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DEPARTMENT OF THE AIR FORCE  
AIR FORCE HISTORICAL RESEARCH AGENCY (AFHRA)  
MAXWELL AIR FORCE BASE, ALABAMA

July 23, 2009  
FOIA 09-02122-F  
RFI # 2009-64977

AFHRA/RSA  
600 Chennault Circle  
Maxwell AFB, AL 36112-6424 USA

Mr. John Greenewald, Jr.  
[REDACTED]

Dear Mr. Greenewald,

I have researched our archive in response to your request under the Freedom of Information Act pertaining to the document with call number MICFILM 31754, IRIS number 1013876. As a Freedom of Information Act request, it has been designated 2009-02122-F. The request for information number assigned by AFHRA is 2009-64977.

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It is my pleasure to give you any information we have and my sincere hope that the information provided serves you well.

Respectfully,

*Cathy Cox*  
Cathy Cox, Archivist  
AFHRA/Research

Enclosure:

1. Copy of original request
2. Copy of document with IRIS # 1013876

**Main:** AIR FORCE MISSILE DEVELOPMENT CENTER

**RECTYPE:** Call: MICFILM 31754

**IRIS Number:** 1013876

**BegDate:** 07-01-1956 **EndDate:** 12-31-1957 **PubDate:** **Author:**

**Title:** GAM-63 MISSILE DEVELOPMENT PROGRAM

**Title Extension:**

**Title Added Entries:**

**Class:** UNCLASSIFIED **LNFT:** 0 **AudioRec:** **NumPages:** 0 **MajCom:**

**Subject:**

**Abstract:** COVERS VARIOUS ASPECTS OF GAM-63 MISSILE LAUNCHES DURING DEVELOPMENT TESTS AT HOLLOMAN AFB NM, INCLUDING SUCCESSES AND FAILURES. ARMY REQUESTED PERMISSION TO GROUND TRACK GAM-63 RASCAL. FIRST GRAVITY BOMB TEST VEHICLE.

**DateRcvd:** **AddDate:** 07-05-1983 **IRISRef:**

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HISTORICAL DATA  
BOMBARDMENT MISSILE DIVISION  
GAM-63 BRANCH  
AIR FORCE MISSILE DEVELOPMENT CENTER  
HOLLOMAN AIR FORCE BASE, NEW MEXICO

RETURN TO	
ATTN: MR. AL. SCOTT	

For Period

1 October - 31 December 1957

Prepared by

BRUNELLE R. MOON, Captain, USAF  
GAM-63 Branch Chief

*Unclass*

*37 pages*

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FOREWORD

The following historical data has been compiled by this Branch in accordance with the provisions of DIRECTORATE SOP Number 5. It represents a factual narrative account of the activities, accomplishments, problems and progress of this organization for the period indicated.

*Brunelle R. Moon*  
BRUNELLE R. MOON, Captain, USAF  
Chief, GAM-63 Branch

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T A B L E O F C O N T E N T S

COMMAND DATA

1. Organization
  - a. Mission
  - b. Changes in Organization
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  - a. Personnel Strength
    - (1) Chart of Military Personnel Strength
    - (2) Chart of Contractor Personnel Strength
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1. Operations
  - a. Launchings
  - b. Other Programs
  - c. Conferences, Trips
  - d. Other Information

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COMMAND DATA

1. Organization

a. Mission

Exercises technical test control of project tests; acts as technical advisor to the responsible development center; reports on test activities; coordinates logistic support for the tests, and briefs visitors as directed on status of project. (U)

b. Changes in Organization

During the period 1 October through 31 December 1957 there have been no changes in organization. Research and Development terminated on 31 October and the R&ST Phase of the GAM-63 Rascal began 1 November 1957. This phase is conducted out of Eglin AFB, Florida, using the test range at AFMDC for launch. (U)

2. Strength

a. Personnel Strength (U)

