as they are tactical *tactical means the real thing. Does not have to be validated*

**3.1.E Expandability (MV III) - Measure of Merit:** *Extent to which an installation/facility is able to expand to accommodate additional workload or new missions.*

**-3.1.E.1** Other than the expandability inherent in unconstrained capacity, discussed earlier, are there any special aspects of this facility that enhance its ability to expand output within each T&E functional area? Yes/no. If yes, explain.

**Response:** No

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: SMALL MISSILE RANGE**

**-3.1.E.1.A** Can you accept new T&E workload different from what you are currently performing? Yes/no. If yes, identify by T&E functional area and test type.

**Response:** No

**-3.1.E.2** Are airspace, land, and water areas--adjacent to areas under DoD control--available and/or suited for physical expansion to support new missions or increased footprints? Yes/no. If yes, please explain.

**Response:** No

**-3.1.E.3** Is the facility equipped to support secure operations? Yes/no. If yes, to what level of classification (Confidential, Secret, Top Secret, Special Access Required)?

**Response:** Yes, Confidential, Secret, and SAR test data/hardware can be supported.

**-3.1.E.4** Are there any capital improvements underway or programmed in the 95 FYDP that would change your capacity/capability? Yes/no. If yes, explain.

**Response:** No

**3.1.F Uniqueness (MV I) - Measure of Merit:** *Extent to which the facility is one-of-a-kind.*

**-3.1.F.1** Is this a one-of-a-kind facility within the DoD? Yes/no. If yes, describe.

**Response:** No

**-3.1.F.1.A** Within the US Government? Yes/no. If yes, describe.

**Response:** No

**-3.1.F.1.B** Within the US? Yes/no. If yes, describe.

**Response:** No

**-3.1.F.2** Are you currently providing support to DoD users outside your Military Department? Yes/no. If yes, indicate percentage of total workload in FY92 and FY93 by Military Department.

**Response:** Yes.      FY92: DNA  
                            FY93: Air Force, 16.7%

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: SMALL MISSILE RANGE**

**3.1.G Available Air, Land, and Sea Space (MV II) - Measure of Merit:** *Extent to which controlled test ranges satisfy weapon system test requirements.*

**3.1.G.1** How many square miles of air, land, and sea space are available to support test operations?

**Response:** 13.3

**3.1.G.2** Who owns and/or controls the land under the restricted airspace you use?

**Response:** U.S. Army Redstone Technical Test Center

**3.1.G.3** How much of this is Restricted Airspace, and what altitude limits are associated with the restricted areas?

**Response:** 100%, 30,000 ft MSL

**3.1.G.4** Do you have special use airspace? Yes/no. If yes, for what types of tests (e.g. terrain following radar)? Dimensions? Will it support simultaneous users? Yes/no.

**Response:** No

**3.1.G.5** Is the airspace over land or water? List the number of square miles over each.

**Response:** Land, see 3.1.G.1

**3.1.G.6** Identify known or projected airspace problems that may prevent accomplishing your mission.

**Response:** None

**3.1.G.7** What is the maximum straight line segment in your airspace in nautical miles?

**Response:** 6

**3.1.G.8** What public airspace have you used for overflight of weapons systems in the past? What was the nature of those tests? Do you anticipate being able to use that same public airspace for similar tests in the future? Yes/no.

**Response:** None

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: SMALL MISSILE RANGE**

**3.1.H Geographic/Climatological Features (MV II) - Measure of Merit:** *Extent to which types of climatic/geographic conditions represent world-wide operational conditions.*

**-3.1.H.1** Describe the topography and ground cover/vegetation within your test airspace (include nap-of-the-earth capability). Identify all of the following that apply: mountains, forest/jungle, cultivated lowland, swamp/riverine, desert, and sea. State the area of each in square miles.

**Response:** Mountains, 1.5; Forest/Jungle, 1.5; Cultivated Lowland, 10.3

**-3.1.H.2** Are there features of the local geology or soil conditions that enhance or inhibit any types of tests?

**Response:** None

**-3.1.H.3** Did you have to go to other geographical locations to satisfy test requirements? Yes/no and explain. If yes, provide as a percent of overall workload per year for the past 8 years.

**Response:** No

**-3.1.H.4** What is the number of days per year the average temperature is below 32 degrees F? Between 32 and 95 degrees? Above 95 degrees?

**Response:** 12, 353, 0

**-3.1.H.5** What is the number of days per year the average relative humidity is below 30 percent? Between 30 and 80 percent? Above 80 percent?

**Response:** 0, 317, 48

**-3.1.H.6** What is the number of test missions per year (1985 - 1993) canceled due to weather?

**Response:** DNA

**-3.1.H.7** What is the number of test days per year (1985 - 1993) canceled due to weather?

**Response:** DNA

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: SMALL MISSILE RANGE**

**-3.1.H.8** What is the number of days per year the visibility is less than 1 mile? Between 1 and 3 miles? Greater than 3 miles?

**Response:** 25, 47, 293

**-3.1.H.9** What is the average number of flying days available per year for flight test? Provide historical average from the past 8 years.

**Response:** Not Applicable

**-3.1.H.10** What percentage of the time are your test operations restricted due to weather?

**Response:** DNA

**3.2 AIR VEHICLES**

This functional area includes facilities involved in the testing of all air vehicles/subsystems/components whether fixed wing or rotary wing and test of major subsystems (e.g., avionics, engines, and sensors). This includes flight testing and the testing involving pre- and post-flight preparation and processing of the air vehicle. Unmanned air vehicles and cruise missiles are included.

**3.2.A Supersonic Airspace (MV II) - Measure of Merit:** *Extent of range size of support weapon system requirements.*

**-3.2.A.1** Do supersonic corridors or areas exist? Yes/no.

**Response:** Not Applicable

**-3.2.A.2** Where are they located relative to your airfield?

**Response:** Not Applicable

**-3.2.A.3** At what altitude (upper and lower altitude)?

**Response:** Not Applicable

**-3.2.A.4** Over land or water? What size and shape (length and width)?

**Response:** Not Applicable

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: SMALL MISSILE RANGE**

**-3.2.A.5** Are there restrictions you must observe to use this space? Yes/no. If yes, explain.

**Response:** Not Applicable

**-3.2.A.6** What is the maximum number of simultaneous users?

**Response:** Not Applicable

**3.2.B Airfield and Facility Characteristics (MV II) - Measure of Merit:** *Extent of air vehicle infrastructure to support T&E operations.*

**-3.2.B.1** Provide a brief description of your airfield and support facilities, to include the following: number and azimuth of runways, elevation, runway length (excluding overrun), overrun length, terminal and/or landing aids, arresting cable (Yes/no, type), ramp area (in square feet), construction material (runway and ramps), load capability, and hanger space.

**Response:** Not Applicable

**-3.2.B.2** How close and how many emergency runways or airfields are in your area of operation?

**Response:** Not Applicable

**-3.2.B.3** Where is your airfield situated relative to working areas (airspace) for supporting test operations?

**Response:** Not Applicable

**-3.2.B.4** What makes your airfield unique or at least suited for supporting test operations?

**Response:** Not Applicable

**-3.2.B.5** Is there a size, weight, maintenance or mission limitation that would affect test operations? If so, describe the limitation(s).

**Response:** Not Applicable

**-3.2.B.6** Including hangers and ramp space, how many fighter size aircraft could you support? Large multi-engine aircraft? Rotary wing? UAV? Cruise missiles?

**Response:** Not Applicable

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: SMALL MISSILE RANGE**

**3.2.C Test Operations (MV II) - Measure of Merit:** *Extent of T&E operations that the airspace can accommodate.*

**-3.2.C.1** What types of air vehicle testing (fixed wing, rotary wing, unmanned vehicles, and cruise missiles) can be supported? (e.g. performance, handling qualities, fatigue life, static, wheels, and brakes, physical integration with external stores or avionics)

**Response:** Not Applicable

**-3.2.C.2** Do ground support facilities exist for pre-flight checkout or rehearsal of test missions?

**Response:** Not Applicable

**-3.2.C.3** What kinds, numbers of aircraft and mix can be supported (manned and unmanned)?

**Response:** Not Applicable

**-3.2.C.4** Does UAV and or rotary wing operations pose any limitation on other types of missions? If yes, explain.

**Response:** Not Applicable

**-3.2.C.5** What sorts of missions (e.g. air-to-air, air-to-ground, and refueling) can be flown within local airspace?

**Response:** Not Applicable

**-3.2.C.6** What is the maximum number of simultaneous missions you can support that require telemetry?

**Response:** Not Applicable

**-3.2.C.7** What is the largest number of simultaneous test missions you have supported in your airspace?

**Response:** Not Applicable

**-3.2.C.8** Identify the number, types, and owners of aircraft at your installation.

**Response:** Not Applicable

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: SMALL MISSILE RANGE**

**3.3 ELECTRONIC COMBAT**

This functional area includes facilities involved in the testing of stand-alone electronic combat systems and electronic combat subsystems that are normally integrated into other weapon systems. It includes the testing of systems or subsystems that have as their primary mission threat warning, testing of systems that provide countermeasures in the RF (radio frequency) spectrum against radars and other RF sensors, systems that provide countermeasures that are used against sensors in the electro-optical or infrared spectrum as well as testing of electronic and C<sup>3</sup> countermeasures.

**3.3.A Threat Environment (MV I) - Measure of Merit:** *Extent to which the capability satisfies weapon system requirements.*

**-3.3.A.1** What is the number of threats simulated?

**Response:** Not Applicable

**-3.3.A.2** How many simultaneous threats can be simulated? What type (e.g. AI, AAA, SAM)? What is maximum signal density? Average density? What power level? What band? Radiated or injected?

**Response:** Not Applicable

**-3.3.A.3** Are the threat software models and simulators (software/hardware) validated? Yes/no. If yes, by whom?

**Response:** Not Applicable

**-3.3.A.4** Do you conduct open loop testing? Reactive? Closed loop? Yes/no for each.

**Response:** Not Applicable

**-3.3.A.5** What is the threat representation (fidelity) and density?

**Response:** Not Applicable

**-3.3.A.6** Are you capable of simulating land threats? Sea threats? Yes/no. If yes, describe.

**Response:** Not Applicable

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: SMALL MISSILE RANGE**

**-3.3.A.7** What geographic dispersion can be simulated?

**Response:** Not Applicable

**-3.3.A.7.A** Threat lay down?

**Response:** Not Applicable

**-3.3.A.7.B** Representative distance?

**Response:** Not Applicable

**-3.3.A.8** Are the threats moveable (i.e. dynamic) within a test scenario? Relocatable to new scenarios? Yes/no.

**Response:** Not Applicable

**-3.3.A.9** Is the facility interlinked with off-size threats?  
Yes/no. If yes, how are you linked?

**Response:** Not Applicable

**-3.3.A.10** Is there a limit on simultaneous users? Yes/no. If no, explain.

**Response:** Not Applicable

**3.3.B Test Article Support (MV II) - Measure of Merit:** *Extent to which test support satisfies weapon system test requirements.*

**-3.3.B.1** Is there a size, weight, or other limitation on test operations the facility can support? Yes/no. If so, identify the limits and measures to remove them.

**Response:** Not Applicable

**-3.3.B.2** What is the number of simultaneous countermeasures that can be evaluated?

**Response:** Not Applicable

**-3.3.B.3** What range of spectra can be tested and evaluated?

**Response:** Not Applicable

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: SMALL MISSILE RANGE**

**-3.3.B.4** What are the available spectra?

**Response:** Not Applicable

**-3.3.B.5** Do you have a scene generation capability? Yes/no. If yes, describe.

**Response:** Not Applicable

**3.4 ARMAMENTS/WEAPONS**

This functional area includes facilities involved in the testing of the weapons portion of a weapon system. In those cases where the weapon system is composed almost exclusively of the weapon, it may include system-level and platform integration testing. In other cases, it addresses just the weapon subsystem (e.g., guidance and control, propulsion, warheads, and airframe), while the testing of the weapon system's vehicle is in another functional area.

**3.4.A Directed Energy (MV II) - Measure of Merit:** *Extent to which the facility satisfies directed energy weapon system test requirements.*

This includes testing of all types of directed energy weapons.

**-3.4.A.1** Do you currently test directed energy weapon systems? Yes/no. If yes, explain. Describe the power source(s) you have available. What is your maximum downrange distance?

**Response:** No

**3.4.B Rocket/Missile/Bomb System (MV II) - Measure of Merit:** *Extent capability satisfies weapon system test requirements.*

This includes the testing of all types of rocket, missile, and bomb systems at the system/subsystem/component level, both stand alone and integrated into the launch platform. This includes testing of air-to-air, air-to-surface, and surface-to-air missiles.

**-3.4.B.1 Ground Space**

**-3.4.B.1.A** What is the area in square miles of the land and water space which you can use to conduct tests of live rocket, missile, or bomb systems?

**Response:** 13.3

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: SMALL MISSILE RANGE**

**-3.4.B.1.B** How many separate and distinct land and water test areas are available to conduct tests of live weapons? List them and the size of each in acres.

**Response:** Test Areas 2, 5900 acres, 2600 acres

**-3.4.B.1.C** What are the maximum ranges (nautical miles) you can test, by type weapon?

**Response:** 3.1 nm for small rockets, guided missiles

**-3.4.B.2 Test Operations**

**-3.4.B.2.A** For each of your land and water ranges, how many test missions were scheduled in FY92 and FY93 that were required to use safety footprints comparable to those required for the following types of weapons:

- Unguided 2000 pound-class ballistic weapon

- live?

- inert?

- Guided weapon (e.g. GBU-24 class)

- live?

- inert?

- Stand-off weapon (e.g. AGM-130 class)

- live?

- inert?

- Short-range missile (e.g., AIM-9)

- below 5000 feet MSL

- between 5000 and 20,000 feet MSL

- above 20,000 feet MSL

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: SMALL MISSILE RANGE**

- Long-range missile (e.g., AIM-120)
  - below 5000 feet MSL
  - between 5000 and 20,000 feet MSL
  - above 20,000 feet MSL

**Response:** None of the testing conducted falls into any of the available categories.

**-3.4.B.2.B** Were flight termination systems required? Yes/no.

**Response:** No

**-3.4.B.2.C** If no missions were scheduled in a category, give the reason(s).

**Response:** No requests, also inadequate land area to accommodate

**-3.4.B.2.D** Were any scheduled missions canceled before the missions, or terminated/aborted during the mission because of encroachments into the safety footprint? Yes/no. If yes, how many per year.

**Response:** No

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**GENERAL INFORMATION**

FACILITY/CAPABILITY TITLE: Small Missile Range ORIGIN DATE: 5/25/94

SERVICE: A ORGANIZATION/ACTIVITY: RTTC LOCATION: RSA, AL

T&E FUNCTIONAL AREA: Other UIC = WIHTAA

T&E TEST FACILITY CATEGORY: Open Air Range

	T&E	S&T	DE	IE	T&D	OTHER
PERCENTAGE USE:	39.5	14.7	26.7	8.5	--	10.6

**BREAKOUT BY T&E FUNCTIONAL AREA (%):**

AIR VEHICLE						
ARMAMENT/WEAPONS	8.8	0.7	0.5	--	--	--
EC						
OTHER	30.7	14.0	26.2	8.5	--	10.6

TOTAL IN BREAKOUT MUST EQUAL "PERCENTAGE USE" ON FIRST LINE

**CLOSE HOLD/SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**TECHNICAL INFORMATION**

**FACILITY/CAPABILITY TITLE:** Small Missile Range

<p><b>FACILITY DESCRIPTION, INCLUDING MISSION STATEMENT:</b> Mission: Plan, conduct, evaluate and report (1) flights of small rockets and guided missiles, and (2) sled and static firing tests of warheads and missile system components. Develop test instrumentation, including missile telemetry systems, and perform data acquisition, reduction, and analysis.</p> <p><b>FACILITY DESCRIPTION:</b> Four highly instrumented test ranges, 8 KM, 3.3 KM, and 0.5 KM (two) in length, with blockhouses, comprise the primary facilities. Two monorail sled tracks, 1000 and 2000 feet in length, areas for static warhead testing, along with a complete complement of data acquisition facilities are also included as part of this facility. Additionally, fixed and mobile telemetry ground stations, data reduction facilities, and mechanical/electronic fabrication/integration facilities are also present. Weather station with Doppler radar; automated, remote, climatic instrumentation; lightning detection/sensors, automated data logging and archiving.</p>
<p><b>INTERCONNECTIONS/MULTI-USE/FACILITY:</b> This facility is interconnected with the Nondestructive and Natural Environments Facility, the Induced Environmental Facility, and the Component Test Facility; all elements of RTTC. Together these facilities provide the MICOM Research, Development, and Engineering Center (MRDEC) test services. Additionally, the RTTC group of facilities provides DIA's Missile and Space Intelligence Center (MSIC) with a local test capability, and conducts tests/provides services for the Navy, Marines, and Air Force.</p>
<p><b>TYPE OF TEST SUPPORTED:</b> Small rocket and missile flight tests, static and dynamic warhead testing, target testing, obscurant testing, laser testing, gun testing, launcher/platform testing.</p>
<p><b>SUMMARY OF TECHNICAL CAPABILITIES:</b> High speed photography; video, and other electronic imaging; electronic instrumentation design, development, and fabrication; telemetry package design, development, and fabrication; data acquisition, reduction and evaluation; operate/modify/maintain domestic and foreign ground targets, calibration of transducers and gages; obscurant deployment and use; quick reaction machine shop; test hardware/fixture/target fabrication; extensive heavy equipment to support testing.</p>
<p><b>KEYWORDS:</b> missile, rocket, munitions, testing, ordnance, telemetry, data acquisition, data reduction, warhead, film, photography, instrumentation, design, fabrication, calibration</p>

**CLOSE HOLD/SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**ADDITIONAL INFORMATION**

**FACILITY/CAPABILITY:** Small Missile Range

**PERSONNEL**

	FY93	FY94	FY95	FY96	FY97	FY98	FY99
OFFICER	0	0	0	0	0	0	0
ENLISTED	0	0	0	0	0	0	0
CIVILIAN	43	43	43	41	40	38	36
CONTRACTOR	67	65	55	48	46	44	43
<b>TOTAL</b>	<b>110</b>	<b>108</b>	<b>98</b>	<b>89</b>	<b>86</b>	<b>82</b>	<b>79</b>

**TOTAL SQUARE FOOTAGE:** 95,928

**TEST AREA SQUARE FOOTAGE:** 73,253

**TONNAGE OF EQUIPMENT:** 1,318

**ANNUAL MAINTENANCE:** \$483K

**OFFICE SPACE SQUARE FOOTAGE:** 22,675

**VOLUME OF EQUIPMENT:** 217,138 (ft<sup>3</sup>)

**ESTIMATED MOVING COST:** \$8.162M

**CAPITAL EQUIPMENT INVESTMENT**

FY93	FY94	FY95	FY96	FY97	FY98	FY99
\$100K	\$525K	\$400K	\$750K	\$470K	DNA	DNA

**CLOSE HOLD/SENSITIVE**

CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)

## FACILITY CONDITION

FACILITY/CAPABILITY TITLE: Small Missile Range

AGE: 35 Years (approx.)

REPLACEMENT VALUE: \$63.3 M (includes equipment)

MAINTENANCE AND REPAIR BACKLOG: NA

DATE OF LAST UPGRADE: 1992-1993

NATURE OF LAST UPGRADE: Small rockets range facility improvement replace an existing house trailer based control facility with a permanent concrete block facility with additional square footage. Additionally, the downrange buried power distribution and instrumentation cables were replaced to enhance reliability.

### MAJOR UPGRADES PROGRAMMED

1. UPGRADE TITLE: High Speed A/D System

TOTAL PROGRAMMED AMOUNT: \$200K

SUMMARY DESCRIPTION: Provide additional capability for high speed analog to digital data conversion in support of assigned programs. Additional capability required to meet increased data requirements and requirements for quicker turn around times for acquired data.

2. UPGRADE TITLE: PCM Decom System Enhancement

TOTAL PROGRAMMED AMOUNT: \$200K

SUMMARY DESCRIPTION: Provide for additional high bit rate PCM demodulation equipment for telemetry ground stations. Permits support of upcoming telemetry programs with higher bit (data rates) than previously experienced.

CLOSE HOLD/SENSITIVE

89R  
Case 1 to End

CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)

## FACILITY CONDITION

FACILITY/CAPABILITY TITLE: Small Missile Range

AGE: 35 Years (approx.)

REPLACEMENT VALUE: \$75.4 M (includes equipment)

MAINTENANCE AND REPAIR BACKLOG: NA

DATE OF LAST UPGRADE: 1992-1993

NATURE OF LAST UPGRADE: Small rockets range facility improvement replace an existing house trailer based control facility with a permanent concrete block facility with additional square footage. Additionally, the downrange buried power distribution and instrumentation cables were replaced to enhance reliability.

### MAJOR UPGRADES PROGRAMMED

1. UPGRADE TITLE: High Speed A/D System

TOTAL PROGRAMMED AMOUNT: \$200K

SUMMARY DESCRIPTION: Provide additional capability for high speed analog to digital data conversion in support of assigned programs. Additional capability required to meet increased data requirements and requirements for quicker turn around times for acquired data.

2. UPGRADE TITLE: PCM Decom System Enhancement

TOTAL PROGRAMMED AMOUNT: \$200K

SUMMARY DESCRIPTION: Provide for additional high bit rate PCM decommutation equipment for telemetry stations. Permits support of upcoming telemetry programs with higher bit (data rates) than previously experienced.

CLOSE HOLD/SENSITIVE

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**HISTORICAL WORKLOAD (000) per person**

FACILITY/CAPABILITY TITLE: Small Missile Range

T&E FUNCTIONAL AREA		FISCAL YEAR							
		86	87	88	89	90	91	92	93
AIR VEHICLES	DIRECT LABOR	NA	NA	NA	NA	NA	NA	NA	NA
	TEST HOURS								
	MISSIONS								
EC	DIRECT LABOR	NA	NA	NA	NA	NA	NA	NA	NA
	TEST HOURS								
	MISSIONS								
ARMAMENT/WEAPONS	DIRECT LABOR	DNA	159.2	161.2	186.9	DNA	14.3	16.9	20.3
	TEST HOURS						.95	1.13	1.35
	MISSIONS'								
OTHER T&E	DIRECT LABOR	DNA	650.4	884.6	889.3	DNA	232.3	212.1	210.2
	TEST HOURS								
	MISSIONS								
OTHER	DIRECT LABOR	NA	NA	NA	NA	NA	NA	NA	NA
	TEST HOURS								
	MISSIONS								

RFC  
AW  
DDA

NA - NOT APPLICABLE  
DNA - DATA NOT AVAILABLE  
DATA FOR 1987, 1988 & 1989 IS AT THE RTTC LEVEL; NO BREAKOUT TO FACILITY LEVEL AVAILABLE

**CLOSE HOLD/SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**DETERMINATION OF UNCONSTRAINED CAPACITY**

FACILITY/CAPABILITY TITLE: Small Missile Range

ANNUAL HOURS OF DOWNTIME	<u>1. 5680</u>
AVERAGE DOWNTIME PER DAY (LINE 1 + 365)	<u>2. 15.56</u>
AVERAGE HOURS AVAILABLE PER DAY (24-LINE 2)	<u>3. 8.43</u>

TEST TYPES 4	TESTS AT ONE TIME 5	WORKLOAD PER TEST PER FACILITY HOUR 6	WORKLOAD PER FACILITY HOUR 7	UNCONSTRAINED CAPACITY PER DAY (LINE 3 x TOTAL Σ) 8 886
Missile Flights	<u>3</u>	<u>20</u>	<u>60</u>	
Warhead Tests	<u>2</u>	<u>10</u>	<u>20</u>	
Telemetry Tests	<u>1</u>	<u>10</u>	<u>10</u>	
"TYPICAL"	<u>1</u>	<u>15</u>	<u>15</u>	
	<u>7</u>	<u>TOTAL Σ</u>	<u>105</u>	<b>ANNUAL UNCONSTRAINED CAPACITY</b> 9 323,400

**CLOSE HOLD/SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

FACILITY/CAPABILITY: INDUCED ENVIRONMENTAL

**SECTION 2: CAPACITY & TECHNICAL RESOURCES**

**2.1 WORKLOAD**

Annual workload will be reported in units as follows: for open air ranges involving flight testing, report test hours and missions. For all other T&E facilities direct labor hours and test hours must be reported; if available, missions must be reported. If an estimation of test hours based on direct labor hours is necessary, refer to the instructions for Determination of Unconstrained Capacity on page 28.

**2.1.A Historical Workload**

**-2.1.A.1** What amount of workload have you performed each year from FY86-93? Use the Historical Workload Form provided in Appendix A of this package.

**Response:** See Attached Form

**2.1.B Forecasted Workload**

**-2.1.B.1** Identify all appropriations (by program element) that generated a requirement for testing or test support, or are expected to generate a requirement for testing/test support in your Military Department (by functional areas of air vehicles, Electronic Combat (EC), armament/weapons, and other test) for FY92, FY93, and each year in the FY95 FYDP. The Military Departments will provide total funding amounts appropriated for all PEs identified in each functional area shown above.

**Response:** A list of program elements provided by TECOM HQ has been annotated to indicate the ones which require testing/test support from RTTC. The annotated list has been returned to TECOM HQ.

**-2.1.B.2** What amount of test work was performed at your facility (in workyears by functional areas of air vehicles, electronic combat, armament/weapons, other tests, and other) in FY92 & FY93?

**Response:**

	FY92	FY93
AIR VEHICLES	NA	NA
ELECTRONIC COMBAT	NA	NA
ARMAMENT/WEAPONS	22.8	23.9
OTHER T&E	51.8	54.4
OTHER	NA	NA

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: INDUCED ENVIRONMENTAL**

**2.2 UNCONSTRAINED CAPACITY**

**-2.2.A** Unconstrained capacity is the maximum capacity of this facility, assuming manpower and consumable supplies (excluding utilities) are unlimited, but allowing for expected downtime (maintenance, weather, darkness (daylight), holidays, etc.). Provide your response by filling out the Determination of Unconstrained Capacity Form in accordance with the instructions in Appendix A.

**Response:** See Attached Form

**-2.2.B** Is this capacity limited by the physical characteristics of the facility itself, safety or health considerations, commercial utility availability, etc.?

**Response:** This capacity is limited by the existing quantity of test facilities, equipment, and instrumentation.

**2.3 TECHNICAL RESOURCES**

**-2.3.A** Does the facility have a specified war-time or contingency role established in approved war plans? Yes/no

**Response:** No

**-2.3.B** Does the facility provide a T&E product or service, without which irreparable harm would be imposed on the test mission of the host installation?

**Response:** Yes

**-2.3.B.1** On the test mission of any other activity?

**Response:** Yes

**-2.3.B.2** On any other mission deemed critical to the operational effectiveness of the armed forces of the United States?

