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U.S. Office of Special Counsel  
1730 M Street, NW  
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Dear Ms. McMullen and Ms. Myers,

The purpose of this letter is to provide my comments on the report submitted by the Secretary of the Navy concerning my January 2006 whistleblower disclosure to the Office of Special Counsel (OSC) (File No. DI-06-0782). OSC transmitted my whistleblowing disclosure to the Secretary of the Navy for an investigation and report pursuant to 5 USC § 1213 (c). Pursuant to the statute, the Secretary has 60 days to conduct an investigation of my allegations and report back to OSC. The initial deadline was April 16, 2006. On September 6, 2006, over two and a half months after the initial deadline, the Secretary of the Navy submitted the required report of investigation to OSC.

The OSC did not forward the report to me for my review and comment until November 14, 2006. OSC staff explained that the nine-week delay was in order for OSC to determine if additional information was necessary prior to forwarding to me for review and comment.

The investigative report conducted by NAVAIR IG and signed by Secretary of the Navy Winter confirms the following:

1. From at least 2001, and in all likelihood, from 1981 to November 2005, NADEP artisans were not provided with the torque tools needed to repair Generator Conversion Units (GCU) on F/A-18s in compliance with military specifications.
2. According to a NADEP engineer who oversees the GCU program, "At worst, mis-torqued screws could result in premature failure of the GCU through overheating due to poor contact across heat transfer surfaces; damage to the electrical insulator under the 12 SCR modules and failure of a module; a failed electrical connection; a damaged helicoil; damage to the tube flange through electrical arching; or Foreign Object Damage internal to the GCU potentially resulting in an electrical fault...In the event that one GCU fails for any reason, the aircraft electrical power distribution system is configured to immediately transfer that GCUs bus to the opposite GCU *at which point the pilot would return to base as soon as practical.*"

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3. No catastrophic F/A-18 mishap to date has been attributed to GCU failure, and the Navy Secretary determined that a recall is unnecessary because the deficiencies cited in the investigation do not represent an immediate "safety of flight" issue.
4. NADEP Supervisors were aware of the need for calibrated torque tools to properly repair GCUs as early as 2003, according to statements acknowledging the production of a GCU training video at NADEP three years ago.<sup>1</sup> No action was taken by NADEP to procure the necessary torque tools until mid-2005.
5. Hundreds of improperly repaired GCUs remain in the Fleet and in the armed forces of our allies. There is no indication that NAVAIR's initiative to improve reliability of GCUs, which began in July 2005, will consider the impact of proper repairs. There is no indication that the steps NADEP has taken to ensure proper repairs of GCUs have been communicated to the rest of the Fleet.

I have a number of concerns about the scope, conduct, and ultimate completeness and reasonableness of the investigation and resolution signed by Secretary Winter.

## **SAFETY**

I accept and am relieved by the Navy's determination that no aircraft have been lost to date because of GCU failure. However, the Navy's confident dismissal of any safety concerns resulting from improperly torqued screws on GCUs requires closer scrutiny.

The Navy's conclusion concerning "safety of flight" issues is based on "redundant" back-up systems in the event of a GCU failure. For example, at 4, the investigation notes, "Sufficient loss of power quality would result in the GCU going off-line, at which point all electrical supply functions would default to the other GCU in the aircraft. In the unlikely event of a dual-generator failure...the aircraft would then default to battery-backup for electrical power functions, at which point the pilot would immediately return to base."

Despite being an "unlikely" event, the Navy's FY2007 budget request<sup>2</sup> asserts a need to correct and modify the F/A-18's (A-D models) 50A Battery Charging Converter to "reset the generators following a dual power outage." It is my understanding that the "battery-backup" on the F/A-18 can only function for about 20 minutes, after which the pilot would have to find a place to land immediately. On a different aircraft, in February 2006, the Navy cited GCU failure, and dual GCU failure, as "an urgent safety problem that must be alleviated to eliminate loss of aircraft and life."<sup>3</sup>

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<sup>1</sup> The content of the video is misrepresented by the NAVAIR investigative team. Please see comments below.

<sup>2</sup> Attachment 1

<sup>3</sup> Attachment 2

This is not to dispute the Navy's assertion about any immediate safety of flight issue resulting from improperly torqued screws on F/A-18 GCUs. The investigation confirmed this problem likely has existed since 1981, with no catastrophic mishaps as a result. But, accepting that no F/A-18s are likely to crash because of this problem does not mean safety could not be enhanced by taking immediate steps to fix the remaining improperly repaired GCUs in the Fleet.