(1) Chart of Military Personnel Strength

	Total Beginning of Period	Total During Period	Total End of Period
OFFICERS	2	-1	1
AIRMEN	1	-1	0
CIVILIANS	1	0	1

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(2) Chart of Contractor Personnel Strength

	Total Beginning of Period	Total During Period	Total End of Period
BELL AIRCRAFT CORPORATION	144	-112	32
CONVAIR (PT WORTH)	37	-37	0
BOEING AIRPLANE CO.	10	-10	0

b. Personnel Changes

The change in personnel during this period was the reassignment of 2nd Lt Simpson E. Adams, Jr., Electronics Officer to the Matador Project. T/Sgt Gerald M. Diel, Scheduling and Propulsion was also reassigned to Matador. (Unclassified)

c. Roster of Key Project Personnel (4)

Brunelle R. Moon, Captain, Chief, GAM-63 Branch

NARRATIVE

1. Operations

a. Launchings

During the period 1 October to 31 December 1957, five GAM-63 missiles were launched. (C)

Missile number 96 was launched 9 October 1957 on its second airborne attempt. The missile flew as programmed and impacted 680 feet from target. This was considered a successful mission as all objectives were accomplished. This missile carried a simulated warhead. (C)

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Missile number 99 was launched 16 October 1957 on its fifth attempt. This missile was used for a profile mission test. The pre-strike missions were satisfactory. The strike missions required in-flight refueling. One in-flight refueling was accomplished on a captive flight, with three in-flight refuelings being made on three separate hot launch attempts. The four in-flight refuelings were very successful. Strategic Air Command could no longer support our requirements and the remaining strike missions were flown without in-flight refueling. This was the first mission to use a military operator to launch the missile. The missile flew as programmed and was considered successful as all objectives were accomplished. (C)

Missile number 100 was launched on its first airborne attempt. ~~This~~ rocket engine, using Red Fuming Nitric Acid as the oxidizer, ~~was used~~ for the first time <sup>on this mission.</sup> The missile carried a simulated warhead. The mission went as programmed and was considered satisfactory as all objectives were obtained. (C)

Missile number 101 was launched on its second airborne attempt. Electrical trouble developed and the missile impacted shortly after launch. The mission was considered unsuccessful as no objectives were obtained. (C)

Missile number 96 was launched on its fifth airborne attempt. No flight data was obtained from this missile. Boost chamber number one blew up approximately at rocket fire. The missile never stabilized and it impacted shortly after launch. (C)

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b. Other Programs

No new programs developed during this period. The Research and Development Tests were terminated 31 October 1957. The Employment and Suitability Tests began 1 November 1957 with Captain K. W. Gully as APGC Liaison Officer at AFMDC. (U)

c. Conferences, Trips

No conferences or trips were accomplished during this period. (U)

d. Other Information

(1) The AN/DPN-31 beacons at AFMDC are to be shipped to Eglin AFB, Florida in the near future. (U)

(2) The two DB-47 aircraft that were bailed to Bell Aircraft Corp. were flown to Tinker AFB, Oklahoma, 31 December 1957. This completes the transfer of all bailed aircraft back to the Air Force. (U)

(3) The Bell Aircraft Corporation at AFMDC are in the process of closing out their activity at this Center. The equipment is being sent to various installations as directed by AMC. (U)

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26 June 1969  
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Ball arrived at Air Force Missile Development Center - October 1949

Number Strike Tests 20  
Strike Started June 1949  
Strike Ended January 1953  
Number Recal Tests 54  
Recal Started August 1951  
Recal Ended November 1952

Number and Type Aircraft -

Number	Type	No. of Flights
1	B-17	91
2	F-80	435
3	F-86	34
4	F-86	735
2	F-86	148
4	F-86	500
Total		1414

Of the Total No. of Flights listed above, 12 involved strikes (Strike Tests) and 1402 were Recal tests (Recal Tests).

Of the Total No. of Flights listed above, 204 occurred successful and unsuccessful launches. Rest of Flights were Control and Engineering flights.

