NAVAIR Lakehurst Overview

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Presented to: LKE Small Business Round Table Industry Day

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Lakehurst History

Ammunition Proving Ground Era

1915-1921

1921-1961

Lighter-Than-Air Era

1st Advanced Arresting Gear Land-Based Recovery

May 31st 2016

1st Electromagnetic Land-Based Catapult

Dec 18th 2010

Cold War Anti-Submarine Warfare Era

1961-1974

Carrier Aviation Support Era

1974-Present
Joint Base McGuire-Dix-Lakehurst

BRAC 2005
Realign Naval Air Engineering Station Lakehurst to Joint Base McGuire-Dix-Lakehurst and transfer Installation Management functions to the Air Force.

- Only tri-service Joint Base of 12
- Active duty, Guard & Reserve missions
- 101,000 acres federal / state / local protected
- 42,073 acres DOD
- 15.7M sf of facilities
- Approximately 37,000 Personnel Work at JBMDL including Military, Civilians, Transients (Students, Reserves) and Contractors

Unique world-class capabilities
- Restricted airspace
- Live-fire training ranges
- Secluded, secure spaces and runways
- Industrial & RDT&E facilities
- Air Refueling and Global Airlift
- Joint active, reserve and National Guard mobilization and training
NAVAIR Lakehurst Role

• World leader in Aircraft Launch and Recovery Equipment (ALRE) and Support Equipment (SE)

• Unique Mission:
  ▪ Assure that fixed and vertical wing aircraft operate safely and effectively from aircraft carriers, air capable ships and expeditionary airfields worldwide

*From Take Off to Touchdown
  99.9999 reliable*
NAVAIR Lakehurst Products/Services

Provide Research and Development Support – SE & ALRE System of Systems

Aviation Management Info Systems

Catapults

Arresting Gear

Weapons Loader

Automated Test Equipment

Cranes

Visual Landing Aids
The World’s Only Continuous, Full Spectrum Life Cycle Support for SE and ALRE

- Program Management
- On-Site Fleet Reps
- Cost Analysis
- Contracts
- Logistics
- Materials
- System Safety

- Science & Technology
- Engineering Development HW / SW
- In-Service Engineering
- Rapid Prototyping
- Production
- Test Operations

- Aircraft / Weapons / Ship Compatibility
- Visual Landing Aids
- Information Systems
- Recovery
- Launch
- Handling
- Servicing and Maintenance
- Advanced Diagnostics
- Expeditionary Airfield Systems
Facilities/Capabilities Fleet Tech
World wide Coverage

CONUS Locations

Everett, WA
ASIR

Bremerton, WA
CAFSU

San Diego, CA
ASIR, CAFSU

29 Palms, CA
EASU

CONUS Locations

Yuma, AZ
EASU

Mayport, FL
ASIR, CAFSU

Pearl Harbor, HI
ASIR

IWAKUNI, JA
EASU

Yokosuka, JA
ASIR, CAFSU

OCONUS Locations

Newport News, VA
CAFSU

Portsmouth, VA
CAFSU

Norfolk, VA
ASIR, CAFSU

Cherry Point, NC
EASU

ASIR- Aeronautical Ships Installation Representatives
CAFSU- Carrier and Field Service Unit Representatives
EASU- Expeditionary Airfield Service Unit Representatives
EMALS
Electro-Magnetic Aircraft Launching System

- Will replace steam catapults currently used to launch aircraft from CNV78 Ford class
- System uses highly reliable and modular electrical and electronic components not subject to mechanical wear

- 1st EMALS aircraft launch (F/A-18E Super Hornet) at Lakehurst Land-Based Test Facility December 2010
- 1st EMALS Carrier-Based Deadload test June 2015 on board the Gerald R Ford Aircraft Carrier (CVN 78)
- 1st EMALS Carrier-Based Aircraft Launch on board CVN 78 July 28th 2017
- CVN 78 currently undergoing operational & major system testing
- Estimated Deployment 2020

www.navair.navy.mil (EMALS)
AAG
Advanced Arresting Gear

- Installed on the new CVN 78 Gerald R Ford Aircraft Carrier
- Will provide new operational advances for safely and efficiently recovering carrier-based, tailhook-equipped aircraft
- Dead load testing and aircraft compatibility testing performed at Lakehurst
- 1st AAG Land-Based Recovery NAVAIR Lakehurst Mar 31, 2016
- 1st AAG Carrier-Based Aircraft Recovery on board CVN 78 July 28th 2017

www.navair.navy.mil (AAG)
**ADMACS**
Aviation Data Management And Control System Upgrade

- Block II provides the capability to rapidly input, collect, process and distribute relevant air operations data and display info in all required ALRE, ordnance and air ops work centers throughout the ship

- All active-duty aircraft carriers will be equipped with the ADMACS Block II by FY20

[Image of ADMACS interface]

[Link: www.navair.navy.mil (ADMACS)]
• Next Generation Navy Automatic Test Equipment (ATE)
  • Will resolve CASS obsolescence
  • Will provide 100% Test Program Set (TPS) transportability
  • Will provide the Navy with a modern, open, ATE architecture
  • Total Inventory Objective is 299 stations with 67 LRIP units ordered to date
Prototype & Manufacturing Facilities/Capabilities

AIR 4.8 Lakehurst’s Prototype and Manufacturing is an essential resource for support of Naval aircraft and associated Aircraft Platform Interface missions.

- **Unique and Sole** manufacturer and Fleet provider of Cross Deck Pendants (CDPs) for USN, USAF and USMC EAF and Low Loss Launch Valves (LLLV)

- Designated Depot for ALRE Systems and Cryogenic Support Equipment

- Recognized Prototype and Rapid Response Facility for Naval Aviation

- 176+ Artisans integrated with 86+ PMD engineers and support personnel – collocated with ALRE and SE Design and In Service Engineers

- Engineering design support / producibility, drawing / model validation, reverse engineering and environmental testing capability

- Full Spectrum QA support, ALRE Flight Safe management and Material Receipt Inspection

- Additive Manufacturing, Digital Thread and Digital Manufacturing Technologies

- DMSMS for SE & ALRE electronic and avionics components
Test Facilities/Capabilities

- Elevated Fixed Platform Helo / UAV (future) Recovery systems
- Runway Arrested Landing Site (RALS)
- Shipboard MK7 Mod 3/4 Arresting Gear
- Advanced Deck Handling
- Expeditionary Air Field
- Jet Car Tracks
- Shipboard water-cooled Jet Blast Deflector
- EMALS
- TC13-Mod 2
- TC13-Mod 0
- Dedicated 12,000 ft Test Runway

Sites & Systems Instrumented
Fleet Representative Systems
Final LLLV Acceptance
Final CDP Master Reel Acceptance
Ship Installation Support
System Certification Support
Service Change, ECPs and EI Support
Developmental Test / Design Support
AC Compatibility Testing
NAVAIR Lakehurst Competency Leads

Personnel: 54 Military 1,829 Civilian 300 CSS

------------ Manage Cross-Competency Requirements
SUMMARY

• NAVAIR Lakehurst is part of NAVAIR’s CAO/IPT Organization
• Full Life Cycle Provider for ALRE & SE
• NAVAIR Lakehurst is a Supported Component & Tenant In the Joint Base McGuire/Dix/Lake