**Response:** Yes

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: INDUCED ENVIRONMENTAL**

**SECTION 3: MEASURES OF MERIT**

**3.1 OVER-ARCHING MEASURES OF MERIT**

The over-arching measures of merit are listed with accompanying questions (or data requirements) intended to elicit standard information upon which the cross-service analysis can be based, and on which the Joint Cross-Service Groups can base their reviews of the Military Department analysis. Additional specific measures of merit are shown under individual functional areas. The numbers in parentheses ( ) before each measure of merit indicate the BRAC selection criteria for military value.

**3.1.A Interconnectivity (MV I) - Measure of Merit:** *Extent of linkage of this facility with other facilities and assessment of single-node failure potential.*

**-3.1.A.1** What percentage of total test workload in FY93 involved the real-time or near real time exchange of data or control with another facility? List the facilities you interconnect to for test and identify how many are simultaneous activities. Identify these as to whether they are internal and external to the site.

**Response:** A small percentage of the FY93 workload involved real or near real-time exchange of data with another facility; however, the RTTC Induced Environmental facility is closely interconnected with the RTTC Component Test, RTTC Small Missile Flight, and the RTTC Non-Destructive and Natural Environmental facilities for test support. The synergism between these facilities allows comprehensive test programs to be conducted by relying on the support from other RTTC capabilities to meet the overall test requirement. RTTC is also closely interconnected with the MICOM Research, Development, and Engineering Center (MRDEC) to provide technical test expertise and facilities/capabilities for conduct of R&D programs. Likewise, the MRDEC provides technical system design expertise to support RTTC test and failure analysis efforts.

**-3.1.A.2** If your facility were to be closed, would there be an impact on other facilities to which you are connected? Yes/no. If yes, explain.

**Response:** Yes. As discussed above, the other facilities within RTTC would lose the support currently acquired from the Induced Environmental facility. The MRDEC would lose the capability to test R&D programs at a readily accessible test facility, and lose the induced environment technical expertise which is provided by RTTC during system development.

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: INDUCED ENVIRONMENTAL**

**3.1.B Facility Condition (MV II) - Measure of Merit:**

*Current and planned status of the T&E facilities for supporting assigned test missions.*

**Response:** See Attached Form

**3.1.C Environmental and Encroachment Carrying Capacity (MV II) - Measure of Merit:** *Extent of current and future potential environmental and encroachment impacts on air, land, and sea space for testing.*

**-3.1.C.1** Do you have limiting (current or future) environmental and/or encroachment characteristics associated with the installation/facility? Yes/no. If yes, explain.

**Response:** No

**-3.1.C.2** How much could workload be increased before this limit would be reached? Express your answer as a percentage of your current workload.

**Response:** Not Applicable

**-3.1.C.3** Do you currently operate under temporary permits of an environmental nature, or voluntary agreements (including treaties) of any sort that deal with the environment? If so, when do they expire? Please describe

**Response:** No

**-3.1.C.4** What is the total population within a 50 mile radius? 100 mile radius? 150 mile radius? 200 mile radius?

<b>Response:</b>	50 mile	-	850,000
	100 mile	-	4,800,000
	150 mile	-	6,500,000
	200 mile	-	13,500,000

**-3.1.C.5** Identify the commercial air/land/sea traffic routes, public use of air/land/sea space, and frequency of use for each that affects or could affect mission accomplishment in your air, land, or sea space.

**Response:** No affect on mission accomplishment.

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: INDUCED ENVIRONMENTAL**

**-3.1.C.5.A** How many test missions per year are canceled due to commercial or public use?

**Response:** Zero

**-3.1.C.6** What is the number of test missions that have been canceled due to encroachment in each of the last two years?

**Response:** Zero

**3.1.D Specialized Test Support Facilities and Targets (MV I) - Measure of Merit:** *Extent to which specialized test support facilities and targets are available.*

**-3.1.D.1** Do you have specialized facilities that are required to support you in conducting your test operations at your facility (e.g. Aerial delivery load build-up facilities; parachute drying towers/packing facilities; paratroop support facilities; specialized fuel storage and delivery systems; mission planning facilities; corrosion control, painting, washing facilities; and specialized maintenance facilities such as avionics intermediate shops)? Yes/no. If yes, please describe.

**Response:** Yes. Hazardous lightning facility, broadband electromagnetic measurement facility, safe and arm device/fuze facility, 24 foot centrifuge, remote blockhouse, four hazardous dynamic test bays, high force hydraulic and electrodynamic vibration excitors, vertical and horizontal reaction mass; vibration simulation, hazardous rail impact facility.

**-3.1.D.2** Are specialized targets required to support this facility? Yes/no. If yes, explain.

**Response:** No

**-3.1.D.2.A** Have the specialized targets been validated? Yes/no. If yes, by whom?

**Response:** Not Applicable

**3.1.E Expandability (MV III) - Measure of Merit:** *Extent to which an installation/facility is able to expand to accommodate additional workload or new missions.*

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: INDUCED ENVIRONMENTAL**

**-3.1.E.1** Other than the expandability inherent in unconstrained capacity, discussed earlier, are there any special aspects of this facility that enhance its ability to expand output within each T&E functional area? Yes/no. If yes, explain.

**Response:** No

**-3.1.E.1.A** Can you accept new T&E workload different from what you are currently performing? Yes/no. If yes, identify by T&E functional area and test type.

**Response:** Yes. The RTTC facilities are designed to test a wide variety of components, subsystems, and systems to induced environments. Therefore, some test hardware from the Air Vehicle, EC, and Armament/Weapons T&E functional areas could be subjected to induced environmental testing at RTTC.

**-3.1.E.2** Are airspace, land, and water areas--adjacent to areas under DoD control--available and/or suited for physical expansion to support new missions or increased footprints? Yes/no. If yes, please explain.

**Response:** No

**-3.1.E.3** Is the facility equipped to support secure operations? Yes/no. If yes, to what level of classification (Confidential, Secret, Top Secret, Special Access Required)?

**Response:** Yes. Confidential, Secret, and SAR test data/hardware can be supported.

**-3.1.E.4** Are there any capital improvements underway or programmed in the 95 FYDP that would change your capacity/capability? Yes/no. If yes, explain.

**Response:** No

**3.1.F Uniqueness (MV I) - Measure of Merit:** *Extent to which the facility is one-of-a-kind.*

**-3.1.F.1** Is this a one-of-a-kind facility within the DoD? Yes/no. If yes, describe.

**Response:** Yes. The capability within this facility to conduct direct strike lightning testing on tactical weapon systems is unique within the United States. Additionally, the synergy between this facility and the other Redstone Technical Test Center facilities provides an overall capability to conduct a comprehensive test program on a variety of weapon systems, subsystems, and components at one geographical location.

**CLOSE HOLD SENSITIVE**



**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: INDUCED ENVIRONMENTAL**

**-3.1.G.6** Identify known or projected airspace problems that may prevent accomplishing your mission.

**Response:** None

**-3.1.G.7** What is the maximum straight line segment in your airspace in nautical miles?

**Response:** 4.9 nautical miles vertical

**-3.1.G.8** What public airspace have you used for overflight of weapons systems in the past? What was the nature of those tests? Do you anticipate being able to use that same public airspace for similar tests in the future? Yes/no.

**Response:** Not Applicable

**3.1.H Geographic/Climatological Features (MV II) - Measure of Merit:** *Extent to which types of climatic/geographic conditions represent world-wide operational conditions.*

**-3.1.H.1** Describe the topography and ground cover/vegetation within your test airspace (include nap-of-the-earth capability). Identify all of the following that apply: mountains, forest/jungle, cultivated lowland, swamp/riverine, desert, and sea. State the area of each in square miles.

**Response:** Cultivated lowland, 0.3 square miles

**-3.1.H.2** Are there features of the local geology or soil conditions that enhance or inhibit any types of tests?

**Response:** No

**-3.1.H.3** Did you have to go to other geographical locations to satisfy test requirements? Yes/no and explain. If yes, provide as a percent of overall workload per year for the past 8 years.

**Response:** No

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: INDUCED ENVIRONMENTAL**

**-3.1.H.4** What is the number of days per year the average temperature is below 32 degrees F? Between 32 and 95 degrees? Above 95 degrees?

**Response:** Below 32 degrees F: 12 days  
32 to 95 degrees F: 353 days  
Above 95 degrees F: 0 days

**-3.1.H.5** What is the number of days per year the average relative humidity is below 30 percent? Between 30 and 80 percent? Above 80 percent?

**Response:** Below 30% RH: 0 days  
30 to 80% RH: 317 days  
Above 80% RH: 48 days

**-3.1.H.6** What is the number of test missions per year (1985 - 1993) canceled due to weather?

**Response:** None

**-3.1.H.7** What is the number of test days per year (1985 - 1993) canceled due to weather?

**Response:** Redstone Arsenal is closed an average of one day/year due to snow/ice.

**-3.1.H.8** What is the number of days per year the visibility is less than 1 mile? Between 1 and 3 miles? Greater than 3 miles?

**Response:** Not Applicable

**-3.1.H.9** What is the average number of flying days available per year for flight test? Provide historical average from the past 8 years.

**Response:** Not Applicable

**-3.1.H.10** What percentage of the time are your test operations restricted due to weather?

**Response:** Data is not available. Lightning testing is the only induced environment which is affected by weather.

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: INDUCED ENVIRONMENTAL**

**3.2 AIR VEHICLES**

This functional area includes facilities involved in the testing of all air vehicles/ subsystems/components whether fixed wing or rotary wing and test of major subsystems (e.g., avionics, engines, and sensors). This includes flight testing and the testing involving pre- and post-flight preparation and processing of the air vehicle. Unmanned air vehicles and cruise missiles are included.

**3.2.A Supersonic Airspace (MV II) - Measure of Merit: *Extent of range size of support weapon system requirements.***

**-3.2.A.1 Do supersonic corridors or areas exist? Yes/no.**

**Response: Not Applicable**

**-3.2.A.2 Where are they located relative to your airfield?**

**Response: Not Applicable**

**-3.2.A.3 At what altitude (upper and lower altitude)?**

**Response: Not Applicable**

**-3.2.A.4 Over land or water? What size and shape (length and width)?**

**Response: Not Applicable**

**-3.2.A.5 Are there restrictions you must observe to use this space? Yes/no. If yes, explain.**

**Response: Not Applicable**

**-3.2.A.6 What is the maximum number of simultaneous users?**

**Response: Not Applicable**

**3.2.B Airfield and Facility Characteristics (MV II) - Measure of Merit: *Extent of air vehicle infrastructure to support T&E operations.***

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: INDUCED ENVIRONMENTAL**

**-3.2.B.1** Provide a brief description of your airfield and support facilities, to include the following: number and azimuth of runways, elevation, runway length (excluding overrun), overrun length, terminal and/or landing aids, arresting cable (Yes/no, type), ramp area (in square feet), construction material (runway and ramps), load capability, and hanger space.

**Response:** Not Applicable

**-3.2.B.2** How close and how many emergency runways or airfields are in your area of operation?

**Response:** Not Applicable

**-3.2.B.3** Where is your airfield situated relative to working areas (airspace) for supporting test operations?

**Response:** Not Applicable

**-3.2.B.4** What makes your airfield unique or at least suited for supporting test operations?

**Response:** Not Applicable

**-3.2.B.5** Is there a size, weight, maintenance or mission limitation that would affect test operations? If so, describe the limitation(s).

**Response:** Not Applicable

**-3.2.B.6** Including hangers and ramp space, how many fighter size aircraft could you support? Large multi-engine aircraft? Rotary wing? UAV? Cruise missiles?

**Response:** Not Applicable

**3.2.C Test Operations (MV II) - Measure of Merit:** *Extent of T&E operations that the airspace can accommodate.*

**-3.2.C.1** What types of air vehicle testing (fixed wing, rotary wing, unmanned vehicles, and cruise missiles) can be supported? (e.g. performance, handling qualities, fatigue life, static, wheels, and brakes, physical integration with external stores or avionics)

**Response:** Not Applicable

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: INDUCED ENVIRONMENTAL**

**-3.2.C.2** Do ground support facilities exist for pre-flight checkout or rehearsal of test missions?

**Response:** Not Applicable

**-3.2.C.3** What kinds, numbers of aircraft and mix can be supported (manned and unmanned)?

**Response:** Not Applicable

**-3.2.C.4** Does UAV and or rotary wing operations pose any limitation on other types of missions? If yes, explain.

**Response:** Not Applicable

**-3.2.C.5** What sorts of missions (e.g. air-to-air, air-to-ground, and refueling) can be flown within local airspace?

**Response:** Not Applicable

**-3.2.C.6** What is the maximum number of simultaneous missions you can support that require telemetry?

**Response:** Not Applicable

**-3.2.C.7** What is the largest number of simultaneous test missions you have supported in your airspace?

**Response:** Not Applicable

**-3.2.C.8** Identify the number, types, and owners of aircraft at your installation.

**Response:** Not Applicable

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: INDUCED ENVIRONMENTAL**

**3.3 ELECTRONIC COMBAT**

This functional area includes facilities involved in the testing of stand-alone electronic combat systems and electronic combat subsystems that are normally integrated into other weapon systems. It includes the testing of systems or subsystems that have as their primary mission threat warning, testing of systems that provide countermeasures in the RF (radio frequency) spectrum against radars and other RF sensors, systems that provide countermeasures that are used against sensors in the electro-optical or infrared spectrum as well as testing of electronic and C<sup>3</sup> countermeasures.

**3.3.A Threat Environment (MV I) - Measure of Merit:** *Extent to which the capability satisfies weapon system requirements.*

**-3.3.A.1** What is the number of threats simulated?

**Response:** Not Applicable

**-3.3.A.2** How many simultaneous threats can be simulated? What type (e.g. AI, AAA, SAM)? What is maximum signal density? Average density? What power level? What band? Radiated or injected?

**Response:** Not Applicable

**-3.3.A.3** Are the threat software models and simulators (software/hardware) validated? Yes/no. If yes, by whom?

**Response:** Not Applicable

**-3.3.A.4** Do you conduct open loop testing? Reactive? Closed loop? Yes/no for each.

**Response:** Not Applicable

**-3.3.A.5** What is the threat representation (fidelity) and density?

**Response:** Not Applicable

**-3.3.A.6** Are you capable of simulating land threats? Sea threats? Yes/no. If yes, describe.

**Response:** Not Applicable

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: INDUCED ENVIRONMENTAL**

**-3.3.A.7** What geographic dispersion can be simulated?

**Response:** Not Applicable

**-3.3.A.7.A** Threat lay down?

**Response:** Not Applicable

**-3.3.A.7.B** Representative distance?

**Response:** Not Applicable

**-3.3.A.8** Are the threats moveable (i.e. dynamic) within a test scenario? Relocatable to new scenarios? Yes/no.

**Response:** Not Applicable

**-3.3.A.9** Is the facility interlinked with off-size threats? Yes/no. If yes, how are you linked?

**Response:** Not Applicable

**-3.3.A.10** Is there a limit on simultaneous users? Yes/no. If no, explain.

**Response:** Not Applicable

**3.3.B Test Article Support (MV II) - Measure of Merit:** *Extent to which test support satisfies weapon system test requirements.*

**-3.3.B.1** Is there a size, weight, or other limitation on test operations the facility can support? Yes/no. If so, identify the limits and measures to remove them.

**Response:** Not Applicable

**-3.3.B.2** What is the number of simultaneous countermeasures that can be evaluated?

**Response:** Not Applicable

**-3.3.B.3** What range of spectra can be tested and evaluated?

**Response:** Not Applicable

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: INDUCED ENVIRONMENTAL**

**-3.3.B.4** What are the available spectra?

**Response:** Not Applicable

**-3.3.B.5** Do you have a scene generation capability? Yes/no. If yes, describe.

**Response:** Not Applicable

**3.4 ARMAMENTS/WEAPONS**

This functional area includes facilities involved in the testing of the weapons portion of a weapon system. In those cases where the weapon system is composed almost exclusively of the weapon, it may include system-level and platform integration testing. In other cases, it addresses just the weapon subsystem (e.g., guidance and control, propulsion, warheads, and airframe), while the testing of the weapon system's vehicle is in another functional area.

**3.4.A Directed Energy (MV II) - Measure of Merit:** *Extent to which the facility satisfies directed energy weapon system test requirements.*

This includes testing of all types of directed energy weapons.

**-3.4.A.1** Do you currently test directed energy weapon systems? Yes/no. If yes, explain. Describe the power source(s) you have available. What is your maximum downrange distance?

**Response:** No

**3.4.B Rocket/Missile/Bomb System (MV II) - Measure of Merit:** *Extent capability satisfies weapon system test requirements.*

This includes the testing of all types of rocket, missile, and bomb systems at the system/subsystem/component level, both stand alone and integrated into the launch platform. This includes testing of air-to-air, air-to-surface, and surface-to-air missiles.

**-3.4.B.1 Ground Space**

**-3.4.B.1.A** What is the area in square miles of the land and water space which you can use to conduct tests of live rocket, missile, or bomb systems?

**Response:** Not Applicable, this appears to apply to flight testing.

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: INDUCED ENVIRONMENTAL**

**-3.4.B.1.B** How many separate and distinct land and water test areas are available to conduct tests of live weapons? List them and the size of each in acres.

**Response:** Not Applicable, this appears to apply to flight testing.

**-3.4.B.1.C** What are the maximum ranges (nautical miles) you can test, by type weapon?

**Response:** Not Applicable

**-3.4.B.2 Test Operations**

**-3.4.B.2.A** For each of your land and water ranges, how many test missions were scheduled in FY92 and FY93 that were required to use safety footprints comparable to those required for the following types of weapons:

- Unguided 2000 pound-class ballistic weapon

- live?

- inert?

- Guided weapon (e.g. GBU-24 class)

- live?

- inert?

- Stand-off weapon (e.g. AGM-130 class)

- live?

- inert?

- Short-range missile (e.g., AIM-9)

- below 5000 feet MSL

- between 5000 and 20,000 feet MSL

- above 20,000 feet MSL

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: INDUCED ENVIRONMENTAL**

- Long-range missile (e.g., AIM-120)
  - below 5000 feet MSL
  - between 5000 and 20,000 feet MSL
  - above 20,000 feet MSL

**Response:** Not Applicable, this appears to apply to flight testing.

**-3.4.B.2.B** Were flight termination systems required? Yes/no.

**Response:** Not Applicable

**-3.4.B.2.C** If no missions were scheduled in a category, give the reason(s).

**Response:** Not Applicable, this appears to apply to flight testing.

**-3.4.B.2.D** Were any scheduled missions canceled before the missions, or terminated/aborted during the mission because of encroachments into the safety footprint? Yes/no. If yes, how many per year.

**Response:** Not Applicable, this appears to apply to flight testing.

**CLOSE HOLD SENSITIVE**

CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)

GENERAL INFORMATION

FACILITY/CAPABILITY TITLE: Induced Environmental ORIGIN DATE: 5/25/94

SERVICE: A ORGANIZATION/ACTIVITY: RTTC LOCATION: RSA

T&E FUNCTIONAL AREA: Other UIC = WIHTAA

T&E TEST FACILITY CATEGORY: Measurement Facility (MF)

	T&E	S&T	DE	IE	T&D	OTHER
PERCENTAGE USE:	44.7	1.8	44.2	7.4	--	1.9

BREAKOUT BY T&E FUNCTIONAL AREA (%):

AIR VEHICLE						
ARMAMENT/WEAPONS	23.6		1.2	4.4	--	--
EC						
OTHER	21.1	1.8	43.0	3.0	--	1.9
TOTAL						

TOTAL IN BREAKOUT MUST EQUAL "PERCENTAGE USE" ON FIRST LINE

CLOSE HOLD/SENSITIVE

CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)

TECHNICAL INFORMATION

FACILITY/CAPABILITY TITLE: Induced Environmental

<p><b>FACILITY DESCRIPTION, INCLUDING MISSION STATEMENT:</b> Mission: To plan, conduct, evaluate, and report induced environmental tests consisting of mechanical shock and vibration, acceleration, S&amp;A/fuze functional testing and electromagnetic including EMI, EMC, EMR, EMP, ESD, and lightning. Tests of live missiles and components are accomplished. <b>DESCRIPTION:</b> Test facilities include a test area which contains four large test bays, a 24 foot diameter centrifuge; a short controlled input road course; and a rail impact test facility. All of these can accommodate hazardous (explosive) test items. Other facilities include electromagnetic radiation facilities for frequencies ranging from 100 KHz to 18 GHz; an EMP facility; various size shielded rooms; a large anechoic chamber; and lightning effects simulators, one capable of direct strike tests on tactical systems containing Class 1, 1 explosives.</p>
<p><b>INTERCONNECTIONS:</b> FACILITY: The induced environmental facility is interconnected with other RTTC facilities for test support such as temperature conditioning, telemetry, and hardware functional testing. The induced environmental facility has unique capabilities to (1) acquire dynamic field data, develop test criteria, and simulate the field environment in the laboratory, (2) develop dynamic and electromagnetic models, and to conduct model verification testing, (3) conduct direct strike lightning testing on complexity tactical (explosive) weapon systems, (4) perform functional evaluations of hazardous (explosive) safe &amp; arm devices/fuzes while being subjected to dynamic and/or temperature testing, (5) conduct dynamic testing on large payloads and explosive test articles, and (6) conduct a comprehensive dynamic and electromagnetic test program.</p>
<p><b>TYPE OF TEST SUPPORT:</b> Electromagnetic (EM) radiation hazards, EM radiation operational, EM interference, EM compatibility, EM pulse, electrostatic discharge, lightning, antenna measurements, EM plume attenuation and EM pulse coupling, electrostatic measurements, vibration, shock, fuse functioning, acceleration, drop, loose cargo, dynamic field data acquisition, modeling and model verification.</p>
<p><b>SUMMARY OF TECHNICAL CAPABILITY:</b> Instrumentation/assets: Shielded rooms, high performance PCs, electromagnetic test facilities, anechoic chamber, E and dynamic test instrumentation, fixed and mobile telemetry data acquisition, RT antennas, RT signal generators, high power amplifiers, target simulators, test item positioners, E probes/sensors, EMP generator, ESI generators, lightning generators, spectrum analyzers, automated high speed data acquisition, computer aided test equipment, centrifuges, shakers, shock machines, signal conditioning, signal analysis, data reduction, drop and pendulum impact testing, rail impact testing, dynamic data acquisition road course.</p>
<p><b>KEYWORDS:</b> Modeling, electromagnetic, electromagnetic environmental effects (E), analysis, anechoic chamber, radio frequency (RF), electromagnetic radiation (EMR), electromagnetic interference (EMI), electromagnetic compatibility (EMC), electrostatic discharge (ESD), electromagnetic pulse (EMP), lightning, Radar, dynamic, safety, structural, performance, road, telemetry, acceleration, vibration, shock, environment, functional drop, failure centrifuge, fuze</p>

CLOSE HOLD/SENSITIVE

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)  
FACILITY/CAPABILITY INDUCED ENVIRONMENTAL**

**ELECTROMAGNETIC ENVIRONMENTAL EFFECTS TECHNICAL  
INFORMATION**

(Attachment to Technical Information Form)

**ENGINEERING/TECHNICAL SUPPORT:** The Electromagnetic Environmental Effects (E3) test personnel provide support to customers including detailed E3 test planning and design, such as assistance in preparing TEMP's and RFP's, preparation of test plans and procedures, and development of instrumentation packages and EMRO target simulators; E3 test conduct; E3 test data acquisition, reduction, interpretation, and analysis; and assistance in determining E3 "fixes" if necessary. Additionally, the E3 Test Branch provides the local Program Executive Officers and Program Managers assistance in defining the E3 criteria for their systems through the Army E3 Requirements Board process, and provides assistance in developing nuclear survivability specifications and coordinating nuclear radiation effects testing at other government facilities.

**ELECTROMAGNETIC INTERFERENCE (EMI) FACILITY:** The EMI test facility is capable of measuring emissions and susceptibilities during subsystem and system tests as specified in MIL-STD-461 and MIL-STD-462. The facility utilizes automated data acquisition to provide near real-time results.

**ELECTROSTATIC DISCHARGE (ESD) FACILITY:** The ESD facility is capable of generating personnel borne (+/- 25 kV) and helicopter borne (+/- 300 kV) discharges on inert and explosive test articles. ESD instrumentation is available to acquire test environment and test article data. Instrumentation is also available to measure the voltage and electric fields on the surface of materiel or within the volume of a dielectric, to measure electrostatic charge distribution and migration rates.

**ELECTROMAGNETIC RADIATION HAZARD (EMRH) AND  
ELECTROMAGNETIC RADIATION OPERATIONAL (EMRO) FACILITY:** The EMR facility is capable of testing weapon systems and launcher platforms over the frequency range of 100kHz to 18GHz. Modulations include CW, AM, FM, and PM. Instrumentation packages are developed in-house for assessing the system performance. The facility utilizes automated data acquisition to provide near real-time results. Test item positioning equipment, visual security covers, and an anechoic chamber are available.

**LIGHTNING TEST FACILITIES:** The lightning facilities are capable of conducting near strike or direct strike testing per MIL-STD-1757/1795. Direct strike testing can be conducted on Class 1.1 explosive articles. Instrumentation is available to acquire test environment and test article data.

**ELECTROMAGNETIC PULSE (EMP) FACILITY:** The EMP test facility is capable of generating a low level (sub-threat) high altitude waveform as defined in DOD-STD-2169A and Quadripartite Standardization Agreement (QSTAG) 244, Edition 2. The facility is a radiated freefield type simulator and consists of a 100 kV pulser, 10 meter diameter horizontally polarized dipole antenna 305 meters long. Instrumentation is available to acquire test environment and test article data.

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY/CAPABILITY: INDUCED ENVIRONMENTAL**

**DYNAMIC TEST BRANCH TECHNICAL INFORMATION**  
(Attachment to Technical Information Form)

**ENGINEERING/TECHNICAL SUPPORT:** The Dynamic Test personnel provide extensive support to the local Program Executive Officers, Program Managers, or other customers including defining vibration and shock requirements for new systems; vibration and shock test design, test planning support, recommendations for MIL-STD dynamic tests; development of unique vibration and shock requirements from field data collected either by this Branch, other agencies, or the contractor; development and evaluation of requirements documents such as TEMP's, MIS's, and ECP's; advise and assist in contractor conducted efforts in both laboratory and field tests. Support is also provided in the area of analysis and modeling to predict or determine dynamic characteristics of structures, subsystems, and systems. The Dynamic Test Branch is active in the MIL-STD-810 Working Group which governs most dynamic testing, Shock & Vibration Symposium, and other avenues to maintain state-of-the-art-knowledge.

**HAZARDOUS DYNAMIC TEST FACILITIES:** Four test bays are equipped with large electro-dynamic and electro-hydraulic vibration exciters, loose cargo vibration machines, accelerated fall shock machines, and drop and pendulum impact test equipment. Facilities are also provided for rail impact testing and acceleration testing. All these test facilities are located to accommodate testing of live explosives and all tests are performed by remote control.

**PRODUCT ASSURANCE AND PRODUCTION TEST FACILITY:** Electro-dynamic and mechanical vibration exciters and an accelerated fall shock machine are provided to support non-hazardous testing of components for test programs including First Article and Lot Acceptance of repair parts samples, Production Reliability Verification, and Periodic Environmental Conformance tests.