Average No. of Flights per Day - 175  
Launches - 30  
Recal - 24  
Total - 195

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AFMTC ADJ '57 7410

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26 June 1969  
K.O.

HISTORICAL DATA  
BOMBARDMENT MISSILE DIVISION  
~~GAM-63 BRANCH~~  
HOLLOMAN AIR DEVELOPMENT CENTER  
HOLLOMAN AIR FORCE BASE, NEW MEXICO

For Period

1 April - 30 June 1957

Prepared by

BRUNELLE R. MOON, Captain, USAF  
Assistant GAM-63 Branch Chief

*[Handwritten signature]*

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Bibliog.	1
Chronolog	0
Data Cards	0

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FOREWORD

The following historical data has been compiled by this Branch in accordance with the provisions of DIRECTORATE SOP Number 5. It represents a factual narrative account of the activities, accomplishments, problems and progress of this organization for the period indicated.

*Brunelle R. Moon*  
BRUNELLE R. MOON, Captain, USAF  
Assistant Chief, GAM-63 Branch

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### NARRATIVE

1. Operations
  - a. Launchings
  - b. Other Programs
  - c. Conference, Trials

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COMMAND DATA

1. Organization

a. Mission

Exercises technical test control of project tests; acts as technical advisor to the responsible development center; reports on test activities; coordinates logistic support for the tests, and briefs visitors as directed on status of project. (Unclassified)

b. Changes in Organization

During the period 1 April through 30 June 1957 there have been no changes in organization. (Unclassified)

2. Strength

a. Personnel Strength (Unclassified)

(1) Chart of Military Personnel Strength

	Total Beginning of Period	Total During Period	Total End of Period
OFFICERS	2	+ 1 & - 1	2
AIRMEN	1	0	1
CIVILIANS	1	0	1

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HADC ADJ 57.4618

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(2) Chart of Contractor Personnel Strength

	Total Beginning of Period	Total During Period	Total End of Period
BELL	227	- 22	205
CONVAIR	30	- 6	24
BOEING	48	-	48

b. Personnel Changes

The change in personnel was the assignment of 2nd Lt. Simpson E. Adams as Electronics Officer to replace 1st Lt. Robert A. Armstrong who returned to a civilian status. (Unclassified)

c. Roster of Key Project Personnel (Unclassified)

Brunelle R. Moon, Captain, Assistant Chief, GAM-63 Branch

Simpson E. Adams, 2nd Lt., Electronic Officer, GAM-63 Branch

NARRATIVE

1. Operations

a. Launchings

During the period 1 April to 30 June 1957 two GAM-63 Rascal missiles were launched and three GBTV were dropped. (Confidential)

Missile number 85F was launched on 10 April 1957 on its second airborne attempt. This was one of the best flights but it was found that the dive angle computer was non-linear and the missile impacted approximately one mile short. (Confidential)

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Missile number 87F was launched 14 May 1957 on its second airborne attempt. Everything went as programmed until after normal rocket shut down at which time the alternator or some other equipment malfunctioned and caused an electrical failure. The missile became unstable and impacted 12 miles short of target. (Confidential)

The three GBTV were dropped 5 April and 13 June 1957. All drops went as programmed with the maximum miss distance of approximately 1000 feet from target. (Confidential)

b. Other Programs

In order to accommodate as many projects as possible the Integrated Range is requesting crystal control for telemetry, 400 MC receivers on destruct systems, and coded beacons for radar tracking. (Unclassified)

Bell has started work on the telemetry problem and expects completion approximately October 1957. It expects to receive official notice in the near future on the other two problems. The R & D phase will not be appreciably affected by the changes, however it is expected to be mandatory in the E & ST phase. (Unclassified)

