Expansion of USMC CPAC Program Operations to Address the Transition of Assets from Okinawa to Guam

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Technology Transition – Supporting DoD Readiness, Sustainability, and the Warfighter
Expansion of USMC CPAC Program Operations to Address the Transition of Assets from Okinawa to Guam

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Presented at the Environment, Energy & Sustainability Symposium & Exhibition (E2S2), 4-7 May 2009, Denver, CO.
Outline

- Background
- Objectives
- Optimization Opportunities
- New CRF Concept Designs
- Project Successes
Background

- The USMC CPAC Program provides corrosion monitoring and mitigation services for vehicles and equipment across the Marine Corps.

- CPAC utilizes Corrosion Repair Facilities (CRFs), Corrosion Service Teams (CSTs), and controlled humidity systems.
  - I Marine Expeditionary Force (MEF) based in Camp Pendleton, CA
  - II MEF based in Camp Lejeune, NC
  - III MEF based in Camp Butler, Okinawa, Japan
  - Marine Forces Reserves (MARFORRES) based in New Orleans, LA
Background (cont’d)

- One CRF is located on Camp Kinser in Okinawa, Japan to minimize impacts on mission readiness, safety, and lifecycle costs of III MEF assets.

- As a result of consolidation of operations on Okinawa and relocation of USMC forces to Guam, CPAC is planning to operate separate, but smaller CRFs at each of these locations.

- The CPAC Program has been developing a transition strategy to ensure the effective transfer of operations to the two new CRFs, thus maintaining the current level of corrosion mitigation capability throughout the transition.
Objectives

- Minimize impact on CPAC corrosion control efforts
- Reduce cost of transition for CPAC and DoD
- Improve CRF design efficiency and effectiveness
- Maintain current capabilities at new CRFs
- Provide CPAC with basis for construction of new CRFs
- Provide site and operational recommendations to the relevant planning organizations
Optimization Opportunities

- Current CRF aboard Camp Kinser, Okinawa processes approximately 1600 Principle End Items (PEIs) per year.
- New CRFs on Guam and Okinawa will process approximately 400 and 1200 PEIs per year, respectively.
- Maintain all corrosion repair and mitigation capabilities.
- Increase efficiency and improve process flow.
Downsizing Opportunities (cont’d)

- Similar geographic and climate conditions of target sites
- Similar construction methods recommended for both sites
- Similar capabilities and process flow
- Design to match capacity needs
- Opportunity for Leadership in Energy and Environmental Design (LEED™) Silver certification
New Okinawa CRF Concept Design

- **Design Characteristics**
  - Targeted throughput of 1200 PEIs per year
  - Two parallel tunnels with two paint booths in each, allowing a staged approach to coating application
  - Incorporates cross-flow capability between tunnels
  - Capable of processing all equipment in current inventory

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Site Footprint, as shown: 540' x 400' = 216,000 SF

Building Footprint: 43,600 SF
New Guam CRF Concept Design

- **Design Characteristics**
  - Targeted throughput of 400 PEIs per year
  - One tunnel with three paint booths allowing a sequential application of primers, topcoat, and camouflage
  - Allows for variability in process flow between steps
  - Capable of processing all equipment in current inventory

Site Footprint, as shown: 
510' x 320' = 163,200 SF

Building Footprint:
35,000 SF
Project Successes

- Developed recommendations for stand-up of CRFs on Camp Hansen and Camp Finegayan
  - Notional site layout/land requirements
  - Infrastructure and resource requirements
  - Proposed capabilities
  - Facility design concepts

- Provided layout and facility information to NAVFAC and MCI MIDPAC
  - CRF requirements have been included in the infrastructure and site layout planning processes
  - The CRF design concepts were incorporated as the Base Facility Requirements for CPAC operations
Project Stakeholders

- U.S. Marine Corps (USMC)
- Naval Facilities Engineering Command (NAVFAC)
- Marine Corps Installations (MCI) Mid-Pacific (MIDPAC)
- Joint Guam Program Office (JGPO)
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This work was funded in part through the Office of the Assistant Secretary of the Army (Installations and Environment) and conducted in part under contract W74V8H-04-D-0005 Task 0494. The views, opinions, and/or findings contained in this paper are those of the author and should not be construed as an official Department of the Army position, policy, or decision unless so designated by other official documentation.