**CONTROLLED INPUT ROAD COURSE/DATA ANALYSIS FACILITY:** A road course provides various surfaces such as Belgian block, washboards, paved, gravel, etc. for evaluation of vibration and shock environments associated with ground vehicles. Vehicles are instrumented and data collected via telemetry; extensive computer analysis is performed to develop compressed time laboratory vibration schedules.

**WARHEAD FUZE/SAFE & ARM DEVICE TEST FACILITY:** A precision centrifuge, an array of computer controlled electronic test equipment, an electro-dynamic vibration exciter, a shock machine, a jumble machine, small temperature conditioning chambers, and the necessary safety accommodations including conductive floors and work surfaces are provided to perform complete functional test and evaluation of fuzes and S&A devices with live explosives.

**CLOSE HOLD SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**ADDITIONAL INFORMATION**

FACILITY/CAPABILITY TITLE: Induced Environmental

**PERSONNEL**

	FY93	FY94	FY95	FY96	FY97	FY98	FY99
OFFICER	0	0	0	0	0	0	0
ENLISTED	0	0	0	0	0	0	0
CIVILIAN	29	29	27	26	26	25	24
CONTRACTOR	47	44	36	33	31	30	29
TOTAL	76	73	63	59	57	55	53

TOTAL SQUARE FOOTAGE: 92,613

TEST AREA SQUARE FOOTAGE: 84,011 incl storage

TONNAGE OF EQUIPMENT: 955 tons estimate

ANNUAL MAINTENANCE: 633,000 estimate

OFFICE SPACE SQUARE FOOTAGE: 8,602

VOLUME OF EQUIPMENT: 167,000 cu. ft. estimated

ESTIMATED MOVING COST: \$4,032,000 estimated plus  
estimated \$11,000,000 to  
construct specialized facilities

**CAPITAL EQUIPMENT INVESTMENT**

FY93	FY94	FY95	FY96	FY97	FY98	FY99
\$3,751,000	\$528,000	\$725,000	\$180,000	\$2,065,000	DNA	DNA

**CLOSE HOLD/SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY CONDITION**

**FACILITY/CAPABILITY TITLE:** Induced Environmental

**AGE:** 35 years (approx.)

**REPLACEMENT VALUE:** \$60.6 M (including equipment)

**MAINTENANCE AND REPAIR BACKLOG:** Not Applicable

**DATE OF LAST UPGRADE:** FY89-FY94

**NATURE OF LAST UPGRADE:** Construction of a large test chamber and procurement of equipment to generate and control high-peak, pulsed electromagnetic radiation (EMR) environments. This upgrade provides an enhanced capability to assess weapon system safety and operational susceptibilities in pulsed EMR environments.

**MAJOR UPGRADES PROGRAMMED**

**1. UPGRADE TITLE:** Fiber Optic Instrumentation Upgrade

**TOTAL PROGRAMMED AMOUNT:** \$300,000

**SUMMARY DESCRIPTION:** Upgrade existing data, control, and communication instrumentation capability within the dynamic test area through the use of state-of-the-art fiber optic transmission equipment/lines.

**2. UPGRADE TITLE:** Electromagnetic Interference Testing

**TOTAL PROGRAMMED AMOUNT:** \$420,000

**SUMMARY DESCRIPTION:** Upgrade existing electromagnetic interference equipment to sustain a state-of-the-art test capability which meets the latest requirements of MIL-STD-461.

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114R*

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**FACILITY CONDITION**

FACILITY/CAPABILITY TITLE: Induced Environmental

AGE: 35 years (approx.) REPLACEMENT VALUE: \$41.8 Million including equipment

MAINTENANCE AND REPAIR BACKLOG: Not Applicable

DATE OF LAST UPGRADE: FY89-FY94

NATURE OF LAST UPGRADE:

Construction of a large test chamber and procurement of equipment to generate and control high-peak, pulsed electromagnetic radiation (EMR) environments. This upgrade provides an enhanced capability to assess weapon system safety and operational susceptibilities in pulsed EMR environments.

MAJOR UPGRADES PROGRAMMED

1. UPGRADE TITLE:

Fiber Optic Instrumentation Upgrade

TOTAL PROGRAMMED AMOUNT:

\$300,000

SUMMARY DESCRIPTION:

Upgrade existing data, control, and communication instrumentation capability within the dynamic test area through the use of state-of-the-art fiber optic transmission equipment/lines.

2. UPGRADE TITLE:

Electromagnetic Interference Testing

TOTAL PROGRAMMED AMOUNT:

\$420,000

SUMMARY DESCRIPTION:

Upgrade existing electromagnetic interference equipment to sustain a state-of-the-art test capability which meets the latest requirements of MIL-STD-461.

**CLOSE HOLD/SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

3. UPGRADE TITLE:

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Hydraulic Pumping System Replacement

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TOTAL PROGRAMMED AMOUNT:

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\$325K

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SUMMARY DESCRIPTION:

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Procure and install hydraulic pumping station, plumbing, and control hardware required to replace/upgrade the equipment that is currently used as the power supply for electro-hydraulic vibration exciters located within the Dynamic Test Branch.

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114a

**CLOSE HOLD/SENSITIVE**

**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

*(000) per person*

**HISTORICAL WORKLOAD (K MHRS)**

FACILITY/CAPABILITY TITLE: Induced Environmental

T&E FUNCTIONAL AREA		FISCAL YEAR							
		86	87	88	89	90	91	92	93
AIR VEHICLES	DIRECT LABOR	NA	NA	NA	NA	NA	NA	NA	NA
	TEST HOURS								
	MISSIONS								
EC	DIRECT LABOR	NA	NA	NA	NA	NA	NA	NA	NA
	TEST HOURS								
	MISSIONS								
ARMAMENT/WEAPONS	DIRECT LABOR	DNA	159.2	161.2	186.9	DNA	20.5	47.6	49.8
	TEST HOURS						4.1	9.52	9.96
	MISSIONS'								
OTHER T&E	DIRECT LABOR	DNA	650.4	884.6	889.3	DNA	85.2	108.1	113.5
	TEST HOURS								
	MISSIONS								
OTHER	DIRECT LABOR	NA	NA	NA	NA	NA	NA	NA	NA
	TEST HOURS								
	MISSIONS								

NA - NOT APPLICABLE  
 DNA - DATA NOT AVAILABLE  
 DATA FOR 1987, 1988 & 1989 IS AT THE RTTC LEVEL; NO BREAKOUT TO FACILITY LEVEL AVAILABLE

**CLOSE HOLD/SENSITIVE**

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**CLOSE HOLD/SENSITIVE  
(RTTC/TECOM)**

**DETERMINATION OF UNCONSTRAINED CAPACITY**

FACILITY/CAPABILITY TITLE: Induced Environmental

ANNUAL HOURS OF DOWNTIME	1.	1896*
AVERAGE DOWNTIME PER DAY (LINE 1/ 365)	2.	5.2
AVERAGE HOURS AVAILABLE PER DAY (24-LINE 2)	3.	18.8

TEST TYPES 4	TESTS AT ONE TIME 5	WORKLOAD PER TEST PER FACILITY HOUR 6	WORKLOAD PER FACILITY HOUR 7	UNCONSTRAINED CAPACITY PER DAY (LINE 3 x TOTAL Σ) 8
Electromagnetic	3	6	18	1128
Dynamic	6	5	30	
Lightning	1	4	4	
S&A	1	3	3	
"TYPICAL"	1	5	5	
	12	TOTAL Σ	60	ANNUAL UNCONSTRAINED CAPACITY 9 411,720

\* Estimated - No data available, varies with test

**CLOSE HOLD/SENSITIVE**

PROGRAM	PE/SSN	D/P	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99
<b>ARMAMENTS/WEAPONS (Directed Energy &amp; Rocket/Missile/Bomb Systems -</b>										
<b>Air to Air, Air to Surface, Surface to Air)</b>										
<u>STINGER RMP PIP</u>	23801 303	D	4020	10390	19519			4985		
<u>TRACTOR PULL</u>	63813 B37	D	8602							
<u>AVENGER PIP</u>	23801 038	D	2461	11195	8385		4967		2219	2190
<u>PATRIOT Prod Imprv</u>	23801 036	D	37548	36249	37326	24610	12859	12652	9721	8728
<u>LOS AD SYS FWD HVY</u>	63757 463	D	51796							
<u>ASAT</u>	63392 E16	D	34103	18862						
<u>TRACTOR RUT</u>	23806 C19	D	1658	1663	8314	2686	1787	903		
<u>TRACTOR RIG</u>	23806 B65	D	10329							
<u>HAWK PIP</u>	23801 690	D	14360	7540						
<u>HELLFIRE Seeker</u>	64816 C13	D			107139	35502				
<u>Air Self Defense</u>	64202 132	O	4354							
<u>HELLFIRE Prod Imprv</u>	23802 045	D	21281	4519	5138					
<u>TOW PIP*</u>	23802 336	D	26195	1950	37541	26477	31059	1364	1267	1256
<u>Alt TOW 2 Warhead*</u>	23802 051	D	4875							
<u>Space Application Tech</u>	63006 592	O				247	250	251	252	253
<u>MOB/WPNS Effect Technology</u>	62784 T40	O	13791	10718	11452	12313	10442	11250	12098	13381
<u>Research in Msls/HE Lasers</u>	61102 H49	O	4716	5003	4568	3509	2332	1593	826	
<u>Directed Energy Technology</u>	62307 139	D	476	53	4509					
<u>Missile Technology</u>	62303 214	D	31315	35873	23255	23301	21848	22410	24454	25987
<u>Hi-Power Microwave Technology</u>	62120 140	D	7778	6980	6153	5870	2644	2715	2855	3064
<u>Electric Gun Sys Demo</u>	63004 L94	D	47052	39884	10865	8887	9994	11033	12098	12133
<u>Missile System Demo</u>	63238 160	D		19861						
<u>Missile Simulation</u>	63313 206	D	3154	3274	3824	4032	3154	4046	4492	4556
<u>Space Tech/Res Office</u>	63006 492	D	5575	2931						

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PROGRAM	PE/SSN	D/P	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99
<b>ARMAMENTS/WEAPONS (Directed Energy &amp; Rocket/Missile/Bomb Systems -</b>										
<b>Air to Air, Air to Surface, Surface to Air)</b>										
<u>PATRIOT Init Spares</u>	<u>CA0252</u>	<u>P</u>		<u>4162</u>	<u>14818</u>	<u>10298</u>				
<u>PATRIOT Mods</u>	<u>C50700</u>	<u>P</u>	<u>35150</u>	<u>9987</u>	<u>18528</u>	<u>26160</u>	<u>19419</u>	<u>19259</u>	<u>19768</u>	<u>20582</u>
<u>TRACTOR RIG</u>	<u>CE8000</u>	<u>P</u>	<u>8184</u>							
<u>AVENGER</u>	<u>C16000</u>	<u>P</u>	<u>174782</u>	<u>144932</u>	<u>133270</u>	<u>4824</u>	<u>4887</u>			
<u>AVENGER Init Spares</u>	<u>CA0260</u>	<u>P</u>		<u>11924</u>	<u>14625</u>	<u>4565</u>				
<u>AVENGER Mods</u>	<u>CE8710</u>	<u>P</u>	<u>6</u>	<u>4117</u>	<u>9318</u>	<u>10877</u>				
<u>AVENGER MOOS Init Spares</u>	<u>CA0286</u>	<u>P</u>				<u>48</u>	<u>1021</u>			
<u>STINGER</u>	<u>C18600</u>	<u>P</u>	<u>11276</u>	<u>31109</u>	<u>32643</u>					
<u>STINGER Mods</u>	<u>C20000</u>	<u>P</u>				<u>10140</u>	<u>10202</u>	<u>10280</u>	<u>10353</u>	
<u>PATRIOT Mods Init Spares</u>	<u>CA0267</u>	<u>P</u>		<u>797</u>	<u>6832</u>	<u>6370</u>	<u>3501</u>	<u>8763</u>	<u>6525</u>	<u>19226</u>
<u>Other Missile Support</u>	<u>CA0275</u>	<u>P</u>	<u>590</u>	<u>1353</u>						
<u>PATRIOT Missile</u>	<u>C49200</u>	<u>P</u>	<u>129200</u>	<u>12213</u>	<u>16069</u>					
<u>HAWK Mods</u>	<u>C35200</u>	<u>P</u>	<u>8843</u>	<u>1498</u>						
<u>HAWK Mods Initial Spares</u>	<u>CA0255</u>	<u>P</u>		<u>3311</u>						
<u>CHAPARRAL</u>	<u>C22200</u>	<u>P</u>	<u>6761</u>	<u>6339</u>						
<u>LONGBOW HELLFIRE</u>	<u>C70300</u>	<u>P</u>				<u>41995</u>	<u>198389</u>	<u>263927</u>	<u>281756</u>	<u>303772</u>
<u>Init Spares W/HF Launchers</u>	<u>AA0968</u>	<u>P</u>		<u>299</u>	<u>193</u>	<u>307</u>				
<u>Initial Spares ATAS</u>	<u>AA0977</u>	<u>P</u>		<u>995</u>	<u>579</u>	<u>600</u>				
<u>Laser HELLFIRE Missile</u>	<u>C70100</u>	<u>P</u>	<u>11497</u>	<u>85350</u>	<u>64835</u>	<u>79646</u>				
<u>Rocket HYDRA 70 HE/PD</u>	<u>E37335</u>	<u>P</u>			<u>1159</u>		<u>8689</u>	<u>2447</u>		<u>6195</u>
<u>Rocket HYDRA 70 Slg Prac</u>	<u>E37337</u>	<u>P</u>	<u>19226</u>	<u>9000</u>	<u>41772</u>	<u>76262</u>	<u>50219</u>	<u>42102</u>	<u>45355</u>	<u>46994</u>
<u>Flare Tracking IR MK33</u>	<u>E82800</u>	<u>P</u>			<u>385</u>					
<u>Rocket Motor HYDRA 70 MK66</u>	<u>E37333</u>	<u>P</u>	<u>484</u>							
<u>Rocket HYDRA 70 MPSM PRAC</u>	<u>E37334</u>	<u>P</u>	<u>21190</u>	<u>10030</u>	<u>12867</u>	<u>31588</u>	<u>22964</u>	<u>19541</u>	<u>20783</u>	<u>21303</u>
<u>TOW Mod Init Spares*</u>	<u>CA0253</u>	<u>P</u>						<u>1337</u>	<u>6067</u>	<u>7232</u>
<u>TOW 2 Missile*</u>	<u>C59403</u>	<u>P</u>	<u>199502</u>	<u>133619</u>	<u>21608</u>	<u>25360</u>	<u>9411</u>	<u>9595</u>		
<u>TOW Mods*</u>	<u>C61700</u>	<u>P</u>	<u>8234</u>	<u>14849</u>	<u>7250</u>		<u>26638</u>	<u>55499</u>	<u>72558</u>	<u>80465</u>

\* TOW Missile only to extent for Air to Ground role





FOR OFFICIAL USE ONLY

DEPARTMENT OF THE ARMY  
HEADQUARTERS, U.S. ARMY TEST AND EVALUATION COMMAND  
ABERDEEN PROVING GROUND, MARYLAND 21005-5055



REPLY TO  
ATTENTION OF

11 AUG 1994

AMSTE-TA-0 (5-10c)

MEMORANDUM FOR Commander, U.S. Army Materiel Command, ATTN: AMCRD-JL, 5001  
Eisenhower Avenue, Alexandria, VA 22333-0001

SUBJECT: Revisions to Aviation Technical Test Center BRAC 95 Data Call #7 -  
Test and Evaluation

1. References:

- a. Memorandum, AMSTE-TA-0, 10 Jun 94, SAB.
- b. Memorandum, STEAT-TS-R, 25 Jul 94, SAB.

2. This memorandum forwards revisions to the Aviation Technical Test Center (ATTC) response to the BRAC 95 Data Call #7 - Test and Evaluation. Changes were made based upon recommendations by this HQ and the Army Audit Agency, Huntsville office.

3. The revision consists of:

- a. 2.1.B.2. Added functional areas.
- b. 2.3.A. Added title of applicable war plan.
- c. 3.1.E.1. Added description of special aspects of facility that could enhance ATTC's ability to expand output.
- d. 3.1.E.2. Added explanation on why airspace, land, and water areas--adjacent to areas under DOD control--are available and suited for physical expansion to support new missions or increased footprints.
- e. 3.1.E.4. Changed answer to yes to be consistent with information provided on Facility Condition Form.
- f. 3.1.G.1. Changed square miles of air, land, and sea space available to support test operations. Square miles were understated in original response to data call.
- g. 3.1.G.7. Changed maximum straight line segment of airspace in nautical miles. Nautical miles were understated in original response to data call.
- h. Facility Condition Form. Changed replacement value. It was noted that the initial response to data call omitted several key elements associated with facility replacement costs.

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118a

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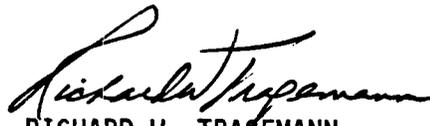
AMSTE-TA-0

SUBJECT: Revisions to Aviation Technical Test Center BRAC 95 Data Call #7 -  
Test and Evaluation

4. TECOM certification of ATTC's response is provided at enclosure 1.  
Hardcopies (5 copies) and computer disks (3 copies, word perfect) for the  
revised ATTC submission are forwarded as enclosure 2.

5. My staff points of contact at this HQ are Mr. Brian M. Simmons or Mr.  
James F. Fisher, AMSTE-TA-0, amstetao@apg-9.apg.army.mil, DSN 298-1417, COMM  
(410) 278-1417.

2 Encls

  
RICHARD W. TRAEEMANN  
Major General, USA  
Commanding

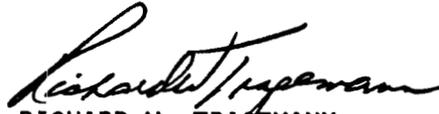
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Revised Aviation Technical Test Center  
BRAC 95 DATA CALL #7 - Test and Evaluation  
CERTIFICATION

The information contained in this memorandum is accurate and complete to the best of my knowledge.

  
RICHARD W. TRAGEMANN  
Major General, USA  
Commanding

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118c  
Encl 1



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**DEPARTMENT OF THE ARMY**  
**U.S. ARMY AVIATION TECHNICAL TEST CENTER**  
**FORT RUCKER, ALABAMA 36362-5276**



Cairns Army Airfield  
Fort Rucker, AL 36362-5276

75 North Flightline Road  
Edwards Air Force Base, CA 93524-6100

STEAT-TS-R (5)

25 July 1994

MEMORANDUM FOR Commander, U.S. Army Test and Evaluation Command,  
ATTN: AMSTE-TA-O (Mr. Simmons), Aberdeen  
Proving Ground, MD 21005-5055

SUBJECT: BRAC Data Call #7 - Test and Evaluation

1. Reference memorandum, ATTC, STEAT-TS-R, 3 Jun 94, SAB.
2. Enclosed is a revised copy of subject Data Call for ATTC, Fort Rucker. The following minor changes were made based upon recommendations by HQ TECOM and the Army Audit Agency, Huntsville, AL:
  - a. 2.1.B.2. Added functional areas.
  - b. 2.3.A. Added title of applicable war plan.
  - c. 3.1.E.1. Added description of special aspects of facility that could enhance ATTC's ability to expand output.
  - d. 3.1.E.2. Added explanation on why airspace, land, and water areas--adjacent to areas under DoD control--are available and suited for physical expansion to support new missions or increased footprints.
  - e. 3.1.E.4. Changed answer to yes to be consistent with information provided on Facility Condition Form.
  - f. 3.1.G.1. Changed square miles of air, land, and sea space available to support test operations. Square miles were understated in original response to data call.
  - g. 3.1.G.7. Changed maximum straight line segment of airspace in nautical miles. Nautical miles were understated in original response to data call.
  - h. Facility Condition Form. Changed replacement value. It was noted that the initial response to data call omitted several key elements associated with facility replacement costs.

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EACT2

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STEAT-TS-R

SUBJECT: BRAC Data Call #7 - Test and Evaluation

3. Information submitted is accurate and complete to the best of my knowledge and belief.

4. Point of contact is Ms. Eileen West, DSN 558-8056.

Encl

*Joseph L. Bergantz*  
JOSEPH L. BERGANTZ  
COL, AV  
Commanding

118e



**DEPARTMENT OF THE ARMY**  
**U.S. ARMY AVIATION TECHNICAL TEST CENTER**  
**FORT RUCKER, ALABAMA 36362-5276**



Cairns Army Airfield  
Fort Rucker, AL 36362-5276

STEAT-TS (70)

75 North Flightline Road  
Edwards Air Force Base, CA 93524-6100

3 June 1994

MEMORANDUM FOR Commander, U.S. Test and Evaluation Command, ATTN:  
AMSTE-TA (Mr. Holloway), Aberdeen Proving Ground, MD  
21005-5055

SUBJECT: BRAC 95 Data Call #7 - Test and Evaluation

1. Reference memorandum, HQ TECOM, AMSTE-TA, 4 May 1994, subject as above.
2. The U.S. Army Aviation Technical Test Center's data call information is submitted in two parts: Flight System Test Directorate, Fort Rucker, AL (encl 1) and The Airworthiness Test Directorate, Edwards AFB, CA (encl 2).
3. Point of contact at ATTC is Ms. Eileen West, DSN 558-8056.

2 Encls

*Joseph L. Bergantz*  
JOSEPH L. BERGANTZ  
Colonel, Aviation  
Commanding



DEPARTMENT OF THE ARMY  
U.S. ARMY AVIATION TECHNICAL TEST CENTER  
FORT RUCKER, ALABAMA 36362-5276



Cairns Army Airfield  
Fort Rucker, AL 36362-5276

75 North Pflugmeier Road  
Edwards Air Force Base, CA 93524-6100

STEAT-TS-R (70)

8 June 1994

MEMORANDUM FOR Commander, U.S. Army Test and Evaluation Command,  
ATTN: AMSTE-TA (Mr. Holloway), Aberdeen Proving  
Ground, MD 21005-5055

SUBJECT: BRAC 95 Data Call #7 - Test and Evaluation

1. Reference memorandum, ATTC, STEAT-TS-R, 3 Jun 94, SAB.
2. Request the enclosed pages reflecting minor changes replace corresponding pages submitted in original BRAC document.
3. Point of contact at ATTC is Ms. Eileen West, DSN 558-8056.

Encl

*Joseph L. Bergantz*  
JOSEPH L. BERGANTZ  
Colonel, Aviation  
Commanding

OPTIONAL FORM 98 (7-90)

FAX TRANSMITTAL

# of pages **7**

To: <b>JIM FISTEX</b>	From: <b>EILEEN WEST</b>
Date/Agency: <b>AMSTE-TA-0</b>	Phone #: <b>558-8056</b>
Fax #: <b>398-9170</b>	Fax #: <b>558-8232</b>

NSN 7540-01-317-7368

5099-101

GENERAL SERVICES ADMINISTRATION

## 2.2. UNCONSTRAINED CAPACITY

2.2.A Unconstrained capacity is the maximum capacity of this facility, assuming manpower and consumable supplies (excluding utilities) are unlimited, but allowing for expected downtime (maintenance, weather, darkness (daylight), holidays, etc.). Provide your response by filling out the Determination of Unconstrained Capacity Form in accordance with the instructions in appendix A.

See Unconstrained Capacity Form.

2.2.B Is this capacity limited by the physical characteristics of the facility itself, safety or health considerations, commercial utility availability, etc?

No.

## 2.3 TECHNICAL RESOURCES

2.3.A Does the facility have a specified war-time or contingency role established in approved war plans? Yes/No

Yes. TECOM War Emergency Plan (WEP).

2.3.B Does the facility provide a T&E product or service, without which irreparable harm would be imposed on the test mission of the host installation?

No. The host installation's (Fort Rucker) mission is primarily training. ATTC does not support any T&E mission of host.

2.3.B.1 On the test mission of any other activity?

No.

2.3.B.2 On any other mission deemed critical to the operational effectiveness of the armed forces of the United States?

No.

*replaced by 130*

2.1.B.2 What amount of test work was performed at your facility (in workyears by functional areas of air vehicles, electronic combat, armament/weapons, other tests, and other) in FY92 & FY93?

Workyears	<u>FY92</u> 73	<u>FY93</u> 74
-----------	-------------------	-------------------

## 2.2. UNCONSTRAINED CAPACITY

2.2.A Unconstrained capacity is the maximum capacity of this facility, assuming manpower and consumable supplies (excluding utilities) are unlimited, but allowing for expected downtime (maintenance, weather, darkness (daylight), holidays, etc.). Provide your response by filling out the Determination of Unconstrained Capacity Form in accordance with the instructions in appendix A.

See Unconstrained Capacity Form.

2.2.B Is this capacity limited by the physical characteristics of the facility itself, safety or health considerations, commercial utility availability, etc?

No.

## 2.3 TECHNICAL RESOURCES

2.3.A Does the facility have a specified war-time or contingency role established in approved war plans? Yes/No

Yes. TECOM War Emergency Plan (WEP).

2.3.B Does the facility provide a T&E product or service, without which irreparable harm would be imposed on the test mission of the host installation?

No. Although we do provide unique services as outlined in 3.1.A.2, those services could be replaced, given additional resources to host installation.

2.3.B.1 On the test mission of any other activity?

No.

2.3.B.2 On any other mission deemed critical to the operational effectiveness of the armed forces of the United States?

No.

*M. J. ... 130*

EDWARDS

**3.1.D Specialized Test Support Facilities and Targets (NV I) - Measure of Merit: Extent to which specialized test support facilities and targets are available.**

**3.1.D.1 Do you have specialized facilities that are required to support you in conducting your test operations at your facility (e.g., aerial delivery load build up facilities; parachute drying towers/packing facilities; paratroop support facilities; specialized fuel storage and delivery systems; mission planning facilities; corrosion control, painting, washing facilities; and specialized maintenance facilities such as avionics intermediate shops)? Yes/no. If yes, please describe.**

No. The following Air Force-owned facilities do support our test operations and are reportable by the Air Force.

**1. Corrosion Control Facility, 50,600 square feet (SF)**

Designed to accommodate aircraft up to C-18 (ARIA) 707-320 size, this is state of the art for environmental controls, and handles a wide range of corrosion control processes. Specialized corrosion control processes substantially reduce or eliminate hazardous waste and environmental pollution. All meet current California Occupational Safety and Health Act (OSHA) standards.

**2. Aircraft Dynamic Research Engineering, Maintenance, Manufacturing, and Modification Facility, 419,849 SF**

A combination hangar and an industrial complex that encompasses over 9 acres (under one roof). Specialize in repair, overhaul and local manufacture of aeronautical and non-aeronautical parts and equipment. Machining and welding capabilities include standard and precision metal working machines, specializing in fabricating, reworking, designing, and repair of metal parts and components. Aircraft structural maintenance and sheetmetal capabilities include minor and major structural repair, modification, technical order compliance on aircraft that includes specialized fabrication with aircraft metals, plastics, fiberglass, composites, and bonded structural parts, and fabricating and testing metal tubing, conduits, and cables or wire rope. Facilities for pneudraulics, battery maintenance, and hydraulics are also available.