The R & D phase of GAM-63 will be terminated in October 1957 and the E & ST phase will begin in October 1957. (Unclassified)

c. Conference, Trips

A conference was held at Headquarters APGC, Eglin Air Force Base, Florida, on 4 June 1957 to discuss the E & ST phase of GAM-63. Captain B. R. Moon attended this meeting. The conference consisted primarily of discussing information from General Putt's letter on

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the GAM-63 program. Answers to questions asked at this meeting will be forthcoming at the phasing group meeting to be held at Headquarters AMC, Wright-Patterson Air Force Base, Ohio, 27-28 June 1957. (Unclassified)

The army has requested permission to ground track the Rascal with the expectation of using it as a target in the future. Permission can be granted on a non-interference bases. (Unclassified)

The GAM-63 Weapon System Phasing Group meeting on 27-28 June 1957 at Wright-Patterson Air Force Base, Ohio, was attended by Captain Brunelle R. Moon and 2nd Lieutenant Simpson E. Adams, HADC, GAM-63 Project Officer and Electronic Officer. (Unclassified)

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26 June 1969  
K.O.

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HISTORICAL DATA  
SOMERSET MISSILE DIVISION  
SOMERSET BRANCH  
WILLOWAN AIR DEVELOPMENT CENTER  
FOLLOMAN AIR FORCE BASE, NEW MEXICO

For Period

1 January - 31 March 1957

Prepared by

WILLIAM R. HICK, Captain, USAF  
Assistant SOMERSET Branch Chief

*W.R.H.*

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● HADC ADJ '57-2534

FORWORD

The following historical data has been compiled by this Branch in accordance with the provisions of AIR FORCE SOP Number 5. It represents a factual narrative account of the activities, accomplishments, problems and progress of this organization for the period indicated.

*Erwin R. Moon*

ERWIN R. MOON, Captain, USAF  
Assistant Chief, GAN-13 Branch



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### NARRATIVE

1. Operations
  - a. Launchings
  - b. Other Programs
  - c. Conference, Trips

COMINT DATA

1. Organization

a. Mission

The mission of the GALL-3 Branch was to direct and monitor test projects and coordinate these activities with the Weapons System Project Office, to provide logistic support required by the contractor and to prepare the necessary reports. (Unclassified)

b. Changes in Organization

During the period 1 January through 31 March 1957, there have been no changes in organization. (Unclassified)

2. Strength

a. Personnel Strength (Unclassified)

(1) Chart of Military Personnel Strength

	Total Beginning of Period	Total During Period	Total End of Period
OFFICERS	3	-1	2
AIRMAN	1	0	1
CIVILIANS	1	0	1

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(2) Chart of Contractor Personnel Strength

	Total Beginning of Period	Total During Period	End of Period
BELL AIRCRAFT CORPORATION	220	+7	227
CONVAIR (FT WORTH)	28	+2	30
BOEING AIRPLANE CO.	37	+11	48

b. Personnel Changes

The only change in this Branch was the change in assignment of the project officer, Captain Walter G. Palmer, who has been transferred to AEDC, Baltimore, Maryland. Captain Brunelle R. Moon, Acting Chief, Bomb Branch, was appointed Assistant Chief, GAM-63 Branch. (Unclassified)

c. Roster of New Project Personnel (Unclassified)

Brunelle E. Moon, Captain, Assistant Chief, GAM-63 Branch

Robert A. Armstrong, 1st Lt, Electronics Officer, GAM-63 Branch

OPERATIVE

1. Operations

a. Launchings

During the period 1 January through 31 March, four GAM-63 Bascal missiles were launched. (Confidential)

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Missile Number 81F was launched on 7 Jan 57 on its 4th airborne attempt. A hydraulic failure shortly after missile release caused the missile to go unstable and impact but a few miles from its release point. (Confidential)

Missile Number 84F was launched on 16 Jan 57 on its 2nd airborne attempt. An unusually high cross wind present at the release altitude together with a mis-calibrated compass on the EE-47 caused the missile to be approximately 8 degrees off its heading at the dive point. The operator fearing that he might lose sight of the target did not put the maximum corrective command into the system and consequently the missile impacted about 13,000 ft. from the target. (Confidential)

