Air Force Aerial Targets
October 2007
NDIA Brief
San Diego, CA

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Director, 691st Armament Systems Squadron
Eglin AFB, FL

Overall Classification of This Briefing is Unclassified and Cleared by AAC/PA No. 10-25-07-624
Overview

• Purpose
  • System Description
  • Organizational Structure
  • Product Groups
    – Full-scale Aerial Targets
    – Subscale Aerial Targets
• Summary
Purpose

• Provide “Presentations” of Realistic Threat Representative Systems (Aircraft and Cruise Missiles) in Support of the Following:
  – Lethality Testing Required for New or Improved Weapon Systems Prior to Production (10 USC 2366)
  – USAF Air-to-Air Weapon System Evaluation Program

• Validate Performance Of DoD Ground-to-Air and Air-to-Air Missiles and Aircraft Systems
  – Emulates Performance, Signatures and Countermeasures (Infrared and Electronic Attack)
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System Description

• Aerial Target “Presentations” include:
  – The Target Itself
  – Target Control System
    • Gulf Range Drone Control System (GRDCS)
  – Launch, Recovery, Maintenance & Repair of Target
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691st Armament Systems Squadron

DIRECTOR
Ms. Michele Brazel

DEPUTY DIRECTOR
Ms. Audrea Feist

CONTRACTING
Ms. Leanne Green

FINANCE
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CHIEF ENGINEER
Mr. Charlie Reuter

AFSAT
Mr. Jim Cornwell

QF-4
Ms. Lee Neugin

QF-16
Mr. Ken Hislop

Develop, Procure and Sustain Aerial Targets and Related Systems
Where We Fit In

Air Force Headquarters

Air Force Materiel Command

Air Armament Center

308th Armament Systems Wing

728th Armament Systems Group

691 Armament Systems Squadron

MGen David Eidsaune, Commander

Dr. Bruce Simpson, Director

Col Cyril Socha, Commander

Ms. Michele Brazel, Director
Click Middle of Screen to Start Movie
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**QF-4 Full Scale Aerial Target**

Program Manager: Ms. Lee A. Neugin

**Description**
- Full Scale Aerial Target for Threat-Representative Weapon System Evaluation
- Meets USAF, Army, Navy, Allied Test Requirements
- Droned Refurbished F-4 Aircraft Out of AMARG
- Program in Full Rate Production
- Prime Contractor is BAE Systems, Mojave, CA

**Key Features**
- Satisfies Title 10 "Live Fire/Lethality"
- Operates via Ground-Based Target Control System
- Supersonic, High-G, Heavy Payload Capability
- Provides 3rd Generation Threat Representation
QF-4 Master Schedule

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Lot 11: Deliveries: Aug 06 – Aug 07
Dec 04

Lot 12: Deliveries: Aug 07 – Jul 08
Feb 06

Lot 13: Deliveries: Aug 08 – Jul 09
Mar 07

Schedules shown above are based on actual contract schedules

Schedules below are planned schedules

Lot 14: Deliveries: May 09 – May 10
Jan 08

Lot 15: Deliveries: May 10 – May 11
Jan 09
QF-4 2007 Accomplishments

• Completed Lot 11 and Began Lot 12 Deliveries
  – Total of 226 QF-4s Delivered to Date

• Conducting Government Ground Test of QRF-4C Model
  – Provides Three Additional Years Of Fullscale Capability
  – Projecting 17 Production Lots vice Current 15 Lots

• Supported 42 NULLO Test Missions in FY07
  – 61 Missiles Fired
  – 8 Kills
The Future of QF-4

- Lots 14 – 17 Will Consist of RF-4C Models Only
- Last QF-4 Delivery Planned For FY13
- Sufficient Inventory through FY15
  - Assumes 16 – 20 QF-4 Kills Per Year
  - Bridges Ops Capability Until QF-16 Deliveries
QF-16 Air Superiority Target
Program Manager: Mr. Ken Hislop