**3. Weight & Balance Facility, 121,500 SF**

Aircraft weighing and center of gravity. Accommodates all aircraft in the DOD and NASA inventories.

**4. Horizontal Thrust Measuring Facility,  
965,652 SF (Open Air Engine Test Stand)  
884 SF (Underground)**

(REPLACES PAGE 161)

EDWARDS  
AQTD

EDWARDS

property on the ground. If this CFA is below 3,000 above ground level (AGL), or supersonic flight is required, a formal environmental assessment is required. Additionally, approval for the possibility of launch debris or a nonfunctioning missile impacting the landscape under the launch point would be required from the land owner. This land area north of R-2505 is sparsely populated and is composed, to a large extent, of public lands under the control of the Bureau of Land Management (BLM).

**3.1.E.3** Is the facility equipped to support secure operations? Yes/no. If yes, to what level of classification (Confidential, Secret, Top Secret, Special Access Required)?

Yes. AFFTC regularly operates multiple large programs at the Top Secret, TS SAR, and SCI levels. Individual facilities are available at these levels, and complexes for up to 2,000 people, secure control rooms, and facilities for many small aircraft or eight large aircraft are available. Full secure communications and data acquisition transmission are available as well as total range encryption. AOTD has used these facilities for classified test missions in the past, although they are owned and accounted for by Edwards AFB.

**3.1.E.4** Are there any capital improvements underway or programmed in the 95 FYDP, that would change your capacity/capability? Yes/no. If yes, explain.

No.

**3.1.F Uniqueness (MV I) - Measure of Merit:** Extent to which the facility is one-of-a kind.

**3.1.F.1** Is this a one-of-a-kind facility within the DOD? Yes/no. If yes, describe.

The AOTD facility is not unique, however, it is located on an installation which is uniquely suited to conducting flight test. No other DOD air vehicle test facility was planned, designed, and constructed as a flight test center to safely test up to the largest aircraft imaginable on a site specifically researched and selected as the best location in the nation for that purpose in the post-World War II era. Key to this is sparse population, land availability, air quality, unparalleled flying weather, and the dry lakebeds for safety. Planned or existing aircraft have yet to exceed the built-in AFFTC test capability. The true uniqueness of this test complex is measured by the fact that NAEA chose to locate and build the nation's premier civilian research/test facility collocated with AFFTC. The Navy and Marine Corps come to Edwards AFB to conduct all of their most hazardous tests on both new and operational improvements.

**3.1.F.1.A** Within the U.S. Government? Yes/no. If yes, describe.

EDWARDS  
AOTD

3.1.H.7 What is the number of test days per year (1985 - 1993) canceled due to weather?

Data not available; however, one day each 4.3 years on average, a snow storm closes the base for a day which results in a test day canceled due to weather.

3.1.H.8 What is the number of days per year the visibility is less than 1 mile? Between 1 and 3 miles? Greater than 3 miles?

	<u>Number of Days Per Year</u>
Visibility less than 1 mile	1
Visibility between 1 and 3 miles	4
Visibility greater than 3 miles	360

It should be noted that for the 360 days, this greater than 3-mile visibility is not just for a small afternoon segment of the day, but for the full 24 hours. The average visual range is 45 miles at EAFB and 55 miles at China Lake.

3.1.H.9 What is the average number of flying days available per year for flight test? Provide historical average from the past 8 years.

Test days are defined as VFR conditions (visibility better than 3 miles). On this basis, there are 363 average flying days available per year for flight test.

3.1.H.10 What percentage of the time are your test operations restricted due to weather?

Bad weather is the exception rather than the rule. Weather restriction (visibility less than 3 miles) amount to 0.4% of the time.

## 3.2 AIR VEHICLES

This functional area includes facilities involved in the testing of all air vehicles/subsystems/components whether fixed wing or rotary wing and test of major subsystems (e.g., avionics, engines, and sensors). This includes flight testing and the testing involving pre- and post-flight preparation and processing of the air vehicle. Unmanned air vehicles and cruise missiles are included.

3.2.A Supersonic Airspace (NV II) - Measure of Merit: Extent of range size to support weapon system requirements.

3.2.A.1 Do supersonic corridors or areas exist? Yes/no.

Yes.

*All p/c 173*

*EDWARDS  
AQTCD*

*125*

EDWARDS

3.2.B.2 How close and how many emergency runways or airfields are in your area of operation?

<u>Name</u>	<u>Operation's Times</u>	<u>Runway Length (feet)</u>
Agua Dulce	0800-1800	4,600
Apple Valley, CA	0630-1700	6,500
Barstow-Dagget, CA	0630-1700	6,400
Brackett Fld, CA	24 hours	4,800
Burbank Glendale/Pasadena, CA	24 hours	6,500
Cable, Upland, CA	Daylight	3,700
California City, CA	0800-1700	6,000
China Lake, CA	0630-2230	9,000
Compton, CA	-----	3,600
El Mirage (Adelanto), CA	Unattended	3,700
El Monte, CA		3,995
Flabob (Riverside) CA	0830-1730	3,200
Gen William J. Fox, Lanc. CA	0700-2100	5,000
Hawthorne, CA	0700-2130	4,000
Hesperia, CA	0800-1800	3,900
Inyokern, CA	Dawn/Dusk	7,300
Kern Valley, CA	Daylight	3,500
Mojave, CA	0715-1800	9,600
Mountain Valley	0800-1700	5,000
Ontario, CA	24 hours	11,200
Plant 42	0600-2400	10,000
Rialto Muni-Miro Fld, CA	0800-1700	4,500
Tehachapi Muni, CA	0800-1700	4,000
Trona, CA	Irregular	5,900
Van Nuys	24 hours	6,500
Whiteman (Los Angeles)CA	24 hours	3,960
18 dry lake runways at EAFB at multiple headings	Daylight	7,207 to 39,103
3 dry lakes along R-2508 to Ely, NV corridor	Daylight	Up to 10,000'

3.2.B.3 Where is your airfield situated relative to working areas (airspace) for supporting test operations?

Field is located within the restricted airspace.

3.2.B.4 What makes your airfield unique or at least suited for supporting test operations?

Field is located within the restricted airspace.  
 VFR weather 99% of the year.  
 Lakebed emergency runways.  
 Existing infrastructure.  
 Availability of airspace and other ranges.  
 Excellent 24-hour-per-day visibility.  
 Location at the hub of 11 DOD test ranges.

See AV 002

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**U.S. ARMY AVIATION TECHNICAL TEST CENTER  
(ATTC)**

**FT. RUCKER, AL**

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(ATTC)**

**FT. RUCKER, AL**

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## SECTION 2: CAPACITY & TECHNICAL RESOURCES

Use the forms and accompanying instructions in appendix A to provide answers for this section.

### 2.1 WORKLOAD

Annual workload will be reported in units as follows: for open air ranges involving flight testing, report test hours and missions. For all other T&E facilities direct labor hours and test hours must be reported; if available, missions must be reported. If an estimate of test hours based on direct labor hours is necessary, refer to the instructions for Determination of Unconstrained Capacity on page 28.

The annual workload for ATTC (Ft. Rucker) is 5,183 test hours and 2,592 test missions.

#### 2.1.A. Historical Workload

2.1.A.1 What amount of workload have you performed each year from FY86-93? Use the Historical Workload Form provided in appendix A of this package.

See Historical Workload Form.

#### 2.1.B Forecasted Workload

2.1.B.1 Identify all appropriations (by program element) that generated a requirement for testing or test support, or are expected to generate a requirement for testing/test support in your Military Department (by functional areas of air vehicles, electronic combat (EC), armament/weapons, and other test) for FY92, FY93, and each year in the FY95 FYDP. The Military Departments will provide total funding amounts appropriated for all PEs identified in each functional area shown above.

<u>PE/SSN</u>	<u>FY92</u>	<u>FY93</u>	<u>FY94</u>	<u>FY95</u>	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>
<u>Air Vehicles</u>								
64816 C27	X	X	X	X				
23744 423			X	X				
64220 518	X	X						
64270 665	X	X	X	X	X	X	X	X
64201 C97			X	X	X	X	X	X
64223 327	X	X	X	X	X	X	X	X
64816 C31	X	X	X	X	X			
64223 397		X						
23744 179				X	X			
23752 106	X	X	X	X	X	X	X	X
95889 910	X	X						
62211 HB5	X	X	X					
62211 47A	X	X	X	X	X	X	X	X
63003 B97	X	X	X	X	X			

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## SECTION 2: CAPACITY & TECHNICAL RESOURCES

Use the forms and accompanying instructions in appendix A to provide answers for this section.

### 2.1 WORKLOAD

Annual workload will be reported in units as follows: for open air ranges involving flight testing, report test hours and missions. For all other T&E facilities direct labor hours and test hours must be reported; if available, missions must be reported. If an estimate of test hours based on direct labor hours is necessary, refer to the instructions for Determination of Unconstrained Capacity on page 28.

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2.1.A.1 What amount of workload have you performed each year from FY86-93? Use the Historical Workload Form provided in appendix A of this package.

See Historical Workload Form.

#### 2.1.B Forecasted Workload

2.1.B.1 Identify all appropriations (by program element) that generated a requirement for testing or test support, or are expected to generate a requirement for testing/test support in your Military Department (by functional areas of air vehicles, electronic combat (EC), armament/weapons, and other test) for FY92, FY93, and each year in the FY95 FYDP. The Military Departments will provide total funding amounts appropriated for all PEs identified in each functional area shown above.

<u>PE/SSN</u>	<u>FY92</u>	<u>FY93</u>	<u>FY94</u>	<u>FY95</u>	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>
<u>Air Vehicles</u>								
64816 C27	X	X	X	X				
23744 423			X	X				
64220 518	X	X						
64270 665	X	X	X	X	X	X	X	X
64201 C97			X	X	X	X	X	X
64223 327	X	X	X	X	X	X	X	X
64816 C31	X	X	X	X	X			
64223 397		X						
23744 179				X	X			
23752 106	X	X	X	X	X	X	X	X
95889 910	X	X						
62211 HB5	X	X	X					
62211 47A	X	X	X	X	X	X	X	X
63003 B97	X	X	X	X	X			

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<u>PE/SSN</u>	<u>FY92</u>	<u>FY93</u>	<u>FY94</u>	<u>FY95</u>	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>
63003 436	X	X	X	X	X	X	X	X
63003 435	X	X	X	X	X			
A05002	X	X	X	X	X	X		
A06500	X	X	X	X	X			
A06605	X	X	X	X	X	X		
A08300								X
A50100	X	X						
AA0018	X	X						
AA0150	X	X	X	X	X	X	X	X
AA0252	X	X	X	X	X	X	X	X
AA0270					X	X	X	X
AA0400	X	X	X	X	X	X	X	X
AA0492	X	X	X	X	X	X	X	X
AA0700		X	X	X	X	X	X	X
AA0705			X	X	X	X	X	X
AA0720	X	X	X	X	X	X	X	X
AA6606	X	X	X	X	X	X	X	X
AA6607				X	X	X	X	X
AB0602	X	X	X	X	X	X	X	X
AB0604			X					
AZ2200	X	X	X	X	X	X	X	X
AZ3540	X							

Armament Weapons

23801 303	X	X	X			X		
23801 038	X	X	X		X		X	X
63757 463	X							
64816 C13			X	X				
23802 045	X	X	X					
23802 336	X	X	X	X	X	X	X	X
C70300				X	X	X	X	X

Electronic Combat

63710 K86	X	X	X	X	X	X	X	X
AB3000	X	X	X	X	X	X	X	X
AZ3506	X	X	X	X	X	X	X	X
AZ3507								X
AZ3508							X	
B53800	X	X	X					
K35601	X	X	X	X	X	X	X	X
K36400	X	X	X	X	X	X		

2.1.B.2 What amount of test work was performed at your facility (in workyears by functional areas of air vehicles, electronic combat, armament/weapons, other tests, and other) in FY92 & FY93?

	<u>Workyears</u> <u>FY92</u>	<u>Workyears</u> <u>FY93</u>
Air Vehicles	220	221
Electronic Combat	0	0
Armament/Weapons	0	0

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<u>PE/SSN</u>	<u>FY92</u>	<u>FY93</u>	<u>FY94</u>	<u>FY95</u>	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>
63003 436	X	X	X	X	X	X	X	X
63003 435	X	X	X	X	X			
A05002	X	X	X	X	X	X		
A06500	X	X	X	X	X			
A06605	X	X	X	X	X	X		
A08300								X
A50100	X	X						
AA0018	X	X						
AA0150	X	X	X	X	X	X	X	X
AA0252	X	X	X	X	X	X	X	X
AA0270					X	X	X	X
AA0400	X	X	X	X	X	X	X	X
AA0492	X	X	X	X	X	X	X	X
AA0700		X	X	X	X	X	X	X
AA0705			X	X	X	X	X	X
AA0720	X	X	X	X	X	X	X	X
AA6606	X	X	X	X	X	X	X	X
AA6607				X	X	X	X	X
AB0602	X	X	X	X	X	X	X	X
AB0604			X					
AZ2200	X	X	X	X	X	X	X	X
AZ3540	X							

Armament Weapons

23801 303	X	X	X			X		
23801 038	X	X	X		X		X	X
63757 463	X							
64816 C13			X	X				
23802 045	X	X	X					
23802 336	X	X	X	X	X	X	X	X
C70300				X	X	X	X	X

Electronic Combat

63710 K86	X	X	X	X	X	X	X	X
AB3000	X	X	X	X	X	X	X	X
AZ3506	X	X	X	X	X	X	X	X
AZ3507								X
AZ3508							X	
B53800	X	X	X					
K35601	X	X	X	X	X	X	X	X
K36400	X	X	X	X	X	X		

2.1.B.2 What amount of test work was performed at your facility (in workyears by functional areas of air vehicles, electronic combat, armament/weapons, other tests, and other) in FY92 & FY93?

	<u>Workyears</u> <u>FY92</u>	<u>Workyears</u> <u>FY93</u>
Air Vehicles	220	221
Electronic Combat	0	0
Armament/Weapons	0	0

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### 2.2. UNCONSTRAINED CAPACITY

2.2.A Unconstrained capacity is the maximum capacity of this facility, assuming manpower and consumable supplies (excluding utilities) are unlimited, but allowing for expected downtime (maintenance, weather, darkness (daylight), holidays, etc.). Provide your response by filling out the Determination of Unconstrained Capacity Form in accordance with the instructions in appendix A.

See Unconstrained Capacity Form.

2.2.B Is this capacity limited by the physical characteristics of the facility itself, safety or health considerations, commercial utility availability, etc?

No.

### 2.3 TECHNICAL RESOURCES

2.3.A Does the facility have a specified war-time or contingency role established in approved war plans? Yes/No

Yes. USAAVNDDTA War Emergency Plan (WEP), dated 3 August 1983. This plan is being updated and renamed the USAATTC War Emergency Plan.

2.3.B Does the facility provide a T&E product or service, without which irreparable harm would be imposed on the test mission of the host installation?

No. The host installation's (Fort Rucker) mission is primarily training. ATTC does not support any T&E mission of host.

2.3.B.1 On the test mission of any other activity?

No.

2.3.B.2 On any other mission deemed critical to the operational effectiveness of the armed forces of the United States?

No.

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## 2.2. UNCONSTRAINED CAPACITY

2.2.A Unconstrained capacity is the maximum capacity of this facility, assuming manpower and consumable supplies (excluding utilities) are unlimited, but allowing for expected downtime (maintenance, weather, darkness (daylight), holidays, etc.). Provide your response by filling out the Determination of Unconstrained Capacity Form in accordance with the instructions in appendix A.

See Unconstrained Capacity Form.

2.2.B Is this capacity limited by the physical characteristics of the facility itself, safety or health considerations, commercial utility availability, etc?

No.

## 2.3 TECHNICAL RESOURCES -

2.3.A Does the facility have a specified war-time or contingency role established in approved war plans? Yes/No

Yes.

2.3.B Does the facility provide a T&E product or service, without which irreparable harm would be imposed on the test mission of the host installation?

No.

2.3.B.1 On the test mission of any other activity?

No.

2.3.B.2 On any other mission deemed critical to the operational effectiveness of the armed forces of the United States?

No.

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### SECTION 3: MEASURES OF MERIT

This section relates the measures of merit and the required data to the four criteria that have been established for Military Value (MV) criteria are:

- CRITERION 1:** The current and future mission requirements and the impact on operational readiness of the Department of Defense's (DOD) total force.
- CRITERION 2:** The availability and condition of land, facilities and associated airspace at both the existing and potential receiving locations.
- CRITERION 3:** The ability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential receiving locations.
- CRITERION 4:** The cost and manpower implications.

#### 3.1 OVER-ARCHING MEASURES OF MERIT

The over-arching measures of merit are listed with accompanying questions (or data requirements) intended to elicit standard information upon which the cross-service analyses can be based, and on which the Joint Cross-Service Groups can base their reviews of the Military Department analyses. Additional specific measures of merit are shown under individual functional areas. The numbers in parentheses ( ) before each measure of merit indicate the Base Realignment and Closure (BRAC) selection criteria for military value.

**3.1.A Interconnectivity (MV I) - Measure of Merit:** Extent of linkage of this facility with other facilities and assessment of single-node failure potential.

**3.1.A.1** What percentage of total test workload in FY93 involved the real-time or near real-time exchange of data or control with another facility? List the facilities you interconnect to for test and identify how many are simultaneous activities. Identify these as to whether they are internal and external to the site.

Approximately 10% of the ATTC workload at Ft. Rucker involves real-time or near real-time data exchange. Other data required to accomplish the testing mission was acquired with on-board data recorders.

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### **SECTION 3: MEASURES OF MERIT**

This section relates the measures of merit and the required data to the four criteria that have been established for Military Value (MV) criteria are:

- CRITERION 1:** The current and future mission requirements and the impact on operational readiness of the Department of Defense's (DOD) total force.
- CRITERION 2:** The availability and condition of land, facilities and associated airspace at both the existing and potential receiving locations.
- CRITERION 3:** The ability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential receiving locations.
- CRITERION 4:** The cost and manpower implications.

#### **3.1 OVER-ARCHING MEASURES OF MERIT**

The over-arching measures of merit are listed with accompanying questions (or data requirements) intended to elicit standard information upon which the cross-service analyses can be based, and on which the Joint Cross-Service Groups can base their reviews of the Military Department analyses. Additional specific measures of merit are shown under individual functional areas. The numbers in parentheses ( ) before each measure of merit indicate the Base Realignment and Closure (BRAC) selection criteria for military value.

**3.1.A Interconnectivity (MV I) - Measure of Merit:** Extent of linkage of this facility with other facilities and assessment of single-node failure potential.

**3.1.A.1** What percentage of total test workload in FY93 involved the real-time or near real-time exchange of data or control with another facility? List the facilities you interconnect to for test and identify how many are simultaneous activities. Identify these as to whether they are internal and external to the site.

Approximately 10% of the ATTC workload at Ft. Rucker involves real-time or near real-time data exchange. Other data required to accomplish the testing mission was acquired with on-board data recorders.

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<u>Facility</u>	<u>Internal</u>	<u>External</u>	<u>Simultaneous Activity</u>
FIXED BASE UNIT	X		
MOBILE UNIT	X		
METEOROLOGICAL Facility		X	
R-2103 FAA RADAR FACILITY		X	
CAIRNS AAF TOWER		X	
RAPCOM FACILITY		X	

3.1.A.2 If your facility were to be closed, would there be an impact on other facilities to which you are connected? Yes/No. If yes, explain.

No.

3.1.B Facility Condition (MV II) - Measure of Merit: Current and planned status of the T&E facilities for supporting assigned test missions. Fill out the Facility Conditions Form in appendix A in accordance with the instructions.

See Facility Condition Form.

3.1.C Environmental and Encroachment Carrying Capacity (MV II) - Measure of Merit: Extent of current and future potential environmental and encroachment impacts on air, land, and sea space for testing.

None.

3.1.C.1 Do you have limiting (current or future) environmental and/or encroachment characteristics associated with the installation/facility? Yes/No. If yes, explain.

No.

3.1.C.2 How much could workload be increased before this limit would be reached? Express your answer as a percentage of your current workload.

Not applicable.

3.1.C.3 Do you currently operate under permits of an environmental nature, or voluntary agreement (including treaties) of any sort that deal with the environment? If so, when do they expire? Please describe.

No.

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<u>Facility</u>	<u>Internal</u>	<u>External</u>	<u>Simultaneous Activity</u>
FIXED BASE UNIT	X		
MOBILE UNIT	X		
METEOROLOGICAL Facility		X	
R-2103 FAA RADAR FACILITY		X	
CAIRNS AAF TOWER		X	
RAPCOM FACILITY		X	

3.1.A.2 If your facility were to be closed, would there be an impact on other facilities to which you are connected? Yes/No. If yes, explain.

No.

3.1.B Facility Condition (MV II) - Measure of Merit: Current and planned status of the T&E facilities for supporting assigned test missions. Fill out the Facility Conditions Form in appendix A in accordance with the instructions.

See Facility Condition Form.

3.1.C Environmental and Encroachment Carrying Capacity (MV II) - Measure of Merit: Extent of current and future potential environmental and encroachment impacts on air, land, and sea space for testing.

None.

3.1.C.1 Do you have limiting (current or future) environmental and/or encroachment characteristics associated with the installation/facility? Yes/No. If yes, explain.

No.

3.1.C.2 How much could workload be increased before this limit would be reached? Express your answer as a percentage of your current workload.

Not applicable.

3.1.C.3 Do you currently operate under permits of an environmental nature, or voluntary agreement (including treaties) of any sort that deal with the environment? If so, when do they expire? Please describe.

No.

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3.1.C.4 What is the total population within a 50 mile radius?  
100-mile radius? 150-mile radius? 200-mile radius?

	<u>Actual 1990</u>	<u>Estimated 1994</u>
50 mile radius -	382,132	395,214
100 mile radius -	1,843,601	1,929,903
150 mile radius -	3,699,209	3,881,744
200 mile radius -	8,613,910	9,062,010

3.1.C.5 Identify the commercial air/land/sea traffic routes, public use of air/land/sea space, and frequency of use for each that affects or could affect mission accomplishment in your air, land, or sea space.

- 60% - public use airspace
- 40% - utilize other Odd restricted airspace

3.1.C.5.A How many test missions per year are canceled due to commercial or public use?

None.

3.1.C.6 What is the number of test missions that have been canceled due to encroachment in each of the last two years?

None.

3.1.D Specialized Test Support Facilities and Targets (MV I) - Measure of Merit: Extent to which specialized test support facilities and targets are available.

3.1.D.1 Do you have specialized facilities that are required to support you in conducting your test operations at your facility (e.g., aerial delivery load build up facilities; parachute drying towers/packing facilities; paratroop support facilities; specialized fuel storage and delivery systems; mission planning facilities; corrosion control, painting, washing facilities; and specialized maintenance facilities such as avionics intermediate shops)? Yes/No. If yes, please describe.

Yes.

1. U.S. Army Aviation Center (USAAVNC). ATTC provides to and receives invaluable support from the U.S. Army Aviation Center who provides ground engine test facilities, parachute drying, tower/parking facilities, specialized fuel delivery and storage facilities, painting shop, specialized maintenance shops, i.e. avionics, armament, sheetmetal to depot level. Additionally Ft. Rucker is a major rotary-wing logistics and maintenance base hosting a \$22 million part inventory.

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3.1.C.4 What is the total population within a 50 mile radius?  
100-mile radius? 150-mile radius? 200-mile radius?

	<u>Actual 1990</u>	<u>Estimated 1994</u>
50 mile radius -	382,132	395,214
100 mile radius -	1,843,601	1,929,903
150 mile radius -	3,699,209	3,881,744
200 mile radius -	8,613,910	9,062,010

3.1.C.5 Identify the commercial air/land/sea traffic routes, public use of air/land/sea space, and frequency of use for each that affects or could affect mission accomplishment in your air, land, or sea space.

60% - public use airspace

40% - utilize other Odd restricted airspace

3.1.C.5.A How many test missions per year are canceled due to commercial or public use?

None.

3.1.C.6 What is the number of test missions that have been canceled due to encroachment in each of the last two years?

None.

3.1.D **Specialized Test Support Facilities and Targets (MV I) - Measure of Merit:** Extent to which specialized test support facilities and targets are available.

3.1.D.1 Do you have specialized facilities that are required to support you in conducting your test operations at your facility (e.g., aerial delivery load build up facilities; parachute drying towers/packing facilities; paratroop support facilities; specialized fuel storage and delivery systems; mission planning facilities; corrosion control, painting, washing facilities; and specialized maintenance facilities such as avionics intermediate shops)? Yes/No. If yes, please describe.

Yes.

1. U.S. Army Aviation Center (USAAVNC). ATTC provides to and receives invaluable support from the U.S. Army Aviation Center who provides ground engine test facilities, parachute drying, tower/parking facilities, specialized fuel delivery and storage facilities, painting shop, specialized maintenance shops, i.e. avionics, armament, sheetmetal to depot level. Additionally Ft. Rucker is a major rotary-wing logistics and maintenance base hosting a \$22 million part inventory.

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2. The U.S. Army Aeromedical Research Laboratory (USAARL). Provides support for the testing of aircrew life support systems. They also have a large inventory of instrumentation for life support evaluation avoiding unnecessary duplication.

3. The U.S. Army Safety Center. Provides document research for Army aircraft safety related issues needed to support the conduct of T&E.

4. Flight Simulators. Ft. Rucker boast one of the finest arrays of motion base helicopter flight simulators in the world. Every major aircraft in the inventory is represented. ATTC uses these simulators in testing to investigate safety of flight implications of items of aircrew life support equipment prior to committing to flight test.

5. The Army Research Institute. Operates a virtual reality research simulator which can be software tailored to represent various types of rotary-wing aircraft, installed weapons, and external stores. There is a potential to evaluate such things as fire control software modifications utilizing their research flight simulator prior to committing resources to a test flight.

3.1.D.2 Are specialized targets required to support this facility? Yes/No. If yes, explain.

No.

3.1.D.2.A Have the specialized targets been validated? Yes/No. If yes, by whom?

Not applicable.

3.1.E Expandability (MV III) - Measure of Merit: Extent to which an installation/facility is able to expand to accommodate additional workload or new missions.

3.1.E.1 Other than the expandability inherent in unconstrained capacity, discussed earlier, are there any special aspects of this facility that enhance its ability to expand output within each T&E functional area? Yes/No. If yes, explain.

Yes. Office, hangar, and ramp space exist to approximately double aircraft and personnel strength. Nearly any type of air vehicle testing could be accommodated. Land is available for added facilities.

3.1.E.1.A Can you accept new Test and Evaluation (T&E) workload different from what you are currently performing? Yes/No. If yes, identify by T&E functional area and test type.

Yes. T&E functional areas of air vehicles, electronic combat, armament/weapons and other could be accepted. Science and Technology, Developmental Engineering, In-Service

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2. The U.S. Army Aeromedical Research Laboratory (USAARL). Provides support for the testing of aircrew life support systems. They also have a large inventory of instrumentation for life support evaluation avoiding unnecessary duplication.