Missile Number 83F was launched on 18 Feb 57 on its 10th airborne attempt. The missile alternator regulator failed at approximately 1 minute 30 seconds causing the loss of the missile at this time. Two of the nine shorts on this missile were because of ground safety equipment failures and were not weapon system failures. (Confidential)

Missile Number 81F was launched on 13 March 1957 on its third airborne attempt. This missile was the first missile launched at HADC that had experienced the full reliability program. Even with a malfunctioning switch controller and drifting oscillator in the director command system the missile impacted but a mile short of the desired impact point. This was a 90 mile flight. (Confidential)

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b. Other Programs

Other activities at HADC during this period included the continuation of the WCM flights incorporating a B-36 and the Z-80 simulated missile. Approximately one flight a week is flown in conjunction with this mission. (Confidential)

Scheduled for this week is the first Gravity Bomb Test Vehicle. This program will consist of three Bascal airplanes, weighted to simulate an actual missile, which will be dropped as a gravity bomb in order to establish the ballistics of such a configuration. (Confidential)

A new policy in effect now seems to be working out satisfactorily. This refers to the servicing and limited calibrations that Biggs Air Force Base, is performing on our B-36's. This saves the time involved in sending these A/C back to Wichita for such service. (Unclassified)

A Bascal will be on public display for the first time at Holloman Air Devolon and Center on Armed Forces Day, 18 May. (Unclassified)

c. Conferences, Trips

The GAM-63 Weapon System Phasing Group meeting on 19-20 December 1956, at Wright-Patterson AFB, Ohio, was attended by Captain Walter G. Palmer, former HADC GAM-63 Project Officer. (Unclassified)

A trip to Wright-Patterson AFB, Ohio was made 3 February 1957, by Captain Brunelle F. Moon, the new GAM-63 Project Officer, to coordinate with the GAM-63 Office WSPC. (Unclassified)

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A conference was held at HQ, AF C, Baltimore, Maryland, 19-21 February to discuss the GAM-63. Three Follower representatives attended this meeting. Results of this trip may be found in Colonel Singer's report. (Unclassified)

*Notes*

The Army requested comments and recommendations on the feasibility of using the Bascel as an acceptable target. A conference was held at HADG in March to discuss the above. It was determined that the Bascel Missile probably would not be a suitable target. (Unclassified)

De-classified  
26 June 1969  
K.O.

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HISTORICAL DATA  
BOMBARDMENT MISSILES DIVISION  
GAM-63 BRANCH  
HOLLoman AIR DEVELOPMENT CENTER  
HOLLoman AIR FORCE BASE, NEW MEXICO

For Period

1 October - 31 December 1956

Prepared by

WALTER G. PALMER, Captain, USAF  
GAM-63 Branch Chief

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Bibliography	
Classification	0
Data Cards	0

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ADJ 57-17

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## FOREWORD

The following historical data has been compiled by this Branch in accordance with the provisions of DIRECTORATE SCF Number 5. It represents a factual narrative account of the activities, accomplishments, problems and progress of this organization for the period indicated.



WALTER C. PALMER, Captain, USAF  
GAM-63 Branch Chief



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### NARRATIVE

1. Operations
  - a. Launchings
  - b. Other Programs
  - c. Conferences, Trips

COMMAND DATA

1. Organization

a. Mission

The mission of the GAIL-65 Branch was to direct and monitor test projects and coordinate these activities with the Weapons System Project Office, to provide logistic support required by the contractor and to prepare the necessary reports. (Unclassified)

b. Changes in Organization

During the period 1 October through 31 December 1956, there have been no changes in organization. (Unclassified)

2. Strength

a. Personnel Strength (Unclassified)

(1) Chart of Military Personnel Strength

	Total Beginning of Period	Total During Period	Total End of Period
OFFICERS	2	0	2
AIRMEN	1	0	1
CIVILIANS	1	0	1