Description

- Fullscale Target for Threat-Representative Weapon System Evaluation
- Meets USAF, Army, Navy, Allied Test Requirements
- Program in Pre-System Development and Demonstration Phase
- Droned Refurbished F-16 Aircraft
- Risk Reduction in Progress: Airframes, Engines & Target Control System

Key Features

- Follow on for QF-4 Program: Supersonic, High-G, Heavy Payload Capability
- Satisfies Title 10 "Live Fire/Lethality"
- Provides 4th Generation Threat Representation
### Proposed QF-16 Schedule
**FY08-FY16**

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QF-16 Risk Reduction

• Risk Reduction Activities: FY07 - 09
  – Focus on Government Furnished Equipment

• F-16 Airframe Study
  – Assess Condition and Availability of Block 10, 15, and 25s
  – Cost of Refurbishment

• Engine Study
  – OSS&E Impacts to Manned and Unmanned Capability
  – Assesses Multiple F100 Engine Configurations

• Target Control System (TCS)
  – Data Link Tester Development
    • Integrate Ground S/W with Contractor-Developed Airborne S/W
  – Portable TCS For Contractor Development Support
F-16 Aircraft Survey

• Provide Potential Primes Access to Airframes
  – Three F-16s Available at AMARG in Late FY08
    • Blocks 10, 15 and 25
  – Government Crew Chief Supervises Visits
  – Program Office Set Ups Visitation Schedule
  – Aircraft Will Be On Ground Power For Analysis
  – Gun and Ammo Canister Will Be Removed

• Multiple Visits May Be Permitted

Better Understanding of Aircraft ➔ High Confidence Proposals
QF-16 AST Status

- FY09 PBR Funding Approved
  - Air Force and Navy Funded
- 1st Industry Day Complete
  - 63 Industry Attendees Representing 23 Companies
- Draft RFP Due Out in Mar 08
  - Key Focus For Industry Day II
- 2nd Industry Day Planned 3QFY08
  - Increase Use of One-on-One Sessions
- RFP Release in 2QFY09
- Contract Award in 1QFY10

Acquisition Strategy not yet Approved – Information Regarding Future Events / Strategy is Tentative
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AFSAT Sub Scale Aerial Target
Program Manager: Mr. Jim Cornwell

**Description**

- An Affordable, All-Composite Airframe
- Flies Faster/Slower, Higher/Lower, and Provides 3x+ More Presentations Than Legacy USAF Subscale Targets
- Program in Initial Production Phase
- Prime Contractor is CEi, Sacramento, CA

**Key Features**

- Satisfies Title 10 "Live Fire/Lethality"
- Operates via Ground Based Target Control System
- Subsonic, Relatively Heavy Payload Capability
## AFSAT Master Schedule

### CY 2006 to CY 2010

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- **FPD** = Flight Product Demonstration
- **FDE** = Flight Demonstration Evaluation
- **LRIP** = Low Rate Initial Production
- **FAAT** = First Article Acceptance Test
- **RAA** = Required Assets Available
- **WSEP** = Weapons System Evaluation Program

### Key Events

- **FPD**
- **Pre-OT Flight Test**
- **LRIP (Lot 4) Award**
- **APB Signed**
- **RAA**
- **Familiarization Flights**
- **OT**
- **FRP (Lot 5) Award**
- **Lot 6**
- **Initiate Product Improvements (RCS, Alt. Launch, Internal EA)**

### Legends

- ▲ = Completed
- △ = Scheduled
AFSAT 2007 Accomplishments

- Completed Pre-Operational Testing
- Supported 21 Familiarization/Weapon System Evaluation Program Missions
  - 114 Presentations Achieved with 103 Missiles Fired
  - 5 Kills
- Currently in Operational Testing
  - Estimate Completion by Nov 07
- Full Rate Production Decision Planned NLT Mar 08
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- QF-4 Production Planned Through FY13 Using RF-4C Model
  - Inventory Depletion Expected in FY15
- QF-16 Strategy Underway
  - Draft Request for Proposal (RFP) Planned 2QFY08
  - Production Deliveries Planned to Begin in FY15
- AFSAT OT Testing Complete / Awaiting OT Final Report
  - Next Step to Execute Lot 5 Award 2QFY08