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5. The Army Research Institute. Operates a virtual reality research simulator which can be software tailored to represent various types of rotary-wing aircraft, installed weapons, and external stores. There is a potential to evaluate such things as fire control software modifications utilizing their research flight simulator prior to committing resources to a test flight.

3.1.D.2 Are specialized targets required to support this facility? Yes/No. If yes, explain.

No.

3.1.D.2.A Have the specialized targets been validated? Yes/No. If yes, by whom?

Not applicable.

3.1.E Expandability (MV III) - Measure of Merit: Extent to which an installation/facility is able to expand to accommodate additional workload or new missions.

3.1.E.1 Other than the expandability inherent in unconstrained capacity, discussed earlier, are there any special aspects of this facility that enhance its ability to expand output within each T&E functional area? Yes/No. If yes, explain.

No.

3.1.E.1.A Can you accept new Test and Evaluation (T&E) workload different from what you are currently performing? Yes/No. If yes, identify by T&E functional area and test type.

Yes. T&E functional areas of air vehicles, electronic combat, armament/weapons and other could be accepted. Science and Technology, Developmental Engineering, In-Service Engineering, Training and Doctrine, Test and Evaluation, and others are all being accomplished at Ft. Rucker in a limited

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Engineering, Training and Doctrine, Test and Evaluation, and others are all being accomplished at Ft. Rucker in a limited

capacity. New instrumentation associated with GPS will greatly expand the capability.

**3.1.E.2** Are airspace, land, and water areas--adjacent to areas under DOD control--available and/or suited for physical expansion to support new missions or increased footprints? Yes/No. If yes, please explain.

Yes. The Ft. Rucker local flying area includes restricted areas R-2103 and R-3002A/B/C/D/E/F managed by Ft. Rucker and Ft. Benning, GA. It also includes Alert Area A-211 which includes Rose Hill MOA, Ft. Rucker's MOAs A/B/C. The Ft. Rucker flying area is joined by the Rose Hill MOA to the northwest, Pensacola A-292 and MOAs to the southwest, and Eglin AFB R-2915A, R-2915A, R-2915B, R-2918, R-2914A, R-2914B, R-2917, R-2919A, and R-2919B to the south. All of Eglin's MOAs A/B/C/D are located at the Ft. Rucker flying area to the south. Part of Tyndall AFB's MOAs A/B/C/D/E are in the Ft. Rucker flying area to the southeast, while R-2905A and R-2905B adjoin with Tyndall AFB. Directly to the east is the Moody 3 MOA and the remainder of the Moody flying and training area. The majority of the Ft. Rucker flying area is over public land, while the restricted areas are over DOD controlled land. Most of the restricted areas are from the surface to various altitudes, including unlimited altitude at Eglin AFB. These large controlled areas would provide for considerable expansion, particularly in the Eglin AFB area.

**3.1.E.3** Is the facility equipped to support secure operations? Yes/No. If yes, to what level of classification (Confidential, Secret, Special Access Required)?

Yes - ~~Secret~~ Classification.

**3.1.E.4** Are there any capital improvements underway or programmed in the 95 FYDP that would change your capacity/capability? Yes/No. If yes, explain.

Yes. Hangar addition (2,000 square feet addition for sheet metal/machine/welding shops).

**3.1.F Uniqueness (MV I) - Measure of Merit:** Extent to which the facility is one-of-a kind.

**3.1.F.1** Is this a one-of-a-kind facility within the DOD? Yes/No. If yes, describe.

No.

**3.1.F.1.A** Within the U.S. Government? Yes/No. If yes, describe.

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No.

**3.1.F.1.B** Within the U.S.? Yes/No. If yes, describe.

No.

**3.1.F.2** Are you currently providing support to DOD users outside your military department? Yes/No. If yes, indicate percentage of total workload in FY92 and FY93 by military department.

Yes. ATTC is currently providing support to the following:

<u>Military Department</u>	<u>FY92 Percent</u>	<u>FY93 Percent</u>
U.S. Air Force	5	5
U.S. Navy	2	0
Department of Justice	2	1
Department of Interior	1	2
Center for Verification	0	2
Defense Nuclear Arm's Control	0	2

**3.1.G Available Air, Land, and Sea Space (MV II) - Measure of Merit:** Extent to which controlled test ranges satisfy weapon system test requirements.

**3.1.G.1** How many square miles of air, land, and sea space are available to support test operations?

<u>Airspace</u>	<u>Square Miles</u>
R-2103 Molinelli	20
Ft. Rucker Alert Area - includes Rose Hill and Ft. Rucker A/B/C Military Operational Area (MOA)	37,950
Moody MOA	10,000
ATTC Dedicated Alert Area	1,420

**3.1.G.2** Who owns and or controls the land under the restricted airspace you use?

<u>Land Space</u>	<u>Owns/Controls</u>
R-2103 Molinelli Range	DOA
Ft. Rucker Alert	Public Land
Rose Hill MOA	Public Land
Rucker A/B/C MOA	Public Land
Moody MOA	Public Land

**3.1.G.3** How much of this is restricted airspace, and what altitude limits are associated with the restricted areas?

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capacity. New instrumentation associated with GPS will greatly expand the capability.

3.1.E.2 Are airspace, land, and water areas--adjacent to areas under DOD control--available and/or suited for physical expansion to support new missions or increased footprints? Yes/No. If yes, please explain.

No.

3.1.E.3 Is the facility equipped to support secure operations? Yes/No. If yes, to what level of classification (Confidential, Secret, Special Access Required)?

Yes - Secret Classification.

3.1.E.4 Are there any capital improvements underway or programmed in the 95 FYDP that would change your capacity/capability? Yes/No. If yes, explain.

No.

3.1.F Uniqueness (MV I) - Measure of Merit: Extent to which the facility is one-of-a kind.

3.1.F.1 Is this a one-of-a-kind facility within the DOD? Yes/No. If yes, describe.

No.

3.1.F.1.A Within the U.S. Government? Yes/No. If yes, describe.

No.

3.1.F.1.B Within the U.S.? Yes/No. If yes, describe.

No.

3.1.F.2 Are you currently providing support to DOD users outside your military department? Yes/No. If yes, indicate percentage of total workload in FY92 and FY93 by military department.

Yes. ATTC is currently providing support to the following:

<u>Military Department</u>	<u>FY92 Percent</u>	<u>FY93 Percent</u>
U.S. Air Force	5	5
U.S. Navy	2	0
Department of Justice	2	1
Department of Interior	1	2
Center for Verification	0	2
Defense Nuclear Arm's Control	0	2

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Restricted Area

Square Miles

Altitude

R-2103 Molinelli Range

20

5,000

3.1.G.4 Do you have special use airspace other than supersonic airspace? Yes/No. If yes, for what types of test (e.g. terrain following radar)? Dimensions? Will it support simultaneous users? Yes/No.

No.

3.1.G.5 Is the airspace over land or water? List the number of square miles over each.

All airspace is over land.

3.1.G.6 Identify known or projected airspace problems that may prevent accomplishing your mission.

None.

3.1.G.7 What is the maximum straight line segment in your airspace in nautical miles?

Maximum straight line segment is 230 nautical miles.

3.1.G.8 What public airspace have you used for overflight of weapons systems in the past? What was the nature of those tests? Do you anticipate being able to use that same public airspace for similar tests in the future? Yes/No.

No.

3.1.H Geographic/Climatological Features (MV II) - Measure of Merit: Extent to which types of climatic/geographic conditions represent world-wide operational conditions.

3.1.H.1 Describe the topography and ground cover/vegetation within your test airspace (include nap-of-the-earth capability). Identify all of the following that apply: mountains, forrest/jungle, cultivated lowland, swamp/riverain, desert, and sea. State the area of each in square miles.

The terrain in the Ft. Rucker area is most typical of the earth's environment. It includes ~~riverain~~, forested areas, open cultivated land, rolling terrain, limited swamp land and winding river bottoms all of which lend themselves to routine nap-of-the-earth tactics and low level helicopter operations.

3.1.H.2 Are there features of the local geology or soil conditions that enhance or inhibit any types of test?

No.

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3.1.G Available Air, Land, and Sea Space (MV II) - Measure of Merit: Extent to which controlled test ranges satisfy weapon system test requirements.

3.1.G.1 How many square miles of air, land, and sea space are available to support test operations?

<u>Airspace</u>	<u>Square Miles</u>
R-2103 Molinelli	20
Ft. Rucker Alert Area - includes Rose Hill and Ft. Rucker A/B/C Military Operational Area (MOA)	32,000
Moody MOA	10,000
ATTC Dedicated Alert Area	1,420

3.1.G.2 Who owns and or controls the land under the restricted airspace you use?

<u>Land Space</u>	<u>Owns/Controls</u>
R-2103 Molinelli Range	DOA
Ft. Rucker Alert	Public Land
Rose Hill MOA	Public Land
Rucker A/B/C MOA	Public Land
Moody MOA	Public Land

3.1.G.3 How much of this is restricted airspace, and what altitude limits are associated with the restricted areas?

<u>Restricted Area</u>	<u>Square Miles</u>	<u>Altitude</u>
R-2103 Molinelli Range	20	15,000

3.1.G.4 Do you have special use airspace other than supersonic airspace? Yes/No. If yes, for what types of test (e.g. terrain following radar)? Dimensions? Will it support simultaneous users? Yes/No.

No.

3.1.G.5 Is the airspace over land or water? List the number of square miles over each.

All airspace is over land.

3.1.G.6 Identify known or projected airspace problems that may prevent accomplishing your mission.

None.

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3.1.H.3 Did you have to go to other geographical locations to satisfy test requirements? Yes/No and explain. If yes, provide as a percent of overall workload per year for the past 8 years.

Yes. Other geographic locations utilized to satisfy ATTC test requirements:

<u>Test Type</u>	<u>Location</u>	<u>Percent</u>
Cold Weather	Ft. Greely	1
Desert Environment	Yuma Proving Ground or Edwards AFB	2

3.1.H.4 What is the number of days per year the average temperature is below 32 degrees F? Between 32 and 95 degrees? Above 95 degrees?

	<u>Number of Days Per Year</u>
Average temperature below 32 degrees F	27
Average temperature between 32 and 95 degrees F	324
Average temperature above 95 degrees F	14
Average annual maximum temperature = 76 degrees	
Average annual minimum temperature = 56 degrees	
Average annual temperature (includes maximum & minimum temperature) = 66 degrees	

3.1.H.5 What is the number of days per year the average relative humidity is below 30%? Between 30 and 80%? Above 80%?

	<u>Number of Days Per Year</u>
Average relative humidity below 30%	0
Average relative humidity between 30 and 80%	300
Average relative humidity above 80%	65

3.1.H.6 What is the number of test missions per year (1985-1993) canceled due to weather?

Data not available, however, estimates can be based on current data: 31 IFR working days at an average of 6 missions per day equals ~~186~~ canceled missions.

3.1.H.7 What is the number of test days per year (1985-1993) canceled due to weather?

Approximately 31 working days per year.

3.1.H.8 What is the number of days per year the visibility is less than 1 mile? Between 1 and 3 miles? Greater than 3 miles?

	<u>Number of Days Per Year</u>
Visibility less than 1 mile	24
Visibility between 1 and 3 miles	19

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3.1.G.7 What is the maximum straight line segment in your airspace in nautical miles?

Maximum straight line segment is 105 nautical miles.

3.1.G.8 What public airspace have you used for overflight of weapons systems in the past? What was the nature of those tests? Do you anticipate being able to use that same public airspace for similar tests in the future? Yes/No.

No.

3.1.H Geographic/Climatological Features (MV II) - Measure of Merit: Extent to which types of climatic/geographic conditions represent world-wide operational conditions.

3.1.H.1 Describe the topography and ground cover/vegetation within your test airspace (include nap-of-the-earth capability). Identify all of the following that apply: mountains, forrest/jungle, cultivated lowland, swamp/riverain, desert, and sea. State the area of each in square miles.

The terrain in the Ft. Rucker area is most typical of the earth's environment. It includes riverain, forested areas, open cultivated land, rolling terrain, limited swamp land and winding river bottoms all of which lend themselves to routine nap-of-the-earth tactics and low level helicopter operations.

3.1.H.2 Are there features of the local geology or soil conditions that enhance or inhibit any types of test?

No.

3.1.H.3 Did you have to go to other geographical locations to satisfy test requirements? Yes/No and explain. If yes, provide as a percent of overall workload per year for the past 8 years.

Yes. Other geographic locations utilized to satisfy ATTC test requirements:

<u>Test Type</u>	<u>Location</u>	<u>Percent</u>
Cold Weather	Ft. Greely	1
Desert Environment	Yuma Proving Ground or Edwards AFB	2

3.1.H.4 What is the number of days per year the average temperature is below 32 degrees F? Between 32 and 95 degrees? Above 95 degrees?

	<u>Number of Days Per Year</u>
Average temperature below 32 degrees F	27
Average temperature between 32 and 95 degrees F	324
Average temperature above 95 degrees F	14

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Visibility greater than 3 miles

322

**3.1.H.9** What is the average number of flying days available per year for flight test? Provide historical average from the past eight years.

Test days for rotary wing testing are defined as VFR conditions (visibility greater than 3 miles). On this basis, there are 322 average flying days available per year for flight test.

**3.1.H.10** What percentage of the time are your test operations restricted due to weather?

Bad weather is the exception rather than the rule. Weather restriction (visibility less than 3 miles) amounts to approximately 12% per year.

**3.2. AIR VEHICLES**

This functional area includes facilities involved in the testing of all air vehicles/subsystems/components whether fixed wing or rotary wing and test of major subsystems (e.g., avionics, engines, and sensors). This includes flight testing and the testing involving pre- and post-flight preparation and processing of the air vehicle. Unmanned air vehicles and cruise missiles are included.

**3.2.A Supersonic Airspace (MV II) - Measure of Merit:** Extent of range size to support weapon system requirements.

There is no approved airspace for supersonic testing; and no supersonic testing is done by ATTC at Ft. Rucker.

**3.2.A.1** Do supersonic corridors or areas exist? Yes/No.

Not applicable.

**3.2.A.2** Where are they located relative to your airfield?

Not applicable.

**3.2.A.3** At what altitude (upper and lower altitude)?

Not applicable.

**3.2.A.4** Over land or water? What size and shape (length and width)?

Not applicable.

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Average annual maximum temperature = 76 degrees  
 Average annual minimum temperature = 56 degrees  
 Average annual temperature (includes maximum & minimum temperature) = 66 degrees

3.1.H.5 What is the number of days per year the average relative humidity is below 30%? Between 30 and 80%? Above 80%?

	<u>Number of Days Per Year</u>
Average relative humidity below 30%	0
Average relative humidity between 30 and 80%	300
Average relative humidity above 80%	65

3.1.H.6 What is the number of test missions per year (1985-1993) canceled due to weather?

Data not available, however, estimates can be based on current data: 31 IFR working days at an average of 6 missions per day equals 186 canceled missions.

3.1.H.7 What is the number of test days per year (1985-1993) canceled due to weather?

Approximately 31 working days per year.

3.1.H.8 What is the number of days per year the visibility is less than 1 mile? Between 1 and 3 miles? Greater than 3 miles?

	<u>Number of Days Per Year</u>
Visibility less than 1 mile	24
Visibility between 1 and 3 miles	19
Visibility greater than 3 miles	322

3.1.H.9 What is the average number of flying days available per year for flight test? Provide historical average from the past eight years.

Test days for rotary wing testing are defined as VFR conditions (visibility greater than 3 miles). On this basis, there are 322 average flying days available per year for flight test.

3.1.H.10 What percentage of the time are your test operations restricted due to weather?

Bad weather is the exception rather than the rule. Weather restriction (visibility less than 3 miles) amounts to approximately 12% per year.

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**3.2.A.5** Are there restrictions you must observe to use this space? Yes/No. If yes, explain.

Not applicable.

**3.2.A.6** What is the maximum number of simultaneous users?

Not applicable.

**3.2.B Airfield and Facility Characteristics (MV II) - Measure of Merit:** Extent of air vehicle infrastructure to support T&E operations.

**3.2.B.1** Provide a brief description of your airfield and support facilities, to include the following: number and azimuth of runways, elevation, runway length (excluding overrun), overrun length, terminal and/or landing aids, arresting cable (yes/no, type), ramp area (in square feet), construction material (runway and ramps), load capability, and hangar space.

Runways - (1) Azimuth 60 degrees and 240 degrees with a 500 ft. overrun on the 60 degree end of runway. (length of runway = 4,500 ft.)

(2) Azimuth 180 degrees and 360 degrees with a 500 ft. overrun on the 180 degree of runway. (length of runway = 5,000 ft.)

Terminal/Landing Aids - Airfield has a terminal (with tower) and is fully equipped with the following landing aids:

Instrument Landing Systems (ILS)  
Non-Directional Beacon (NDB)  
Very High Frequency Omni Range (VOR)  
Ground Controlled Approach

Arresting Cable - Runways do not have arresting cable.

Ramp - Aircraft parking ramp = 150,000 square feet.

Construction Material - Ramp is asphalt with concrete parking pads. Runways are concrete with load capability up to C-141 limited.

**3.2.B.2** How close and how many emergency runways or airfields are in your area of operation?

Not applicable for rotary wing testing.

**3.2.B.3** Where is your airfield situated relative to working areas (airspace) for supporting test operations?

Approximately 10-15 miles to reach working airspace.

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### 3.2. AIR VEHICLES

This functional area includes facilities involved in the testing of all air vehicles/subsystems/components whether fixed wing or rotary wing and test of major subsystems (e.g., avionics, engines, and sensors). This includes flight testing and the testing involving pre- and post-flight preparation and processing of the air vehicle. Unmanned air vehicles and cruise missiles are included.

**3.2.A Supersonic Airspace (MV II) - Measure of Merit:** Extent of range size to support weapon system requirements.

No supersonic testing done by ATTC at Ft. Rucker.

3.2.A.1 Do supersonic corridors or areas exist? Yes/No.

Not applicable.

3.2.A.2 Where are they located relative to your airfield?

Not applicable.

3.2.A.3 At what altitude (upper and lower altitude)?

Not applicable.

3.2.A.4 Over land or water? What size and shape (length and width)?

Not applicable.

3.2.A.5 Are there restrictions you must observe to use this space? Yes/No. If yes, explain.

Not applicable.

3.2.A.6 What is the maximum number of simultaneous users?

Not applicable.

**3.2.B Airfield and Facility Characteristics (MV II) - Measure of Merit:** Extent of air vehicle infrastructure to support T&E operations.

3.2.B.1 Provide a brief description of your airfield and support facilities, to include the following: number and azimuth of runways, elevation, runway length (excluding overrun), overrun length, terminal and/or landing aids, arresting cable (yes/no, type), ramp area (in square feet), construction material (runway and ramps), load capability, and hangar space.

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3.2.B.4 What makes your airfield unique or at least suited for supporting test operations?

Well suited to support T&E test operations due to maintenance and logistical support services.

3.2.B.5 Is there a size, weight, maintenance or mission limitation that would affect test operations? If so, describe the limitation(s).

None.

3.2.B.6 Including hangars and ramp space, how many fighter size aircraft could you support? Large multi-engine aircraft? Rotary wing? UAV? Cruise missiles?

ATTC can accommodate 45 rotary wing aircraft.

3.2.C Test Operations (MV II) - Measure of Merit: Extent of T&E operations that the airspace can accommodate.

3.2.C.1 What types of air vehicle testing (fixed wing, rotary wing, unmanned vehicles, and cruise missiles) can be supported? (e.g. performance, handling qualities, fatigue life, static, wheels and brakes, physical integration with external stores, or avionics).

ATTC can support the following types of air vehicle testing: performance, handling qualities, physical integration with external stores or avionics, systems integration, aircraft survivability equipment, ground support equipment, reliability-availability and maintainability, and firing rotary wing cannons, rockets, and missiles (except HELLFIRE).

3.2.C.2 Do ground support facilities exist for pre-flight checkouts or rehearsal of test missions?

Yes. One base station and one mobile station.

3.2.C.3 What kinds, numbers of aircraft, and mix can be supported (manned and unmanned)?

ATTC's current inventory of aircraft at Ft. Rucker = 24

1	AH-1F	2	OH-58C
6	AH-64A	1	OH-58D
1	CH-47D	1	OH-58DI
2	CH-3E	2	UH-1H
1	C-23A	3	UH-60A
1	C-23A1	1	UH-60L
1	OH-58A	1	U-21H

ATTC can support any mix of Army aircraft (rotary and fixed wing). Approximately 45 aircraft could be supported based on

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Runways - (1) Azimuth 60 degrees and 240 degrees with a 500 ft. overrun on the 60 degree end of runway. (length of runway = 4,500 ft.)

(2) Azimuth 180 degrees and 360 degrees with a 500 ft. overrun on the 180 degree of runway. (length of runway = 5,000 ft.)

Terminal/Landing Aids - Airfield has a terminal (with tower) and is fully equipped with the following landing aids:

Instrument Landing Systems (ILS)  
Non-Directional Beacon (NDB)  
Very High Frequency Omni Range (VOR)  
Ground Controlled Approach

Arresting Cable - Runways do not have arresting cable.

Ramp - Aircraft parking ramp = 150,000 square feet.

Construction Material - Ramp is asphalt with concrete parking pads. Runways are concrete with load capability up to C-141 limited.

3.2.B.2 How close and how many emergency runways or airfields are in your area of operation?

Not applicable for rotary wing testing.

3.2.B.3 Where is your airfield situated relative to working areas (airspace) for supporting test operations?

Approximately 10-15 miles to reach working airspace.

3.2.B.4 What makes your airfield unique or at least suited for supporting test operations?

Well suited to support T&E test operations due to maintenance and logistical support services.

3.2.B.5 Is there a size, weight, maintenance or mission limitation that would affect test operations? If so, describe the limitation(s).

None.

3.2.B.6 Including hangars and ramp space, how many fighter size aircraft could you support? Large multi-engine aircraft? Rotary wing? UAV? Cruise missiles?

ATTC can accommodate 45 rotary wing aircraft.

3.2.C Test Operations (MV II) - Measure of Merit: Extent of T&E operations that the airspace can accommodate.

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personnel availability. Unlimited off-site aircraft support can be provided based on Maintenance Agreement with Ft. Rucker to assist in adding to work force with a three day notice.

3.2.C.4 Does UAV and or rotary wing operations pose any limitation on other types of missions? If yes, explain.

No.

3.2.C.5 What sorts of missions (e.g. air-to-air, air-to-ground and refueling) can be flown within local airspace?

All normal helicopter operations and limited weapons firing.

3.2.C.6 What is the maximum number of simultaneous missions you can support that require telemetry?

Two - ATTC (Ft. Rucker)

3.2.C.7 What is the largest number of simultaneous test missions you have supported in your airspace?

There is no known limit on airspace capability other than normal aircraft separation requirements. However, ATTC's technical instrumentation capability is 6 fully instrumented aircraft, 6 partially instrumented, and two telemetry aircraft.

3.2.C.8 Identify the number, types, and owners of aircraft at your installation.

<u>Owners</u>	<u>Number of Aircraft</u>	<u>Types of Aircraft</u>
USAAVNC	12 <u>539</u> 551	Fixed Wing Rotary Wing
ATTC	3 <u>21</u> 24	Fixed Wing Rotary Wing
USAARL	2 <u>1</u> 3	Rotary Wing Fixed Wing
TOTAL	578	

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3.2.C.1 What types of air vehicle testing (fixed wing, rotary wing, unmanned vehicles, and cruise missiles) can be supported? (e.g. performance, handling qualities, fatigue life, static, wheels and brakes, physical integration with external stores, or avionics).

ATTC can support the following types of air vehicle testing: performance, handling qualities, physical integration with external stores or avionics, systems integration, aircraft survivability equipment, ground support equipment, reliability-availability and maintainability, and firing rotary wing cannons, rockets, and missiles (except HELLFIRE).

3.2.C.2 Do ground support facilities exist for pre-flight checkouts or rehearsal of test missions?

Yes. One base station and one mobile station.

3.2.C.3 What kinds, numbers of aircraft, and mix can be supported (manned and unmanned)?

ATTC's current inventory of aircraft at Ft. Rucker = 24

1	AH-1F	2	OH-58C
6	AH-64A	1	OH-58D
1	CH-47D	1	OH-58DI
2	CH-3E	2	UH-1H
1	C-23A	3	UH-60A
1	C-23A1	1	UH-60L
1	OH-58A	1	U-21H

ATTC can support any mix of Army aircraft (rotary and fixed wing). Approximately 45 aircraft could be supported based on personnel availability. Unlimited off-site aircraft support can be provided based on Maintenance Agreement with Ft. Rucker to assist in adding to work force with a three day notice.

3.2.C.4 Does UAV and or rotary wing operations pose any limitation on other types of missions? If yes, explain.

No.

3.2.C.5 What sorts of missions (e.g. air-to-air, air-to-ground and refueling) can be flown within local airspace?

All normal helicopter operations and limited weapons firing.

3.2.C.6 What is the maximum number of simultaneous missions you can support that require telemetry?

Two - ATTC (Ft. Rucker)

3.2.C.7 What is the largest number of simultaneous test missions you have supported in your airspace?

There is no known limit on airspace capability other than normal aircraft separation requirements. However, ATTC's technical instrumentation capability is 6 fully instrumented aircraft, 6 partially instrumented, and two telemetry aircraft.

3.2.C.8 Identify the number, types, and owners of aircraft at your installation.