## (2) Chart of Contractor Personnel Strength

	Total Beginning of Period	Total During Period	End of Period
BELL AIRCRAFT CORPORATION	222	+6	228
CONVAIR (ET WORRE)	32	-3	29
BOEING AIRPLANE CO.	38	-1	37

## b. Personnel Changes

There have been no personnel changes during the period of this report. (Unclassified)

## c. Roster of Key Project Personnel (Unclassified)

Walter G. Palmer, Captain, Chief, GAM-63 Project Office

Robert A. Armstrong, 1st Lt, Assistant Chief, GAM-63 Office

NARRATIVE

## 1. Operations

## a. Launchings

During the period 1 October through 31 December, two GAM-63 Rascal missiles were launched. The primary flight test objective was to conduct an operational type flight. Both missiles were launched from a EB-47 director aircraft. (Confidential)

The first of these two missiles was launched on 5 November. Four unsuccessful attempts were made to launch this missile before it was finally released. The missile flight after launch was normal and satisfactory until slightly after the missile had been

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placed in the terminal dive attitude by the inertial guidance system. At that time, the turbine pump shut down as a result of an interruption in fuel flow. The missile became unstable and fell short of the predicted impact point. (Confidential)

The second missile was launched on 27 November. This missile was launched without prior captive flight testing and was launched on the first attempt. Shortly after the end of the boost phase, relay transmitter power dropped to zero and the guidance operator was unable to monitor the missile flight path. As a result, the dive command was given by the inertial guidance system and the operator was unable to correct the flight path in azimuth or pitch. Impact was approximately three miles from the predicted impact point. This missile was the first GAM-63 to be launched 90 nautical miles from the target and during the flight the missile climbed to 70,000 feet and attained an airspeed of Mach 3.0. (Confidential)

Between the launches of these two missiles, four attempts were made to launch a third GAM-63. A fifth attempt was made immediately following the release of the second missile. After five unsuccessful attempts, the missile was unloaded, defueled, and a complete electronic preflight checkout was initiated. In the meantime, two other missiles were prepared for launch. (Confidential)

Two attempts were made to launch each of these other two missiles during December. After the second attempt, both missiles were unloaded and defueled for the holiday season. (Confidential)

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b. Other Programs

During this period, the automatic gain control captive flight testing was continued. The tests were reoriented to test an additional command channel so that the guidance operator could control the setting of the automatic gain control. (Confidential)

Two captive flights were made over Kansas City to obtain terminal guidance indicator photographs of the area. These photos will be compared with the predictions of the area made by Bell Aircraft Corporation. (Confidential)

A stabilized automatic tracking antenna system has been installed in a EB-36 for captive flight testing of this system. This antenna will be stabilized in space so that when the director aircraft turns after launch, the antenna will remain pointed in the direction of the missile. (Confidential)

c. Conferences, Trips

Documentation of the GAM-63 Project under AFPC Manual 96-2 was initiated by a presentation to the Holloman Air Development Center staff on 7 December. Documentation has not been completed at this time. (Unclassified)

A meeting was conducted on 13 December, by representatives of Air Proving Ground Command and Holloman Air Development Center. The purpose of this meeting was to discuss the Program Review Board Information Outline to be submitted by the GAM-63 Employment and Suitability Testing Project Office. (Unclassified)

Two meetings of the GAM-63 Weapon System Phasing Group were attended by a representative of the FADC GAM-63 Project Office.