<u>Owners</u>	<u>Number of Aircraft</u>	<u>Types of Aircraft</u>
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ATTC	3 <u>21</u> 24	Fixed Wing Rotary Wing
USAARL	2 <u>1</u> 3	Rotary Wing Fixed Wing
TOTAL	578	

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APPENDIX A FORMS

GENERAL INFORMATION

TECHNICAL INFORMATION

FACT SHEET - INSTRUMENTATION/ASSETS

ADDITIONAL INFORMATION

FACILITY CONDITION

HISTORICAL WORKLOAD

DETERMINATION OF UNCONSTRAINED CAPACITY

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APPENDIX A FORMS

GENERAL INFORMATION

TECHNICAL INFORMATION

FACT SHEET - INSTRUMENTATION/ASSETS

ADDITIONAL INFORMATION

FACILITY CONDITION

HISTORICAL WORKLOAD

DETERMINATION OF UNCONSTRAINED CAPACITY



**GENERAL INFORMATION**

**FACILITY/CAPABILITY TITLE:** U.S. Army Aviation Technical Test Center (Ft. Rucker, AL)

**ORIGIN DATE:** 1 June 1994

**Service:** Army    **Organization/Activity:** U.S. Army Aviation Technical Test Center (ATTC)    **Location:** Ft. Rucker, AL

**T&E Functional Area:** Air Vehicles

**UIC:** W376AA

**T&E Test Facility Category:** Open Air Ranges

	<u>T&amp;E</u>	<u>S&amp;T</u>	<u>DE</u>	<u>IE</u>	<u>T&amp;D</u>	<u>OTHER</u>
<b>PERCENTAGE USE:</b>	100%					
<b>BREAKOUT BY T&amp;E FUNCTIONAL AREA (%):</b>						
<b>Air Vehicles</b>	100					
<b>Armament/Weapons</b>						
<b>EC</b>						
<b>Other</b>						

**Total in Breakout Must Equal "Percentage Use" on First Line**

TECHNICAL INFORMATION

Facility/Capability Title: U.S. Army Aviation Technical Test Center (Ft. Rucker, AL)

**Facility Description (including mission statement):** The ATTC mission is to plan, conduct, analyze, and report on technical tests of aviation systems and related support equipment during development and throughout the life cycle to include airworthiness. ATTC (Ft. Rucker facility) is located at Cairns Army Airfield Ft. Rucker, AL. The Ft. Rucker flying area covers 32,000 square miles with ATTC controlling 1,415 square miles. The major facilities include three hangars with 71,700 square feet; shop space 25,100 square feet; parking ramps 240,000 square feet; and operations buildings, 64,700 square feet. There are noninstrumented ranges in this flying area that are used to fire most of the weapons in the inventory. The Aviation Center's large fleet and flying hour program create an unparalleled support base for our fleet of aircraft. Quick response is available through their logistical support base, minimizing aircraft downtime. The Army Aeromedical Research Laboratory's scientific instrumentation is at our disposal which eliminates the need for duplicate equipment and expertise. (Continued on next form)

**Interconnectivity/Multi-Use of T&E Facility:** Eglin Air Force Base is less than one hour from ATTC (Ft Rucker). The Army's HELLFIRE Range, Electronic Threats, large firing area and the Climatic Laboratory are all utilized by ATTC to accomplish test or Army aircraft and aircraft systems. We can go to Eglin Air Force Base, fly a range mission and return easily within the same day.

**Type of Test Supported:** Type of test supported include: engineering flight test, flight test instrumentation, aircraft test maintenance/fabrication, aviation systems, aviation ground equipment testing, and aviation test support.

**Summary of Technical Capabilities:** ATTC, Flight Systems Test Directorate has the personnel and expertise to plan, conduct, analyze, and report on Army air weapon systems both helicopter and light fixed wing aircraft. It also has the personnel and expertise to design, install, and maintain major instrumentation systems.

(See attached fact sheet on instrumentation/assets.)

**Keywords:** Air vehicles, rotary wing, airborne instrumentation, telemetry, data reduction, RAM, HFE, and safety.

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## TECHNICAL INFORMATION

**Facility/Capability Title:** U.S. Army Aviation Technical Test Center (Ft. Rucker, AL)

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(See attached fact sheet on instrumentation/assets.)

**Keywords:** Air vehicles, rotary wing, airborne instrumentation, telemetry, data reduction, RAM, HFE, and safety.

TECHNICAL INFORMATION

Facility/Capability Title: U.S. Army Aviation Technical Test Center (Ft. Rucker, AL)

Facility Description (including mission statement) Continued: Other support is available at the Aviation Center such as Directorate of Combat Developments, Directorate of Training and Doctrine, U.S. Army Training and Doctrine Command Systems Managers, Directorate of Evaluation and Standardization, Army Research Institute, and the Safety Center. Our aircraft maintenance contractor is part of the total all-encompassing Aviation Center's aircraft maintenance contract. ATTC's portion of the total contract is 11%. Pilot support is available from the Aviation Center to support our flying requirements on an as-needed basis.

Interconnectivity/Multi-Use of T&E Facility:

Type of Test Supported:

Summary of Technical Capabilities:

Keywords:

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TECHNICAL INFORMATION

Facility/Capability Title: U.S. Army Aviation Technical Test Center (Ft. Rucker, AL)

Facility Description (including mission statement) Continued: Other support is available at the Aviation Center such as Directorate of Combat Developments, Directorate of Training and Doctrine, U.S. Army Training and Doctrine Command Systems Managers, Directorate of Evaluation and Standardization, Army Research Institute, and the Safety Center. Our aircraft maintenance contractor is part of the total all-encompassing Aviation Center's aircraft maintenance contract. ATTC's portion of the total contract is 11%. Pilot support is available from the Aviation Center to support our flying requirements on an as-needed basis.

Interconnectivity/Multi-Use of T&E Facility:

Type of Test Supported:

Summary of Technical Capabilities:

Keywords:

**FACILITY/CAPABILITY TITLE: U.S. Army Aviation Technical Test Center (Ft. Rucker, AL)**

**FACT SHEET - Instrumentation/Assets**

ATTC (Ft. Rucker) has the necessary hardware (including spares) to fully/partially instrument six/six aircraft respectively for testing systems installed on test aircraft (maintains a \$5.9 million inventory of airborne data acquisition system components, sensors, test and calibration equipment). ATTC also has two telemetry/data processing stations for receiving and processing data. These stations include hardware and software to receive data from telemetry (or read data after the flight from airborne recorded tapes), decode the data, apply calibrations, calculate derived parameters, conduct spectral, time series, and other analyses, and present the data in a variety of graphic formats. To support these tests ATTC has:

- Photographic and video laboratory (variety of film and video processing equipment)
- Instrumentation laboratory (for build-up, check-out and calibration of airborne instrumentation)
- Machine/sheet metal shop (for modification of aircraft and support of instrumentation installations)
- GPS and inertial navigation equipment (to determine precise locations of aircraft)

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**FACILITY/CAPABILITY TITLE: U.S. Army Aviation Technical Test Center (Ft. Rucker, AL)**

**FACT SHEET - Instrumentation/Assets**

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- Instrumentation laboratory (for build-up, check-out and calibration of airborne instrumentation)
- Machine/sheet metal shop (for modification of aircraft and support of instrumentation installations)
- GPS and inertial navigation equipment (to determine precise locations of aircraft)

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ADDITIONAL INFORMATION

Facility/Capability Title: U.S. Army Aviation Technical Test Center  
 (Ft. Rucker, AL Facility)

PERSONNEL

	FY93	FY94	FY95	FY96	FY97	FY98	FY99
Officer	18	18	18	18	0	0	0
Enlisted	32	31	31	31	0	0	0
Civilian	65	65	63	60	0	0	0
Contractor	260	274	259	226	0	0	0
Total	357	388	371	335	0	0	0

Total Square Footage: Shop and hangar space = 97,000

Test Area Square Footage: N/A - Open Air

Office Space Square Footage: 52,320

Tonnage of Equipment: 620

Volume of Equipment: Unknown

Annual Maintenance Cost: \$190,000 included in  
 Inter-Service Support  
 Agreement with Ft. Rucker

Estimated Moving Cost: \$100,000

CAPITAL EQUIPMENT INVESTMENT - TDAP and PBS

	FY93	FY94	FY95	FY96	FY97	FY98	FY99
	\$1,300,000	\$1,000,000	\$1,300,000	\$1,000,000	0	0	0

NOTE: ATTC MISSION CONSOLIDATED UNDER YPG EFFECTIVE FY97.

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**ADDITIONAL INFORMATION**

Facility/Capability Title: U.S. Army Aviation Technical Test Center  
(Ft. Rucker, AL Facility)

**PERSONNEL**

	FY93	FY94	FY95	FY96	FY97	FY98	FY99
Officer	18	18	18	18	0	0	0
Enlisted	32	31	31	31	0	0	0
Civilian	65	65	63	60	0	0	0
Contractor	260	274	259	226	0	0	0
Total	357	388	371	335	0	0	0

Total Square Footage: Shop and hangar space = 97,000

Test Area Square Footage: N/A - Open Air

Tonnage of Equipment: 620

Annual Maintenance Cost: \$190,000 included in  
 Inter-Service Support  
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Office Space Square Footage: 52,320

Volume of Equipment: Unknown

Estimated Moving Cost: \$100,000

**CAPITAL EQUIPMENT INVESTMENT - TDAP and PBS**

	FY93	FY94	FY95	FY96	FY97	FY98	FY99
\$1,300,000	\$1,000,000	\$1,300,000	\$1,300,000	\$1,000,000	0	0	0

NOTE: ATTC mission consolidated under YPG effective FY97.

FACILITY CONDITION

FACILITY/CAPABILITY TITLE: U.S. Army Aviation Technical Test Center  
(Ft. Rucker, AL Facility)

AGE: Approximately 36 years

REPLACEMENT VALUE: \$31 million

MAINTENANCE AND REPAIR BACKLOG: None

DATE OF LAST UPGRADE: 1988-1989

NATURE OF LAST UPGRADE: Total renovation of hangars and shops

MAJOR UPGRADES PROGRAMMED

1. UPGRADE TITLE: Hangar addition.  
TOTAL PROGRAMMED AMOUNT: \$300,000  
SUMMARY DESCRIPTION: 2,000 square feet addition for sheet metal/machine/welding shops
2. UPGRADE TITLE: \_\_\_\_\_  
TOTAL PROGRAMMED AMOUNT: \_\_\_\_\_  
SUMMARY DESCRIPTION: \_\_\_\_\_

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**FACILITY CONDITION**

**FACILITY/CAPABILITY TITLE:** U.S. Army Aviation Technical Test Center  
(Ft. Rucker, AL Facility)

**AGE:** Approximately 36 years

**REPLACEMENT VALUE:** \$15 million

**MAINTENANCE AND REPAIR BACKLOG:** None

**DATE OF LAST UPGRADE:** 1988-1989

**NATURE OF LAST UPGRADE:** Total renovation of hangars and shops

**MAJOR UPGRADES PROGRAMMED**

1. **UPGRADE TITLE:** Hangar addition.

**TOTAL PROGRAMMED AMOUNT:** \$300,000

**SUMMARY DESCRIPTION:** 2,000 square feet addition for sheet metal/machine/welding shops

2. **UPGRADE TITLE:** \_\_\_\_\_

**TOTAL PROGRAMMED AMOUNT:** \_\_\_\_\_

**SUMMARY DESCRIPTION:** \_\_\_\_\_

**ADDITIONAL INFORMATION**

**Facility/Capability Title: U.S. Army Aviation Technical Test Center  
(Molinelli Range, Ft Rucker, AL)**

**PERSONNEL - Molinelle Range - no permanently assigned ATTC personnel.**

	FY93	FY94	FY95	FY96	FY97	FY98	FY99
Officer							
Enlisted							
Civilian							
Contractor							
Total							

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**Total Square Footage: NA (Shop and hangar space)**

**Test Area Square Footage: 12,500 acres**

**Office Space Square Footage: NA**

**Tonnage of Equipment: NA**

**Volume of Equipment: NA**

**Annual Maintenance Cost: NA**

**Estimated Moving Cost: NA**

**CAPITAL EQUIPMENT INVESTMENT**

FY93	FY94	FY95	FY96	FY97	FY98	FY99

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**ADDITIONAL INFORMATION**

**Facility/Capability Title:** U.S. Army Aviation Technical Test Center  
(Molinelli Range, Ft Rucker, AL)

**PERSONNEL - Molinelle Range - no permanently assigned ATTC personnel.**

	FY93	FY94	FY95	FY96	FY97	FY98	FY99
<b>Officer</b>							
<b>Enlisted</b>							
<b>Civilian</b>							
<b>Contractor</b>							
<b>Total</b>							

**Total Square Footage: NA (Shop and hangar space)**

**Test Area Square Footage: 12,500 acres**

**Tonnage of Equipment: NA**

**Annual Maintenance Cost: NA**

**Office Space Square Footage: NA**

**Volume of Equipment: NA**

**Estimated Moving Cost: NA**

**CAPITAL EQUIPMENT INVESTMENT**

FY93	FY94	FY95	FY96	FY97	FY98	FY99

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FACILITY CONDITION

FACILITY/CAPABILITY TITLE: U.S. Army Aviation Technical Test Center  
(Molinelli Range, Ft. Rucker, AL)

AGE: Approximately 4 years

REPLACEMENT VALUE: NA

MAINTENANCE AND REPAIR BACKLOG: NA

DATE OF LAST UPGRADE: June 1991

NATURE OF LAST UPGRADE: Range Instrumentation Control System - computer system that controls the targetry.

MAJOR UPGRADES PROGRAMMED

1. UPGRADE TITLE: \_\_\_\_\_

TOTAL PROGRAMMED AMOUNT: \_\_\_\_\_

SUMMARY DESCRIPTION: \_\_\_\_\_

2. UPGRADE TITLE: \_\_\_\_\_

TOTAL PROGRAMMED AMOUNT: \_\_\_\_\_

SUMMARY DESCRIPTION: \_\_\_\_\_

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15/R

FACILITY CONDITION

FACILITY/CAPABILITY TITLE: U.S. Army Aviation Technical Test Center  
(Molinelli Range, Ft. Rucker, AL)

AGE: Approximately 4 years

REPLACEMENT VALUE: NA

MAINTENANCE AND REPAIR BACKLOG: NA

DATE OF LAST UPGRADE: June 1991

NATURE OF LAST UPGRADE: Range Instrumentation Control System - computer system that controls the targetry.

MAJOR UPGRADES PROGRAMMED

1. UPGRADE TITLE: \_\_\_\_\_

TOTAL PROGRAMMED AMOUNT: \_\_\_\_\_

SUMMARY DESCRIPTION: \_\_\_\_\_

2. UPGRADE TITLE: \_\_\_\_\_

TOTAL PROGRAMMED AMOUNT: \_\_\_\_\_

SUMMARY DESCRIPTION: \_\_\_\_\_

HISTORICAL WORKLOAD

Facility/Capability Title: U.S. Army Aviation Technical Test Center (Ft. Rucker, AL)

T&E FUNCTIONAL AREA		FISCAL YEAR							
		86	87	88	89	90	91	92	93
AIR VEHICLES	DIRECT LABOR	559,838	527,329	547,242	547,384	399,639	411,667	383,658	384,894
	TEST HOURS	12,050	9,825	9,089	7,829	7,878	7,337	5,305	5,183
	MISSIONS	6,025	4,913	4,545	3,914	3,939	3,668	2,652	2,592
AIR VEHICLES	DIRECT LABOR								
	TEST HOURS								
	MISSION								
ARMAMENT/WEAPONS	DIRECT LABOR								
	TEST HOURS								
	MISSION								
OTHER T&E	DIRECT LABOR								
	TEST HOURS								
	MISSION								
OTHER	DIRECT LABOR								
	TEST HOURS								
	MISSION								

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**HISTORICAL WORKLOAD**

**Facility/Capability Title: U.S. Army Aviation Technical Test Center (Ft. Rucker, AL)**

T&E FUNCTIONAL AREA		FISCAL YEAR							
		86	87	88	89	90	91	92	93
AIR VEHICLES	DIRECT LABOR	559,838	527,329	547,242	547,384	399,639	411,667	383,658	384,894
	TEST HOURS	12,050	9,825	9,089	7,829	7,878	7,337	5,305	5,183
	MISSIONS	6,025	4,913	4,545	3,914	3,939	3,668	2,652	2,592
AIR VEHICLES	DIRECT LABOR								
	TEST HOURS								
	MISSION								
ARMAMENT/WEAPONS	DIRECT LABOR								
	TEST HOURS								
	MISSION								
OTHER T&E	DIRECT LABOR								
	TEST HOURS								
	MISSION								
OTHER	DIRECT LABOR								
	TEST HOURS								
	MISSION								

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**DETERMINATION OF UNCONSTRAINED CAPACITY**

**FACILITY/CAPABILITY TITLE:** U.S. Army Aviation Technical Test Center (Ft. Rucker, AL)

ANNUAL HOURS OF DOWNTIME	1	<u>6,415 fac hrs per aircraft</u>
AVERAGE DOWNTIME PER DAY (LINE 1/365)	2	<u>17.6 fac hrs</u>
AVERAGE HOURS AVAILABLE PER DAY (24 - Line 2)	3	<u>6.4 fac hrs</u>

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TEST TYPES	TEST AT ONE TIME	WORKLOAD PER TEST PER FACILITY HOUR	WORKLOAD PER FACILITY HOUR	UNCONSTRAINED CAPACITY PER DAY (LINE 3 X TOTAL )
4	5	6	7	8
<u>Lead-the-Fleet</u>	<u>4</u>	<u>1,939 flt hrs/969 msn/</u> <u>3.5 fac hrs</u> msn	<u>2.28 flt hrs/fac hr</u>	<u>58.43 flt hrs</u>
<u>Flight Systems</u>	<u>2</u>	<u>3,244 flt hrs/1,622 msn/</u> <u>3.5 fac hrs</u> msn	<u>1.14 flt hrs/fac hr</u>	
_____	_____	_____	_____	
_____	_____	_____	_____	
<u>"TYPICAL"</u>	<u>10</u>	<u>2 flt hrs-msn/3.5 fac hrs</u>	<u>5.71 flt hrs/fac hr</u>	
		<u>TOTAL</u>	<u>9.13 flt hrs/fac hr</u>	

ANNUAL  
UNCONSTRAINED  
CAPACITY  
9 21,327 flt hrs  
or  
10,663 missions

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**DETERMINATION OF UNCONSTRAINED CAPACITY**

**FACILITY/CAPABILITY TITLE:** U.S. Army Aviation Technical Test Center (Ft. Rucker, AL)

<b>ANNUAL HOURS OF DOWNTIME</b>	<b>1</b>	<u>6,415 fac hrs per aircraft</u>
<b>AVERAGE DOWNTIME PER DAY (LINE 1/365)</b>	<b>2</b>	<u>17.6 fac hrs</u>
<b>AVERAGE HOURS AVAILABLE PER DAY (24 - Line 2)</b>	<b>3</b>	<u>6.4 fac hrs</u>

<b>TEST TYPES</b>	<b>TEST AT ONE TIME</b>	<b>WORKLOAD PER TEST PER FACILITY HOUR</b>	<b>WORKLOAD PER FACILITY HOUR</b>	<b>UNCONSTRAINED CAPACITY PER DAY (LINE 3 X TOTAL )</b>
<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
<u>Lead-the-Fleet</u>	<u>4</u>	<u>1,939 flt hrs/969 msn/ 3.5 fac hrs msn</u>	<u>2.28</u> <u>2.23 flt hrs/fac hr</u>	<u>58.5 flt hrs</u>
<u>Flight Systems</u>	<u>2</u>	<u>3,244 flt hrs/1,622 msn/ 3.5 fac hrs msn</u>	<u>1.14 flt hrs/fac hr</u>	
_____	_____	_____	_____	
_____	_____	_____	_____	
<u>"TYPICAL"</u>	<u>10</u>	<u>2 flt hrs-msn/3.5 fac hrs</u>	<u>5.71 flt hrs/fac hr</u>	
		<b><u>TOTAL</u></b>	<b><u>9.13 flt hrs/fac hr</u></b>	<b>ANNUAL UNCONSTRAINED CAPACITY</b>
				<b>9</b> <u>21,337.7 flt hrs</u>
				<u>or</u>
				<u>10,668 missions</u>

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**U.S ARMY AVIATION TECHNICAL TEST CENTER**

**AIRWORTHINESS QUALIFICATION TEST DIRECTORATE  
(AQT D)**

**EDWARDS AIR FORCE BASE, CA**

## SECTION 2: CAPACITY & TECHNICAL RESOURCES

Use the forms and accompanying instructions in appendix A to provide answers for this section.

### 2.1 WORKLOAD

Annual workload will be reported in units as follows: for open air ranges involving flight testing, report test hours and missions. For all other T&E facilities, direct labor hours and test hours must be reported; if available, missions must be reported. If an estimate of test hours based on direct labor hours is necessary, refer to the instructions for Determination of Unconstrained Capacity on page 28.

The annual workload for ATTC (Edwards AFB) is 1,726 test hours and 863 test missions.

#### 2.1.A. Historical Workload

2.1.A.1 What amount of workload have you performed each year from FY86-93? Use the Historical Workload Form provided in appendix A of this package.

See Historical Workload Form.

#### 2.1.B Forecasted Workload

2.1.B.1 Identify all appropriations (by program element) that generated a requirement for testing or test support, or are expected to generate a requirement for testing/test support in your Military Department (by functional areas of air vehicles, electronic combat (EC), armament/weapons, and other test) for FY92, FY93, and each year in the FY95 FYDP. The Military Departments will provide total funding amounts appropriated for all PEs identified in each functional area shown above.

<u>PE/SSN</u>	<u>FY92</u>	<u>FY93</u>	<u>FY94</u>	<u>FY95</u>	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>
<u>Air Vehicles</u>								
64223 327	X	X	X	X	X	X	X	X
64816 C31	X	X	X	X	X			
64223 397		X						
62211 47A	X	X	X	X	X	X	X	X
63003 436	X	X	X	X	X	X	X	X
63003 313		X	X	X	X	X	X	X
A05002	X	X	X	X	X	X		
A06605	X	X	X	X	X	X		
A08300								X
A10500			X					
AA0270					X	X	X	X
AA0400	X	X	X	X	X	X	X	X
AA0492	X	X	X	X	X	X	X	X

2.1.B.2 What amount of test work was performed at your facility (in workyears by functional areas of air vehicles, electronic combat, armament/weapons, other tests, and other) in FY92 & FY93?

	Workyears <u>FY92</u>	Workyears <u>FY93</u>
Air Vehicles	73	74
Electronic Combat	0	0
Armament/Weapons	0	0

2.2. UNCONSTRAINED CAPACITY

2.2.A Unconstrained capacity is the maximum capacity of this facility, assuming manpower and consumable supplies (excluding utilities) are unlimited, but allowing for expected downtime (maintenance, weather, darkness (daylight), holidays, etc.). Provide your response by filling out the Determination of Unconstrained Capacity Form in accordance with the instructions in appendix A.

See Unconstrained Capacity Form.

2.2.B Is this capacity limited by the physical characteristics of the facility itself, safety or health considerations, commercial utility availability, etc?

No.

2.3 TECHNICAL RESOURCES

2.3.A Does the facility have a specified war-time or contingency role established in approved war plans? Yes/No

Yes.

2.3.B Does the facility provide a T&E product or service, without which irreparable harm would be imposed on the test mission of the host installation?

No.

2.3.B.1 On the test mission of any other activity?

No.

2.3.B.2 On any other mission deemed critical to the operational effectiveness of the armed forces of the United States?

No.

### SECTION 3: MEASURES OF MERIT

This section relates the measures of merit and the required data to the four criteria that have been established for Military Value. The four military value (MV) criteria are:

- CRITERION 1: The current and future mission requirements and the impact on operational readiness of the Department of Defense's (DOD) total force.
- CRITERION 2: The availability and condition of land, facilities and associated airspace at both the existing and potential receiving locations.
- CRITERION 3: The ability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential receiving locations.
- CRITERION 4: The cost and manpower implications.

#### 3.1 OVER-ARCHING MEASURES OF MERIT

The over-arching measures of merit are listed with accompanying questions (or data requirements) intended to elicit standard information upon which the cross-service analyses can be based, and on which the Joint Cross-Service Groups can base their reviews of the Military Department analyses. Additional specific measures of merit are shown under individual functional areas. The numbers in parentheses ( ) before each measure of merit indicate the Base Realignment and Closure (BRAC) selection criteria for military value.

**3.1.A. Interconnectivity (MV I) - Measure of Merit:** Extent of linkage of this facility with other facilities and assessment of single-node failure potential.

**3.1.A.1** What percentage of total test workload in FY93 involved the real-time or near real-time exchange of data or control with another facility? List the facilities you interconnect to for test, and identify how many are simultaneous activities. Identify these as to whether they are internal and external to the site.

The estimated percentage of total Airworthiness Qualification Test Directorate (AQT) test workload conducted at Edwards Air Force Base (EAFB) in FY93 that involved the real-time or near real-time exchange of data or control between the test aircraft and another facility is 100.

AQTD currently interconnects to the following facilities:

<u>Facility</u>	<u>Internal</u>	<u>External</u>	<u>Simultaneous Activity</u>
NASA	X		X
SOUTH BASE	X		X
NORTH BASE	X		X
PRECISION MEASUREMENT & ELECTRONICS LABORATORY	X		X
METEOROLOGICAL FACILITY		X	X
R2508 FAA RADAR FACILITIES		X	X
EDWARDS TOWER RAPCON FACILITY		X	X

**3.1.A.2** If your facility were to be closed, would there be an impact on other facilities to which you are connected? Yes/no. If yes, explain.

Yes. AQTD provides video telemetry coverage from a specially-equipped UH-1 helicopter for all space shuttle landings at EAFB. Also, we provide airspeed calibration support to the Air Force and the National Aeronautical Space Administration (NASA) using our T-34C pace aircraft. There is no other such aircraft at EAFB for pace in the T-34C airspeed regime. We also provide helicopter orientation flights for new entrants to the Air Force Test Pilot School. We have technical exchanges with Air Force Combined Test Force personnel concerning new technologies in each of our aircraft under test.

**3.1.B Facility Condition (MV II) - Measure of Merit:** Current and planned status of the T&E facilities for supporting assigned test missions. Fill out the Facility Condition Form in appendix A in accordance with the instructions.

**3.1.C Environmental and Encroachment Carrying Capacity (MV II) - Measure of Merit:** Extent of current and future potential environmental and encroachment impacts on air, land, and sea space for testing.

**3.1.C.1** Do you have limiting (current or future) environmental and/or encroachment characteristics associated with the installation/facility? Yes/no. If yes, explain.

Yes. There are limiting environmental characteristics such as air emissions constraints. However, the use of emission control technologies will enable future growth.

3.1.C.2 How much could workload be increased before this limit would be reached? Express your answer as a percentage of your current workload.

It is not possible to precisely predict how much the installation workload can be increased because of numerous unknowns. However, based on a review of the worst-case air emissions source area, it is roughly estimated that a 15 to 20 percent increase could be accommodated under existing and known future air emission limits.

3.1.C.3 Do you currently operate under temporary permits of an environmental nature or voluntary agreements (including treaties) of any sort that deal with the environment? If so, when do they expire? Please describe.

No. Currently, we do not operate under any temporary permits or voluntary agreements of an environmental nature.

3.1.C.4 What is the total population within a 50 mile radius? 100-mile radius? 150-mile radius? 200-mile radius?

	<u>Approximately</u>
50 mile radius -	313,000
100 mile radius -	16,070,000
150 mile radius -	18,028,120
200 mile radius -	20,489,920

While the Air Force Flight Test Center (AFFTC) is located in a sparsely populated area, it is very near one of the largest urban population centers in the United States.

3.1.C.5 Identify the commercial air/land/sea traffic routes, public use of air/land/sea space, and frequency of use for each that affects or could affect, mission accomplishment in your air, land, or sea space.

None. While there are some potential problems for very high altitude aircraft (29,000 feet and up), there are no such problems in the flight regimes in which AQT tests (under 15,000 feet).

3.1.C.5.A How many test missions per year are canceled due to commercial or public use?

None.

3.1.C.6 What is the number of test missions that have been canceled due to encroachment in each of the last 2 years?

None.

**3.1.D Specialized Test Support Facilities and Targets (MV I) - Measure of Merit:** Extent to which specialized test support facilities and targets are available.