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The first was held on 17-18 October, at Bell Aircraft Corporation, Westfield, New York and the second was at Headquarters, Air Materiel Command, Wright-Patterson AFB, Ohio, on 19-20 December.  
(Unclassified)

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Declassified  
26 June 1969  
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HISTORICAL DATA  
BOMBARDMENT MISSILES DIVISION  
GAM-63 BRANCH  
HOLLOMAN AIR DEVELOPMENT CENTER  
HOLLOMAN AIR FORCE BASE, NEW MEXICO

(S41)

For Period  
1 July - 30 September 1956  
~~1 October - 31 December 1956~~

Prepared by

WALTER G. PALMER, Captain, USAF  
GAM-63 Branch Chief

Title correction  
by J.S. Hammond  
8 Nov 56  
(S41)

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F O R E W O R D

The following historical data has been compiled by this Branch in accordance with the provisions of DIRECTORATE SOP Number 5. It represents a factual narrative account of the activities, accomplishments, problems and progress of this organization for the period indicated.



WALTER G. PALMER, Captain, USAF  
GAM-63 Branch Chief



## T A B L E O F C O N T E N T S

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  - b. Personnel Changes

### NARRATIVE

1. Operations
  - a. Launchings
  - b. Other Programs
  - c. Conferences, Visitations

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### COMBAND DATA

## 1. Organization

### a. Mission

The mission of the GAM-63 Branch was to direct and monitor test projects and coordinate these activities with the Weapon System Project Office, to provide logistic support required by the contractor and to prepare the necessary reports. (Unclassified)

## b. Changes in Organization

During the period 1 July through 30 September 1956, there have been no changes in organization. (Unclassified)

## 2. Strength

#### B. Personnel Strength (Unclassified)

### CHART OF PERSONNEL STRENGTH

	Total Beginning of Period	Total During Period	Total End of Period
OFFICERS	3	-1	2
AIRMEN	1	0	1
CIVILIANS	1	0	1

### b. Personnel Changes

The only change in personnel in this branch was the change in assignment of the project officer, Captain William A. Smith, to duty as Wright Air Development Center Liaison Officer, with duty station Wright-Patterson AFB, Ohio. Captain Walter G. Palmer assumed duty as GAM-63 Branch Chief. Captain Palmer was appointed Civil Air Patrol Liaison Officer effective 1 July 1956 on Special Order Number 133, Headquarters, Holloman Air Development Center, 2 July 1956, and was assigned additional duty as project officer, Holloman Air Development Center Operations Plan Number 6-57, 1 September 1956. (Confidential)

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## NARRATIVE

### 1. Operations

#### a. Launchings

During the period covered by this report, two GAM-63 Rascal missiles were launched. The primary flight test objective was to evaluate the XLR-67-BA-9 engine. (Confidential)

The first of the two was fired on 6 August, from a DB-36. This missile had been filled with acid thirteen days and had been scheduled to fly five times before it was finally launched. Inhibited White Fuming Nitric Acid was used for the second time and chemical analysis of the acid varied only in the third figure. A bladder fuel tank was also used for the first time. Performance of this missile was excellent. (Confidential)

The second missile was launched on 11 September. This missile was the first to be filled with acid by the B-1 Acid Trailer. Pre-launch check-out and launch from a DB-47 were satisfactory. Fourteen seconds after launch the missile was destructed without ground command. An investigating committee could not determine the exact cause for destruct but modifications with the approval of Missile Flight Safety, have been made to reduce the possibility of recurrence. (Confidential)

#### b. Other Programs

During June, July and August, 1956, tests were made of the ability of an observer to identify his aiming point with Rascal Guidance equipment. These tests were conducted on Phoenix, Arizona, using a F-89 to simulate the missile and a DB-36. Results were indicated by a radar bomb scoring unit. Strategic Air Command observers performed the guidance functions. (Confidential)

In September an extensive captive program was initiated to investigate and determine the best values to be used in setting up the automatic gain control in the unattended search radar. (Confidential)

#### c. Conferences, Visitations

The only conference held during this period was the Weapon System Phasing Group meeting at Holloman Air Development Center on 16 and 17 August 1956. (Unclassified)

Two groups of personnel planning to participate in Engineering and Suitability Testing in Air Proving Ground Command have visited this facility to observe the procedures used by Bell Aircraft to prepare a missile for flight. (Unclassified)

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