**3.1.D.1** Do you have specialized facilities that are required to support you in conducting your test operations at your facility (e.g., aerial delivery load build up facilities; parachute drying towers/packing facilities; paratroop support facilities; specialized fuel storage and delivery systems; mission planning facilities; corrosion control, painting, washing facilities; and specialized maintenance facilities such as avionics intermediate shops)? Yes/no. If yes, please describe.

Yes.

1. Corrosion Control Facility, 50,600 square feet (SF)

Designed to accommodate aircraft up to C-18 (ARIA) 707-320 size, this is state of the art for environmental controls, and handles a wide range of corrosion control processes. Specialized corrosion control processes substantially reduce or eliminate hazardous waste and environmental pollution. All meet current California Occupational Safety and Health Act (OSHA) standards.

2. Aircraft Dynamic Research Engineering, Maintenance, Manufacturing, and Modification Facility, 419,849 SF

A combination hangar and an industrial complex that encompasses over 9 acres (under one roof). Specialize in repair, overhaul and local manufacture of aeronautical and non-aeronautical parts and equipment. Machining and welding capabilities include standard and precision metal working machines, specializing in fabricating, reworking, designing, and repair of metal parts and components. Aircraft structural maintenance and sheetmetal capabilities include minor and major structural repair, modification, technical order compliance on aircraft that includes specialized fabrication with aircraft metals, plastics, fiberglass, composites, and bonded structural parts, and fabricating and testing metal tubing, conduits, and cables or wire rope. Facilities for pneudraulics, battery maintenance, and hydraulics are also available.

3. Weight & Balance Facility, 121,500 SF

Aircraft weighing and center of gravity. Accommodates all aircraft in the DOD and NASA inventories.

4. Horizontal Thrust Measuring Facility,  
965,652 SF (Open Air Engine Test Stand)  
884 SF (Underground)

SEE ERATA PG 123

Calibrating/measuring installed engine thrust and performance. Used on turbo-prop Army aircraft (e.g., C-12). Facility extends 4 stories underground.

5. Stores Weight Inertia System, 2,788 SF

Stores measurement of weight, centers of gravity, & moments of inertia.

6. Air Data Calibration Facility, 49 SF

Low Altitude Airspeed Calibration

7. Technical Support Facility (TSF) Entry Control Building, 6,200 SF

Security Visitor Control Center. Entry control/processing facility containing four small conference rooms and waiting area for visitors.

8. TSF Maintenance/ Supply Storage Warehouse/Engine Storage, AGE Maintenance, Machine/Composite/ Battery Shops, 64,195 SF

Facility maintenance building contains a shop and office area and is used primarily for parts storage. Supply storage warehouse is a two supply mezzanine storage facility, alarmed for security with some office space. Engine storage, AGE maintenance, machine/composite/battery shops facility is specifically designed to support large scale test programs such as the B-2.

9. Dry Lakebeds:

Cannot be replicated. Rosamond and Rogers Dry Lakebeds are a unique natural resource that provide 68 miles of marked and maintained emergency landing runways, the longest of which is 7 miles. Frequently used for Army high-risk tests.

3.1.D.2 Are specialized targets required to support this facility? Yes/no. If yes, explain.

No.

3.1.D.2.A Have the specialized targets been validated? Yes/no. If yes, by whom?

Not applicable.

3.1.E Expandability (MV III) - Measure of Merit: Extent to which an installation/facility is able to expand to accommodate additional workload or new missions.

3.1.E.1 Other than the expandability inherent in unconstrained capacity, discussed earlier, are there any special aspects of this facility that enhance its ability to expand output within each T&E functional area? Yes/no. If yes, explain.

Yes. Office, hangar, and ramp space exist to approximately double aircraft and personnel strength. Nearly any type of air vehicle testing could be accommodated. Land is available for added facilities.

3.1.E.1.A Can you accept new Test and Evaluation (T&E) workload different from what you are currently performing? Yes/no. If yes, identify by T&E functional area and test type.

Yes. T&E functional areas of air vehicle, electronic combat, armament/weapons, and others. Test types Test and Evaluation, Science and Technology, Developmental Engineering, In-Service Engineering, Training and Doctrine, and other. All of the above areas and types are done today at AFFTC. Any or all can be significantly increased and others not mentioned added without impact.

3.1.E.2 Are airspace, land, and water areas--adjacent to areas under DOD control--available and/or suited for physical expansion to support new missions or increased footprints? Yes/no. If yes, please explain.

Yes. Edwards and China Lake enjoy the use of a very large and relatively unencumbered piece of airspace that is restricted for DOD use: the R-2508 complex, which includes R-2505, R-2506, R-2515, and R-2524. The R-2508 complex is jointly managed and controlled by the Commanders of NAWCWPNS, EAFB, and the National Training Center (NTC) at Fort Irwin. Both airspace and landspace adjacent to the R-2505 restricted area and the R-2524 electronic combat range (ECR) are available for expansion to support new missions or increased footprints. R-2505 is restricted from surface to infinity and overlies DOD-controlled land. R-2505 is within the restricted airspace R-2508; however, R-2508 is only restricted above 20,000 feet. Areas within R-2508 below the restricted altitude, over both public and private land, are presently used for the flight testing of cruise missiles and unmanned aerial vehicles that can be kept under visual observation and can be controlled from chase aircraft. However, there are requirements for longer flights of weapon systems that cannot be kept under visual observation by chase aircraft due to the weapon systems' speed or altitude. The area within R-2508 available for expansion of launch points for such systems is located north of R-2505. Controlled Firing Areas (CFAs) could be established within this expansion area that could give direct flight ranges of 70 to 90 miles from launch to impact within R-2505. A CFA is an airspace approved by the Federal Aviation Administration (FAA) wherein activities are conducted under conditions so controlled as to eliminate hazards to nonparticipating aircraft and to ensure the safety of persons and

property on the ground. If this CFA is below 3,000 above ground level (AGL), or supersonic flight is required, a formal environmental assessment is required. Additionally, approval for the possibility of launch debris or a nonfunctioning missile impacting the landscape under the launch point would be required from the land owner. This land area north of R-2505 is sparsely populated and is composed, to a large extent, of public lands under the control of the Bureau of Land Management (BLM).

**3.1.E.3** Is the facility equipped to support secure operations? Yes/no. If yes, to what level of classification (Confidential, Secret, Top Secret, Special Access Required)?

Yes. AFFTC regularly operates multiple large programs at the Top Secret, TS SAR, and SCI levels. Individual facilities are available at these levels, and complexes for up to 2,000 people, secure control rooms, and facilities for many small aircraft or eight large aircraft are available. Full secure communications and data acquisition transmission are available as well as total range encryption. AOTD has used these facilities for classified test missions in the past.

SEE  
ERRATA  
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**3.1.E.4** Are there any capital improvements underway or programmed in the 95 FYDP, that would change your capacity/capability? Yes/no. If yes, explain.

No.

**3.1.F Uniqueness (MV I) - Measure of Merit:** Extent to which the facility is one-of-a kind.

**3.1.F.1** Is this a one-of-a-kind facility within the DOD? Yes/no. If yes, describe.

The AOTD facility is not unique, however, it is located on an installation which is uniquely suited to conducting flight test. No other DOD air vehicle test facility was planned, designed, and constructed as a flight test center to safely test up to the largest aircraft imaginable on a site specifically researched and selected as the best location in the nation for that purpose in the post-World War II era. Key to this is sparse population, land availability, air quality, unparalleled flying weather, and the dry lakebeds for safety. Planned or existing aircraft have yet to exceed the built-in AFFTC test capability. The true uniqueness of this test complex is measured by the fact that NASA chose to locate and build the nation's premier civilian research/test facility collocated with AFFTC. The Navy and Marine Corps come to Edwards AFB to conduct all of their most hazardous tests on both new and operational improvements.

**3.1.F.1.A** Within the U.S. Government? Yes/no. If yes, describe.

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NASA chose to locate and build the nation's premier civilian research/test facility collocated with AFFTC. The AFFTC is also the much used alternate recovery site for the space shuttle.

3.1.F.1.B Within the U.S.? Yes/no. If yes, describe.

Many foreign nations also run their tests here. All commercial aircraft manufacturers use the AFFTC complex for their most hazardous certification tests. DOD, as well as commercial aircraft, head for Rogers Dry Lakebed when they have in-flight emergencies.

3.1.F.2 Are you currently providing support to DOD users outside your military department? Yes/no. If yes, indicate percentage of total workload in FY92 and FY93 by military department.

Yes. AQTD is currently providing support to the following:

	<u>FY92</u> <u>Percent</u>	<u>FY93</u> <u>Percent</u>
NASA space shuttle landings	3	3
Air Force C-17 photo chase		3
Coast Guard EC-130	4	

3.1.G Available Air, Land, and Sea Space (MV II) - Measure of Merit: Extent to which controlled test ranges satisfy weapons system test requirements.

3.1.G.1 How many square miles of air, land, and sea space are available to support test operations?

Airspace

R-2508 Complex - 19,210 Square Statute Miles

Land Space

R-2508 Complex - 3,220 Square Statute Miles

3.1.G.2 Who owns and or controls the land under the restricted airspace you use?

<u>Land Space</u>	<u>Owns/Controls</u>	<u>Square Statute Miles</u>
R-2508 Complex	DOD	3,220
	DOA	1,900
	DOI	6,600
	Private	1,500
	State	1,000

3.1.G.3 How much of this is restricted airspace, and what altitude limits are associated with the restricted areas?

Total restricted airspace = 27,131 square statute miles

R-250

14,300 - Of which 4,292 miles are surface to unlimited and 10,008 miles are from FL 200 to unlimited.

**3.1.G.4** Do you have special use airspace other than supersonic airspace? Yes/no. If yes, for what types of test (e.g. terrain following radar)? Dimensions? Will it support simultaneous users? Yes/no.

AQTD does not own any, but has access to all of the following:

The EFTR current weapons capabilities consists of accurately evaluating weapon/aircraft avionics, weapon trajectory, and precision scoring. Located on the EFTR is:

- Precision Impact Range Area (PIRA). The PIRA was established for the conduct of air-to-ground gunnery, precision bombing (PB) tests, photo resolution, spin testing, aerial decelerator tests, and other tests requiring precision instrumentation. The PIRA is located in the southeast portion of the EAFB reservation and covers approximately 75 square miles. Supersonic approaches to the PIRA below 15,000 feet mean sea level (MSL) are accommodated in the Alpha Corridor (20 X 5 miles) which is adjacent to the PIRA and runs west to east. The PIRA is subdivided into the West Range, the East Range and the PB-6 Range. Each Range can be scheduled individually, or in conjunction with one another, dependent upon mission requirements. The PIRA will support simultaneous users.

-- West Range consists of seven precision bombing circles (two with scoring instrumentation), an Infrared (IR) Target, and dual Air-To-Ground Ranges (DAGRAG). PB-1 and PB-10 are prime instrumented bombing targets scored by triangulation from towers equipped with video camera scoring. Real-time scoring information is accurate to approximately 2 feet and can be voice transmitted to the aircrew less than 1 minute after impact. Target PB-8, a 1.2-square mile cleared area with a prepared surface, is used primarily for dropping dummies, parachutes, capsules, tip tanks, drone vehicles, and other stores when recovery of the item is required. Three other low-level bombing targets (PB-2, PB-3, and PB-9) can be used for testing when specific altitude, speed, and mode of release dictate and are scored by cinetheodolite data. Target PB-4 is a radar target area equipped with four corner reflectors which are placed back to back to provide identification points for offset bombing on established bombing targets. The latitude and longitude of PB-4 are contained in computer software and compared with airborne radar data to establish the aircraft location in relation to the target. The IR target is a billboard-like target, approximately 50 feet by 30 feet, and is used for dynamic testing of IR sensors, television sensors, and photographic equipment where resolution and background information are required. To assist in locating the target when visibility is marginal, a radar corner

reflector is mounted on the left side of the target structure 20 feet above ground level.

-- The East Range consists of two precision bombing circles and an air-to-ground gunnery and rocket range. PB-12 is an instrumented bombing circle similar to PB-1 and PB-10 on the West Range. PB-5 is an uninstrumented bombing target for use when scoring is not required. The East Gunnery and Rocket Range is configured for a left-hand traffic pattern for strafing and bombing with five strafe targets and a bombing circle. The range has future expansion capabilities for a second traffic pattern, 15 additional strafe targets, and an additional bombing circle.

--The PB-6 Range, located north of the PIRA East Range, is used for gunfire from helicopters and is a primary jettison area for non-explosive ordnance.

- The Alpha Corridor is a west-to-east airborne entry corridor into the PIRA and is normally scheduled in conjunction with PIRA missions. The Alpha Corridor begins at the southwest corner of the EAFB reservation and extends to the western boundary of the PIRA and covers approximately 100 square miles. The Alpha Corridor will support simultaneous users.

- The DAGRAG. A conventional low-altitude air-to-surface gunnery, bombing, and rocket range with an associated defined airspace reservation. The DAGRAG is located on the western end of the PIRA and is divided into a north range with a right-hand traffic pattern and a south range with a left-hand traffic pattern. The division of the north and south ranges is defined by a line running true east and west from the east shore of Rogers Dry Lake through the control tower. Each DAGRAG range consists of one bomb or rocket circle, 10 cloth strafe targets, two skip bomb targets and two flank observation towers. One common control tower serves both the north and south ranges. The ground around each strafe target is periodically pulverized to reduce the danger of ricochets. Scoring is accomplished manually by counting the holes in the target upon completion of the mission. When a more accurate score is desired for post-flight analysis, the target is taken to a scoring facility where the holes can be measured for their angle and distance from the target center to within 3 inches. The DAGRAG will support simultaneous users.

- The Photo and IR Resolution Range. Uses PIRA targets for testing and resolution of airborne photographic equipment and film and for testing airborne IR tracking systems. Located within the PIRA, the IR Resolution Range covers an area approximately 2 miles wide and 21 miles long in the southeast portion of the EAFB reservation. The range consists of 18 bar-type resolution targets of various sizes, one tri-density target, five circle targets, and 14 check-cross targets. Photo resolution patterns are constructed in accordance with Military

Standard (MIL-STD) 150. The photo and IR Resolution Range will support simultaneous users.

- The Photo and IR Tactical Range. Consists of a variety of targets used to determine the accuracy and fidelity of airborne cameras and radars. Located within the Alpha Corridor and the PIRA, the Photo and IR Tactical Range is comprised of 33 tactical targets consisting of aircraft, land vehicles, tanks, missiles, guns, and bunkers at locations principally along the photo and IR Resolution Range. The Photo and IR Tactical Range will support simultaneous users.

- Radar Fidelity and Geometric Range (RADFAG). The RADFAG is a passive reflector range that uses corner reflectors and Luneberg lenses to test and evaluate forward-looking and side-looking radar systems. The South RADFAG Range is located on Buckhorn Lake approximately 6 miles southwest of the main base runway 04/22. The south range includes six square arrays, each consisting of 16 reflectors, and six L-shaped arrays, each consisting of nine reflectors. An assortment of other corner reflectors and Luneberg lenses is available for installation to simulate a tactical situation or to satisfy a wide variety of flight test requirements. Other than the reflectors, there are no metal parts to cause extraneous signal returns. Subsonic and supersonic runs can be permitted from ground level to unlimited altitudes over the entire range. The North RADFAG Facility is a passive radar reflector array consisting of 80 trihedral corner reflectors enclosed in an area 6,000 feet square. Mounted directly in the array center, surveyed to first order, and tied to the Contraves cinetheodolite survey network, is an omnidirectional quadrihedral reflector used to navigate on the array. The array is located in the north-west corner of the Edwards AFB reservation. The RADFAG will support simultaneous users.

- The Terrain Following Routes. R-2508 contains several TF/TA routes within controlled airspace. The primary TFR routes is a 1 mile by 26 mile corridor calibrated to define ground variations within 2 feet. and highly instrumented for both TM and TSPI needed for real-time and post-flight analysis. The course extends east from Rogers Dry Lake to the east edge of the EAFB reservations. Haystack Butte lies under the course and rises 412 feet above the surrounding terrain. The normal approach to Haystack Butte is made in a straight course which is directly over Runway 25 on the lakebed. The final approach is over terrain that has a gradual rise of 1.0 to 1.5 degrees. The course is charted with a GPS precise survey used to develop the Digital Terrain Elevation Data (DTED) base with survey points used to develop a 10 foot grid +/- 1 foot over the 1 mile by 26 mile course point to point accuracy. Overflight data are digitized and profiles are provided for post-flight analysis. Also associated with the TFR route is a low altitude supersonic corridor for high speed TF/TA system evaluation and verification. The TFR routes can support simultaneous users.

- Infrared Target System. Allows for dynamic testing of IR sensors, television sensors, and photographic equipment for spacial frequency as a function of target contrast, target temperature differential, altitude and airspeed. The system will support simultaneous users.

- Instrumented routes (IR). The IR-200 route is a 5-mile corridor that extends from the west coast (Point Mugu/Vandenberg AFB), transitions over land through unpopulated areas, and enters R-2508 on the south east corner. It then proceeds north through China Lake Ranges and exits R-2508 at the north east corner. The route then transitions through the Nullis and Tonapah test ranges and proceeds north into the Dugway Proving Ground and UTTR to various targeting areas for terminal impacts. The IR-200 corridor covers approximately 600 nautical miles. The entire route is surveyed and can be scheduled for entry or exit at designated way points. IR-200 was established for the cruise missile program and as such a TERCOM Mapping data base is available for the entire route. The layout of the course also allows for emergency recoveries at each one of the ranges it transitions as well as associated ground instrumentation for test evaluation. The IR-200 route will support simultaneous users.

- Designated Spin Areas. There are four designated spin areas on the EAFB Flight Test Range used for obtaining aircraft spin data, evaluating aircraft performance during high angle of attack maneuvers, spin shute testing and test pilot instruction concerning various spinning methods and recovery techniques.

3.1.G.5 Is the airspace over land or water? List the number of square miles over each.

Over land - 47,847 square miles

3.1.G.6 Identify known or projected airspace problems that may prevent accomplishing your mission.

No known problems.

3.1.G.7 What is the maximum straight line segment in your airspace in nautical miles?

R-2508 - 156 nautical miles

3.1.G.8 What public airspace have you used for overflight of weapons systems in the past? What was the nature of those tests? Do you anticipate being able to use that same public airspace for similar tests in the future? Yes/no.

AQTD has no need to use public airspace at AFFTC. All testing here is done within restricted airspace.

**3.1.H Geographic/Climatological Features (MV II) - Measure of Merit:** Extent to which types of climatic/geographic conditions represent world-wide operational conditions.

**3.1.H.1** Describe the topography and ground cover/vegetation within your test airspace (include nap-of-the-earth capability). Identify all of the following that apply: mountains, forest/jungle, cultivated lowland, swamp/riverine, desert, and sea. State the area of each in square miles.

The EAFB complex includes many capabilities to test terrain following (TF) systems. Within minutes of takeoff are varied terrains which include level, moderately rolling, rough, and many other low-level routes. Sand dunes and towers are also located within the EAFB complex. The Harper's Lake route, used for TF testing over level terrain, is located 33 miles from the EAFB runway and is approximately 41 miles in length. The Saltdale route, used for TF testing over moderately rolling terrain, is located 20 miles from the EAFB runway and is approximately 13 miles in length. The Rough I route, used for TF testing over rough terrain, is located 18 miles from the EAFB runway and is approximately 53 miles in length. Ridges are located west of the Saltdale route approximately 26 miles from the EAFB runway. Desert Butte and Haystack Butte, the isolated obstacle routes, are located 8 miles from the EAFB runway and are approximately 8 miles in length, providing 400-foot high isolated obstacles. Additional low-level routes which are used for pilot proficiency and integrated system evaluation (ISE) testing are the Blue, Blue/Black, Amber, Green, and Red. The Eureka Valley San Dunes which are 700+ feet AGL are located 135 miles from the EAFB runway and provide the capability to test the TF system against San Dunes. Independence Tower which is 306 feet AGL is located 115 miles from the EAFB runway and provides the capability to test the TF system against towers. The Panamint and Saline Valleys which allow chaff dispensing, provide the capability to test the TFR in the presence of chaff. These valleys are located approximately 82 and 115 miles, respectively from the EAFB runway.

**3.1.H.2** Are there features of the local geology or soil conditions that enhance or inhibit any types of test?

The evaluation of a total weapon system requires that testing be conducted in as near an operational environment as possible. This not only requires a simulated operational profile but also conducting tests over various terrain, clutter, and atmospheric environments. For example, testing a terrain following/avoidance radar system requires conducting tests over various terrains, trees, clutter, mountains, snow, sand, etc. All of these environments are available in the R-2508 or adjacent DOD test ranges. AOTD plans to test the Special Operations aircraft, MH-47E and MH-60K, terrain following/avoidance radar system at EAFB because of the excellent terrain and support for that type of testing.

3.1.H.3 Did you have to go to other geographical locations to satisfy test requirements? Yes/no and explain. If yes, provide as a percent of overall workload per year for the past 8 years.

Yes. Helicopter hovering and low-speed performance and handling qualities are affected by the proximity to the ground as well as the density altitude of the air. Therefore, in-ground-effect testing must be conducted at a test site near sea level, 5000 feet, and 10,000 feet MSL. Such sites are all within one UH-1 fuel load of the AQTD facility at EAFB. Frequently used sites include Bakersfield (sea level), Bishop (5,000 feet), and Coyote Flat (10,000 feet). In addition, in-flight icing tests require a test site with not only cold weather, but also both areas of clear air (for artificial icing using AQTD's helicopter in-flight spray system (HISS) and icing clouds. AQTD leases a facility at Duluth, MN, from the Air National Guard as an icing test support facility. Percentage of usage is not available, but icing tests are conducted for approximately 3 months each winter, and at least 1 month of testing is usually accomplished at high or low altitude test sites each year. Additionally, AQTD has used the Climatic Laboratory at Eglin AFB, FL, a unique facility within the U.S.

3.1.H.4 What is the number of days per year the average temperature is below 32 degrees F? Between 32 and 95 degrees? Above 95 degrees?

	<u>Number of Days Per Year</u>
Average temperature below 32 degrees F	0
Average temperature between 32 and 95 degrees F	365
Average temperature above 95 degrees F	0

3.1.H.5 What is the number of days per year the average relative humidity is below 30%? Between 30 and 80%? Above 80%?

	<u>Number of Days Per Year</u>
Average relative humidity below 30%	282
Average relative humidity between 30 and 80%	68
Average relative humidity above 80%	15

3.1.H.6 What is the number of test missions per year (1985 - 1993) canceled due to weather?

Data is not available. Most of AQTD's testing requires very smooth air, therefore, nearly all testing is conducted early in the morning. Tests are usually suspended as afternoon thermals begin. That also corresponds to the time that the aircraft need to start into daily maintenance to be ready for the next day's missions.

3.1.H.7 What is the number of test days per year (1985 - 1993) canceled due to weather?

One day each 4.3 years on average, a snow storm closes the base for a day which results in a test day canceled due to weather.

} see  
EAFB  
pg 125

3.1.H.8 What is the number of days per year the visibility is less than 1 mile? Between 1 and 3 miles? Greater than 3 miles?

	<u>Number of Days Per Year</u>
Visibility less than 1 mile	1
Visibility between 1 and 3 miles	4
Visibility greater than 3 miles	360

It should be noted that for the 360 days, this greater than 3-mile visibility is not just for a small afternoon segment of the day, but for the full 24 hours. The average visual range is 45 miles at EAFB and 55 miles at China Lake.

3.1.H.9 What is the average number of flying days available per year for flight test? Provide historical average from the past 8 years.

Test days are defined as VFR conditions (visibility better than 3 miles). On this basis, there are 363 average flying days available per year for flight test.

3.1.H.10 What percentage of the time are your test operations restricted due to weather?

Bad weather is the exception rather than the rule. Weather restriction (visibility less than 3 miles) amount to 0.4% of the time.

### 3.2 AIR VEHICLES

This functional area includes facilities involved in the testing of all air vehicles/subsystems/components whether fixed wing or rotary wing and test of major subsystems (e.g., avionics, engines, and sensors). This includes flight testing and the testing involving pre- and post-flight preparation and processing of the air vehicle. Unmanned air vehicles and cruise missiles are included.

3.2.A Supersonic Airspace (MV II) - Measure of Merit: Extent of range size to support weapon system requirements.

3.2.A.1 Do supersonic corridors or areas exist? Yes/no.

Yes.

SEE PAGE 125

3.2.A.2 Where are they located relative to your airfield?

<u>Edwards Supersonic Areas:</u>	<u>Location</u>
High Altitude Supersonic Corridor	Over the base
Black Mountain Supersonic Corridor	15 NM north of base
Alpha Corridor/PIRA	On the base
Panamint Supersonic Area	135 NM north of Panamint MOA

3.2.A.3 At what altitude (upper and lower altitude)?

<u>Edwards Supersonic Areas:</u>	<u>Altitude</u>
High Altitude Supersonic Corridor	FL 300 to Unlimited
Black Mountain Supersonic Corridor	500 AGL to Unlimited
Alpha Corridor/PIRA	Surface to Unlimited
Panamint Supersonic Area	5,000' MSL to Unlimited

3.2.A.4 Over land or water? What size and shape (length and width)?

OVER LAND:

<u>Edwards Supersonic Areas:</u>	<u>Length/Width</u>
High Altitude Supersonic Corridor	15 NM Wide, 244 NM Long
Black Mountain Supersonic Corridor	8 NM Wide, 47 NM Long
Alpha Corridor/PIRA	4 NM Wide, 28 NM Long
Panamint Supersonic Area	5,000' MSL to Unlimited

3.2.A.5 Are there restrictions you must observe to use this space? Yes/no. If yes, explain.

No.

3.2.A.6 What is the maximum number of simultaneous users?

<u>Edwards Supersonic Areas:</u>	<u>Simultaneous Users</u>
High Altitude Supersonic Corridor	10
Black Mountain Supersonic Corridor	5
Alpha Corridor/PIRA	1
Panamint Supersonic Area	5

**3.2.B Airfield and Facility Characteristics (MV II) - Measure of Merit:** Extent of air vehicle infrastructure to support T&E operations.

3.2.B.1 Provide a brief description of your airfield and support facilities, to include the following: number and azimuth of runways, elevation, runway length (excluding overrun), overrun length, terminal and/or landing aids, arresting cable (yes/no, type), ramp area (in square feet), construction material (runway and ramps), load capability, and hangar space.

Edwards AFB is located on the western edge of the Mojave Desert, approximately 90 miles northeast of Los Angeles, CA. The base is surrounded southeast through northwest by mountain

ranges. Edwards is served by 21 runways and landing areas. There are three paved runways (main base runway, north base auxiliary, and south base auxiliary), and 18 marked runways on Rogers and Rosamond Dry Lakebeds. As home of the AFFTC, the EAFB main airfield is exposed to every aircraft in the Air Force inventory and more.

<u>Runway</u>	<u>Length</u>	<u>Width</u>	<u>Overrun</u>	<u>Elevation</u>	<u>Load Capacity</u>
<u>MAIN BASE</u>					
22	14,995'	300'	1,000 Asph	2,287'	*
04	14,995'	300'	1,800 Concrete	2,302'	*

\* Transition to lakebed runway.

NORTH BASE AUXILIARY

24	6,000'	150'	300' Asph	2,300'	22,500 lbs
06	6,000'	150'	300' Asph	2,277'	22,500 lbs

SOUTH BASE AUXILIARY

24	5,000'	50'	--	2,300'	12,500 lbs
06	5,000'	50'	1,000 Concrete	2,288'	12,500 lbs

ROGERS LAKEBED:

15	31,680'	300'	--	2,279'	C-5
17L	39,103'	300'	--	2,279'	C-5
17C	39,103'	300'	--	2,279'	C-5
17R	39,103'	300'	--	2,279'	C-5
18L	23,105'	300'	--	2,279'	C-5
18C	23,105'	300'	--	2,279'	C-5
18R	23,105'	300'	--	2,279'	C-5
23L	21,781'	300'	--	2,279'	C-5
23R	21,781'	300'	--	2,279'	C-5
30L	9,242'	300'	--	2,279'	F-111
30R	9,242'	300'	--	2,279'	F-111
24*	7,207'	300'	--	2,279'	22,500 lbs
22**	9,641'	300'	--	2,279'	C-5
24***	11,074'	200'	--	2,279'	12,500 lbs
07	23,095'	300'	--	2,279'	C-5
09	9,995'	300'	--	2,279'	22,500 lbs

\* Delta taxiway extension

\*\* Rwy 22 extension

\*\*\* South base extension

<u>Runway</u>	<u>Length</u>	<u>Width</u>	<u>Overrun</u>	<u>Elevation</u>	<u>Load Capacity</u>
<u>ROSAMOND DRY LAKE:</u>					
02	21,120'	300'	--	2,279'	C-130
11	21,120'	300'	--	2,279'	C-130

Terminal and/or Landing Aids:

MAIN BASE:

VASI (Visual Approach Slope Indicators)  
ILS (Instrument Landing System)  
MSBLS (Microwave Scatter Beam Landing System - Space Shuttle)  
FMQ13 (Digital Wind Set)  
FMQ8 (Digital Temp/Dew Point Set)  
GQM34 (Cloud Height Set)  
High Intensity Edge Lighting  
Threshold Lighting  
Windsocks

LOCATED OFF MAIN BASE:

VORTAC (VHF Omnidirectional Range/Tactical Air Navigation)  
approximately 9.3 miles NE of main base control tower

PAPI (Precision Approach Path Indicator) portable system for  
shuttle landing

Edge Lighting/Threshold Lighting at north base auxiliary

Windsocks at both north and south base runways

Arresting Gear:

There is no arresting gear capability on the Edwards AFB main base runway. There is, however, a BAK 12, currently in disrepair, located on the closed portion of south base auxiliary runway not in use. The concrete runway is 8,000 feet concrete in length with a 50 foot crown. Due to the arresting gear building being outside airfield criteria 7 to 1 ratio, as prescribed in AFR 86-14, the first 3,000' is closed to use. There is also a 50 feet by 150 feet area, where the arresting gear crosses the runway that will require repair before utilization of the arresting gear facilities can be reestablished. The south base auxiliary runway 24 threshold was displaced to allow the remaining 5,000 feet of runway to be used for aircraft 12,500 pounds or below; no jet aircraft.

Ramp Area:

AQTD	213,444 SF
Main Base	5,087,748 SF (1,049,650 SF of concrete pads)
North Base	264,900 SF
South Base	2,550,000 SF

Construction Material:

Main Base	Concrete
North Base	Asphalt/concrete
South Base	Concrete
Lakebed runways	Silt/clay

3.2.B.2 How close and how many emergency runways or airfields are in your area of operation?

<u>Name</u>	<u>Operation's Times</u>	<u>Runway Length (feet)</u>
Agua Dulce	0800-1800	4,600
Apple Valley, CA	0630-1700	6,500
Barstow-Dagget, CA	0630-1700	6,400
Brackett Fld, CA	24 hours	4,800
Burbank Glendale/Pasadena, CA	24 hours	6,500
Cable, Upland, CA	Daylight	3,700
California City, CA	0800-1700	6,000
China Lake, CA	0630-2230	9,000
Compton, CA	-----	3,600
El Mirage (Adelanto), CA	Unattended	3,700
El Monte, CA		3,995
Flabob (Riverside) CA	0830-1730	3,200
Gen William J. Fox, Lanc. CA	0700-2100	5,000
Hawthorne, CA	0700-2130	4,000
Hesperia, CA	0800-1800	3,900
Inyokern, CA	Dawn/Dusk	7,300
Kern Valley, CA	Daylight	3,500
Mojave, CA	0715-1800	9,600
Mountain Valley	0800-1700	5,000
Ontario, CA	24 hours	11,200
Plant 42	0600-2400	10,000
Rialto Muni-Miro Fld, CA	0800-1700	4,500
Tehachapi Muni, CA	0800-1700	4,000
Trona, CA	Irregular	5,900
Van Nuys	24 hours	6,500
Whiteman (Los Angeles) CA	24 hours	3,960
18 dry lake runways at EAFB at multiple headings	Daylight	7,207 to 39,103
3 dry lakes along R-2508 to Ely, NV corridor	Daylight	Up to 10,000'

3.2.B.3 Where is your airfield situated relative to working areas (airspace) for supporting test operations?

Field is located within the restricted airspace.

3.2.B.4 What makes your airfield unique or at least suited for supporting test operations?

Field is located within the restricted airspace.  
 VFR weather 95% of the year.  
 Lakebed emergency runways.  
 Existing infrastructure.  
 Availability of airspace and other ranges.  
 Excellent 24-hour-per-day visibility.  
 Location at the hub of 11 DOD test ranges.

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176*

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3.2.B.5 Is there a size, weight, maintenance or mission limitation that would affect test operations? If so, describe the limitation(s).

No. (See paragraph 3.1.F.1) The base and all test facilities were specifically designed to accommodate the largest aircraft anyone could envision. The main runway was cited for expansion of up to 21 miles long if ever required.

3.2.B.6 Including hangars and ramp space, how many fighter-size aircraft could you support? Large multi-engine aircraft? Rotary wing? UAV? Cruise missiles?

AQTD hangar can support 27 rotary-wing and light turbo-prop fixed-wing aircraft. Ramp space could accommodate more and larger aircraft.

3.2.C Test Operations (MV II) - Measure of Merit: Extent of T&E operations that the airspace can accommodate.

3.2.C.1 What types of air vehicle testing (fixed wing, rotary wing, unmanned vehicles, and cruise missiles) can be supported? (e.g. performance, handling qualities, fatigue life, static, wheels and brakes, physical integration with external stores or avionics)

AQTD could support all of the above except cruise missiles.

3.2.C.2 Do ground support facilities exist for pre-flight checkout or rehearsal of test missions?

Yes. Four telemetry control stations within AQTD. In addition, the following are available from the AFFTC:

Integrated Missile Facilities (IMF)  
Integration Facility for Avionics Systems Test (IFAST)  
Large Anechoic Chamber  
MUTES/MOTES (Electronic Combat)  
Test Evaluation Mission Simulator (TEMS)

3.2.C.3 What kinds, numbers of aircraft and mix can be supported (manned and unmanned)?

AQTD can support any mix of Army aircraft (rotary and fixed wing). Approximately 30 total aircraft could be supported if personnel were available.

Current inventory at AQTD, EAFB = 16 aircraft

1 AH-1F	1 UH-60A
1 AH-64	5 UH-1H
1 CH-47D	4 T-34C
1 OH-58C	1 U-21A
1 OH-58DI	

3.2.C.4 Does UAV and or rotary wing operations pose any limitation on other types of missions? If yes, explain.

No.

3.2.C.5 What sorts of missions (e.g. air-to-air, air-to-ground and refueling) can be flown within local airspace?

Except for nuclear detonations, there are no limits.

3.2.C.6 What is the maximum number of simultaneous missions you can support that require telemetry?

AQTD has four telemetry ground stations which can support four separate tests. In addition, arrangements can be made to use the AFFTC control rooms outlined below:

Twelve simultaneous missions can be conducted requiring telemetry. Of these 12, the range can provide mission control room support to 11 of these. One control room is at the F-16 CTF and supports their efforts full time, 6 control rooms are in Ridley Mission Control Center, and the remaining 4 control rooms are in the TSF. Each of the control rooms can accommodate up to 16 stripchart displays, four graphic displays, and six alphanumeric displays. All of these can display any combination of engineering units data and calculated data from the telemetry stream. All of these displays can be modified instantaneously during the mission in real time. Each control room has the capability to input up to three data streams which can be any combination of PCM telemetry and TSPI data. The control rooms are equipped to handle a flight flutter analysis station used in realtime for vibration/acoustic and flutter evaluation, as well as large screen video displays for displaying transmitted telemetry HUD video/chase aircraft video, range instrumentation video, work station parameter displays, and off range video sources via the data link system.

3.2.C.7 What is the largest number of simultaneous test missions you have supported in your airspace?

Data is not available, nor is there a metrics in place to ascertain the total number of missions being conducted at any one time within our airspace. Historically, given the volume of participants based on FAA records, our airspace has never reached a definitive number of maximum simultaneous test missions. There is also no known documentation indicating that our airspace has ever reached a point of maximum congestion or saturation at anytime.

The R2508 Complex work areas are scheduled and utilized on a non-exclusive basis. The "capacity" of this airspace has never been defined and no missions have ever been turned away for this reason. In FY86 and FY89, the R-2508 Complex joint-managed areas recorded its history's highest aircraft utilization figures of

73,134 and 72,306 operations respectively. The difference between 1989's high count and the latest reported count for FY93 of 52,399 reflects a reduction of 28.35%. Based on these figures, it is appropriate to expect the complex work areas have some unused capacity. It is perceived that the maximum capacity will approximate the high levels reported in 1986 and 1989.

3.2.C.8 Identify the number, types, and owners of aircraft at your installation.

<u>Owners</u>	<u>Number of Aircraft</u>	<u>Types of Aircraft</u>
U.S. Air Force	8	Bomber
	22	Cargo
	54	Fighter
	23	Trainer
	4	Attack/Cargo
	<u>7</u>	Helicopter
	140	
NASA	2	Cargo
	2	Bomber
	<u>8</u>	Fighter
	12	
U.S. Navy	7	Fighter
TOTAL	159	

APPENDIX A FORMS

GENERAL INFORMATION

TECHNICAL INFORMATION

FACT SHEET - INSTRUMENTATION/ASSETS

ADDITIONAL INFORMATION

FACILITY CONDITION

HISTORICAL WORKLOAD

DETERMINATION OF UNCONSTRAINED CAPACITY

**GENERAL INFORMATION**

**FACILITY/CAPABILITY TITLE:** U.S. Army Aviation Technical Test Center  
Airworthiness Qualification Test Directorate (EAFB, CA)

**ORIGIN DATE:** 1 June 1994

**Service:** Army                      **Organization/Activity:** AQTD                      **Location:** Edwards AFB, CA

**T&E Functional Area:** Air Vehicles    **UIC:** W37601

**T&E Test Facility Category:** Open Air Ranges

	<u>T&amp;E</u>	<u>S&amp;T</u>	<u>DE</u>	<u>IE</u>	<u>T&amp;D</u>	<u>OTHER</u>
<b>PERCENTAGE USE:</b>	<u>100%</u>	<u>          </u>				
<b>BREAKOUT BY T&amp;E FUNCTIONAL AREA (%):</b>						
<b>Air Vehicles</b>	<u>100</u>	<u>          </u>				
<b>Armament/Weapons</b>	<u>          </u>					
<b>EC</b>	<u>          </u>					
<b>Other</b>	<u>          </u>					

**Total in Breakout Must Equal "Percentage Use" on First Line**

## TECHNICAL INFORMATION

Facility/Capability Title: U.S. Army Aviation Technical Test Center  
Airworthiness Qualification Test Directorate (EAFB, CA)

Facility Description (including mission statement): The mission is to plan, conduct, analyze, and report the results of tests of the airworthiness of new & modified Army aircraft (rotary & fixed wing). AQT D instruments the aircraft for necessary parameters, designs the tests, conducts the tests using Army experimental test pilots, processes the data (in real time via telemetry or post flight), analyzes the data, and reports on the results. AQT D has the capability to instrument eight aircraft for airworthiness testing. It has telemetry ground stations to support real-time data acquisition for four test flights simultaneously. Data can also be processed post-flight if necessary. The telemetry and data processing capabilities are transportable to support remote site operations. AQT D owns, maintains and operates the only in-flight Helicopter icing spray system in the U.S. for certification of helicopters in icing conditions. It has been designated a national asset by the T&E Support Aircraft Reliance panel.

Interconnectivity/Multi-Use of T&E Facility: Close proximity of the Echo Range on the Naval Air Weapons Center (China Lake) allows staging out of the AQT D facility at Edwards to test Army aircraft against threat systems. Such testing has been conducted in the past. AQT D uses its video telemetry capability to video all space shuttle landings at Edwards AFB. The video signal is fed into the NASA satellite communication system through the NASA facility at Edwards. We have supplied airspeed pace support with our T-34C pace aircraft to NASA-Dryden, NASA-Ames and the Air Force for tests where our pace aircraft better matches the performance of their test vehicle. We also have supported the C-17 program with video support using one of our chase T-34C aircraft and our airborne video equipment and personnel. (Continued on next form)

Type of Test Supported: Types of tests include: vehicle performance, structural tests, handling qualities, in-flight icing tests, and quick-reaction engineering flight tests in support of Army Aviation safety/mishap related investigations. The directorate also conducts tests of new technologies having potential application to aviation systems. These tests may be on civilian or foreign aircraft or on prototype aircraft or simulators.

Summary of Technical Capabilities: AQT D has the personnel and expertise to plan, conduct, analyze, and report on airworthiness flight tests of rotary and fixed wing aircraft. It also has the personnel and expertise to design, install, and maintain major airborne instrumentation systems. (See attached fact sheet on instrumentation/assets.)

Keywords: Air vehicles. Airworthiness. In-Flight icing tests. Rotary-wing. Airborne instrumentation. Telemetry. Data processing.

TECHNICAL INFORMATION  
(Continued)

Facility/Capability Title: U.S. Army Aviation Technical Test Center  
Airworthiness Qualification Test Directorate (EAFB, CA)

Facility Description; including mission statement:

Interconnectivity/Multi-Use of T&E Facility (Continued): We regularly use the following Air Force facilities: instrumentation calibration laboratory, the weight and balance facility, the south base complex (for low-speed helicopter flight over the runway without interfering with traffic on the main runway), north base complex (for classified programs requiring secure facilities), test pilot school (for continuing training for flight test engineers and test pilots), meteorological facility (for required information on each pretest briefing sheet), R2508 FAA Radar for traffic clearance during flight tests), Edwards tower (air traffic control), RAPCON facility for air traffic control), and thrust stands (for measuring thrust on Army turbo-prop aircraft).

Type of Test Supported:

Summary of Technical Capabilities:

Keywords:

**FACILITY/CAPABILITY TITLE: U.S. Army Aviation Technical Test Center  
Airworthiness Qualification Test Directorate (EAFB, CA)**

**FACT SHEET - Instrumentation/Assets**

AQTD has the necessary hardware (including spares) to fully instrument eight aircraft for airworthiness testing (maintain a \$6 million inventory of airborne data acquisition system components, sensors, test equipment and calibration equipment). In addition, AQTD has four telemetry/data processing stations for receiving and processing data. These stations include hardware and software to receive data from telemetry (or read data after the flight from airborne tapes), decode the data, apply calibrations, calculate derived parameters, conduct spectral, time series, and other analyses and present the data in a variety of graphical formats. To support tests, AQTD has:

- Photographic and video laboratory (a wide variety of equipment including video telemetry).
- Instrumentation laboratory (for build-up and check-out of airborne instrumentation).
- Portable weather stations (for providing localized air data, including windspeed).
- Small machine/sheetmetal shop (for minor modifications, primarily to support instrumentation installation).
- Helicopter Icing Spray System (a national asset used to create an in-flight artificial cloud to test deice/anti-ice capability of helicopter and light fixed wing aircraft).
- Cloud physics measurement aircraft (a fixed-wing aircraft with sensors and data collection/storage capability to measure liquid water content, water drop size distribution, air humidity, and temperature to document conditions for icing tests).

**ADDITIONAL INFORMATION**

**Facility/Capability Title:** U.S. Army Aviation Technical Test Center  
**Airworthiness Qualification Test Directorate (EAFB, CA)**  
**PERSONNEL** (Edwards AFB, Facility)

	FY93	FY94	FY95	FY96	FY97	FY98	FY99
Officer	27	20	20	20	0	0	0
Enlisted	23	20	20	20	0	0	0
Civilian	73	74	72	69	0	0	0
Contractor	15	15	15	15	0	0	0
<b>Total</b>	<b>138</b>	<b>129</b>	<b>127</b>	<b>145</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Total Square Footage:** 87,831 (Shop and hangar space)

**Test Area Square Footage:** NA-Testing is an open air range.

**Tonnage of Equipment:** 389

**Office Space Square Footage:** 11,929

**Volume of Equipment:** Unknown

**Annual Maintenance Cost:**

Included in \$200,000 Inter-Service Support Agreement with the Air Force

Estimated Moving Cost: Cost cannot be determined without knowing a potential destination.  
 All equipment is transportable.

**CAPITAL EQUIPMENT INVESTMENT - TDAP and PBS**

	FY93	FY94	FY95	FY96	FY97	FY98	FY99
\$1,300,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	0	0	0

NOTE: ATTC mission consolidated under YPG effective FY97.

FACILITY CONDITION

FACILITY/CAPABILITY TITLE: U.S. Army Aviation Technical Test Center  
Airworthiness Qualification Test Directorate (EAFB, CA)  
(Edwards AFB Facility)

AGE: Approximately 30 years

REPLACEMENT VALUE: \$8,816,000

MAINTENANCE AND REPAIR BACKLOG: None

DATE OF LAST UPGRADE: FY94

NATURE OF LAST UPGRADE: New roof installed over all office areas and hangar roofs repaired. All office areas renovated (new walls, ceilings, floorings, electrical wiring, telephone wiring, and computer network wiring). Approximate cost of upgrade--\$2.3 million.

MAJOR UPGRADES PROGRAMMED - None

1. UPGRADE TITLE: \_\_\_\_\_

TOTAL PROGRAMMED AMOUNT: \_\_\_\_\_

SUMMARY DESCRIPTION: \_\_\_\_\_

2. UPGRADE TITLE: \_\_\_\_\_

TOTAL PROGRAMMED AMOUNT: \_\_\_\_\_

SUMMARY DESCRIPTION: \_\_\_\_\_

**ADDITIONAL INFORMATION**

**Facility/Capability Title:** U.S. Army Aviation Technical Test Center  
Airworthiness Qualification Test Directorate (EAFB,CA)  
(Coyote Flat, CA Facility)

**PERSONNEL** - This is a high-altitude (10,000 feet) remote-site test support facility, there are no permanently assigned personnel.

	FY93	FY94	FY95	FY96	FY97	FY98	FY99
<b>Officer</b>							
<b>Enlisted</b>							
<b>Civilian</b>							
<b>Contractor</b>							
<b>Total</b>							

**Total Square Footage:** 600 (Shop and hangar space)

**Test Area Square Footage:** 3000-foot runway and tethered hover tiedown pad. Total area 6.5 acres.      **Office Space Square Footage:** None

**Tonnage of Equipment:** NA

**Volume of Equipment:** None

**Annual Maintenance Cost:** None

**Estimated Moving Cost:** NA

**CAPITAL EQUIPMENT INVESTMENT** - None

FY93	FY94	FY95	FY96	FY97	FY98	FY99

FACILITY CONDITION

FACILITY/CAPABILITY TITLE: U.S. Army Aviation Technical Test Center  
Airworthiness Qualification Test Directorate (EAFB, CA)  
(Coyote Flat, CA Facility)

AGE: Approximately 20 years

REPLACEMENT VALUE: \$45,000. Does not include environmental studies or compliance work which would have to be conducted prior to any replacement. Estimated cost of such studies and compliance range up to \$1 million.

MAINTENANCE AND REPAIR BACKLOG: None

DATE OF LAST UPGRADE: Unknown

NATURE OF LAST UPGRADE: NA

MAJOR UPGRADES PROGRAMMED - None

1. UPGRADE TITLE: \_\_\_\_\_

TOTAL PROGRAMMED AMOUNT: \_\_\_\_\_

SUMMARY DESCRIPTION: \_\_\_\_\_

2. UPGRADE TITLE: \_\_\_\_\_

TOTAL PROGRAMMED AMOUNT: \_\_\_\_\_

SUMMARY DESCRIPTION: \_\_\_\_\_

**ADDITIONAL INFORMATION**

**Facility/Capability Title:** U.S. Army Aviation Technical Test Center  
Airworthiness Qualification Test Directorate (EAFB, CA)  
(Bishop, CA Facility)

**PERSONNEL** - This is a medium-altitude (5,000 feet) remote-site test support facility with no permanently assigned personnel.

	FY93	FY94	FY95	FY96	FY97	FY98	FY99
<b>Officer</b>							
<b>Enlisted</b>							
<b>Civilian</b>							
<b>Contractor</b>							
<b>Total</b>							

**Total Square Footage:** 0 (Shop and hangar space)

**Test Area Square Footage:** Tethered hover tie-down pad at Bishop Airport. Total leased land is 6.2 acres

**Office Space Square Footage:** 720 (two office trailers)

**Tonnage of Equipment:** None

**Volume of Equipment:** None

**Annual Maintenance Cost:** \$3,120 annual lease

**Estimated Moving Cost:** NA

**CAPITAL EQUIPMENT INVESTMENT** - None

FY93	FY94	FY95	FY96	FY97	FY98	FY99

FACILITY CONDITION

FACILITY/CAPABILITY TITLE: U.S. Army Aviation Technical Test Center  
Airworthiness Qualification Test Directorate (EAFB, CA)  
(Coyote Flat, CA Facility)

AGE: Approximately 20 years

REPLACEMENT VALUE: \$45,000. Does not include environmental studies or compliance work which would have to be conducted prior to any replacement. Estimated cost of such studies and compliance ranges up to \$1 million.

MAINTENANCE AND REPAIR BACKLOG: None

DATE OF LAST UPGRADE: Unknown

NATURE OF LAST UPGRADE: NA

MAJOR UPGRADES PROGRAMMED - None

1. UPGRADE TITLE: \_\_\_\_\_

TOTAL PROGRAMMED AMOUNT: \_\_\_\_\_

SUMMARY DESCRIPTION: \_\_\_\_\_

2. UPGRADE TITLE: \_\_\_\_\_

TOTAL PROGRAMMED AMOUNT: \_\_\_\_\_

SUMMARY DESCRIPTION: \_\_\_\_\_

**ADDITIONAL INFORMATION**

**Facility/Capability Title:** U.S. Army Aviation Technical Test Center  
Airworthiness Qualification Test Directorate (EAFB, CA)  
(Duluth, MN Icing Facility)

**PERSONNEL** - This is a remote-site test support facility used to support in-flight icing tests of helicopters & light fixed-wing aircraft, no permanent personnel assigned.

	FY93	FY94	FY95	FY96	FY97	FY98	FY99
<b>Officer</b>							
<b>Enlisted</b>							
<b>Civilian</b>							
<b>Contractor</b>							
<b>Total</b>							

**Total Square Footage:** Shop and hangar space = 24,305 (also 8.5 acres of ramp space)

**Test Area Square Footage:** NA-Testing is an open air range      **Office Space Square Footage:** 6,595

**Tonnage of Equipment:** None      **Volume of Equipment:** None

**Annual Maintenance Cost:** \$65,000      **Estimated Moving Cost:**

**CAPITAL EQUIPMENT INVESTMENT - None**

FY93	FY94	FY95	FY96	FY97	FY98	FY99

FACILITY CONDITION

FACILITY/CAPABILITY TITLE: U.S. Army Aviation Technical Test Center  
Airworthiness Qualification Test Directorate (EAFB, CA)  
(Duluth, MN Icing Facility)

AGE: Unknown

REPLACEMENT VALUE: \$3,231,000

MAINTENANCE AND REPAIR BACKLOG: None

DATE OF LAST UPGRADE: Unknown

NATURE OF LAST UPGRADE: NA

MAJOR UPGRADES PROGRAMMED - None

1. UPGRADE TITLE: \_\_\_\_\_

TOTAL PROGRAMMED AMOUNT: \_\_\_\_\_

SUMMARY DESCRIPTION: \_\_\_\_\_

2. UPGRADE TITLE: \_\_\_\_\_

TOTAL PROGRAMMED AMOUNT: \_\_\_\_\_

SUMMARY DESCRIPTION: \_\_\_\_\_

HISTORICAL WORKLOAD

Facility/Capability Title: U.S. Army Aviation Technical Test Center  
Airworthiness Qualification Test Directorate (EAFB, CA)

T&E FUNCTIONAL AREA		FISCAL YEAR							
		86	87	88	89	90	91	92	93
AIR VEHICLES	DIRECT LABOR					133,213	137,222	127,886	128,298
	TEST HOURS					2,626	2,445	1,768	1,726
	MISSION					1,313	1,223	884	863
EC	DIRECT LABOR								
	TEST HOURS								
	MISSION								
ARMAMENT/WEAPONS	DIRECT LABOR								
	TEST HOURS								
	MISSION								
OTHER T&E	DIRECT LABOR								
	TEST HOURS								
	MISSION								
OTHER	DIRECT LABOR								
	TEST HOURS								
	MISSION								



**DETERMINATION OF UNCONSTRAINED CAPACITY**

**FACILITY/CAPABILITY TITLE:** U.S. Army Aviation Technical Test Center,  
Airworthiness Qualification Test Directorate (EAFB, CA)

<b>ANNUAL HOURS OF DOWNTIME</b>	<u>1 6,415 fac hrs per aircraft</u>
<b>AVERAGE DOWNTIME PER DAY (LINE 1/365)</b>	<u>2 17.6 fac hrs</u>
<b>AVERAGE HOURS AVAILABLE PER DAY (24 - Line 2)</b>	<u>3 6.4 fac hrs</u>

<b>TEST TYPES</b>	<b>TEST AT ONE TIME</b>	<b>WORKLOAD PER TEST PER FACILITY HOUR</b>	<b>WORKLOAD PER FACILITY HOUR (LINE 3 X TOTAL)</b>	<b>UNCONSTRAINED CAPACITY PER DAY</b>
<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
<u>Airworthiness</u>	<u>5</u>	<u>1,728 flt hrs/864 msn/ 3.5 fac hrs msn</u>	<u>2.85 flt hrs/fac hrs</u>	
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	
<u>TYPICAL"</u>	<u>3</u>	<u>2 flt hrs-msn/ 3.5 fac hrs msn</u>	<u>1.71 flt hrs/fac hrs</u>	
		<b>TOTAL</b>	<u>4.56 flt hrs/fac hrs</u>	
				<b>ANNUAL UNCONSTRAINED CAPACITY</b>
				<b>9</b> <u>10,662 flt hrs</u>
				or
				<u>5,331 missions</u>

195.