It is a truism that when there are "redundant" safety systems, a breakdown limited to one of them will not result in "catastrophic" loss of aircraft. Yet, the Navy's assurances about safety rely on a back-up system (second GCU) that the Navy already has determined requires improvements in reliability (see below). It is inherently unreasonable to conclude that there is no potential safety problem when one unreliable component is backed up by another unreliable system.

The investigators also failed to interview Captain William Trainor, former NADEP Commanding Officer, who at a stand-up in June 2006, told all NADEP personnel that FY2006 saw an increased number of aircraft and air crew losses, and "part of the problem was maintenance."

## **RELIABILITY**

The report does not include any investigative effort or record to determine whether improperly repaired GCUs and, specifically, failure to torque screws according to military specifications, decreases the overall reliability of the GCU. Did the failure of NADEP managers to provide torque tools for repairs of GCUs 1) result in an increased number of GCU failures, 2) have an impact on the overall readiness of the F/A-18 Fleet during wartime, and/or 3) increase the burden to the American taxpayer for upkeep and maintenance of the Fleet? The report does not consider those key issues, which represented the impact of my original allegations, for which many of my factual concerns have been confirmed.

Having worked on aircraft components for 25 years, my concern as an artisan is not only whether the aircraft will crash, but will it be mission capable after repair. Until now, it has always been stressed that we must provide reliable components to the Navy, and through FMS, to our allies. COMNAVAIRFORINST 4790.2, vol. 2, which sets NAVAIR policy for depot level maintenance, defines "reliability," as "the probability that an item will perform its intended function for a specified interval under stated conditions." Given the Navy Secretary's unwillingness to initiate a recall, it will take several years for all of the affected GCU units to work their way through the system to the point in which a meaningful reliability baseline can be set.

To speed up this process, NAVAIR should immediately instruct all facilities that have the capability to remove the GCU's and re-torque them to address this issue during normal aircraft downtime. It is not a reasonable corrective action for my confirmed allegations for NAVAIR to continue to allow our mission capabilities to be determined randomly.

At 26-27, Mr. Sean Brennan, CDR, USN (Retired), a former NADEP Director of QA states, "there were no mission degradation or safety issues of concern to engineering" resulting from the GCU repair problem. But decisively, the investigative report provides no evidence on which to assess CDR Brennan's confident assertion about mission degradation.

In 2005, the GCU was placed by the NAVAIR PMA-265 (F/A-18) program at the top of a list of "Most Significant Mission Readiness and Life Cycle Cost Drivers"<sup>4</sup> and the third on a list of F/A-18 "mission degraders."<sup>5</sup> As recently as September 2006, the GCU was second on a list of "F/A-18 A-D Top Performance Degraders" with respect to "readiness."<sup>6</sup> Lack of torque tools for proper repair may play a significant role in these determinations, yet the Navy provides no investigative effort or record in this area.

At 4, the investigators cite a narrative provided by Mr. William Taylor, F/A-18 Fleet Support Deputy Program Manager, PMA-265C, which states, "As part of an overall initiative to improve reliability of the GCU, repair procedures at NADEP North Island were converted to an overhaul process starting in July 2005. However, it will be at least 1-2 years before Fleet data will indicate whether these changes will result in greater GCU reliability."

My actions have given the Navy a jumpstart in this process. Given the acknowledged unreliable performance of the GCU in recent years, the actions finally taken at NADEP to ensure proper repairs of this component should be stressed throughout the NAVAIR system and with the Fleet.

## **MISMANAGEMENT**

The negligence of senior supervisors at North Island in this matter is overlooked by investigators, while unnecessary and gratuitous personal attacks against me are included without justification.

The Secretary of the Navy and the investigators fail to hold NADEP managers accountable for their misstatements during the investigation and for years of negligence and mismanagement of the GCU program. NADEP supervisors knew about the torque problems as early as 2003, were informed about it repeatedly, and did nothing to address it until I raised it as an issue in mid-2005. The investigation confirms this timeline. However, the NAVAIR investigative team misinterprets some of the evidence in this area. It then offers faulty analysis as to why the problem was not corrected years ago, indirectly shifting blame to the artisans when the buck should have stopped with the management team. Specific examples are below.

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<sup>4</sup> Attachment 3 and 4

<sup>5</sup> Attachment 5

<sup>6</sup> Attachment 6

A GCU training video, produced at NADEP in late-2003 or early 2004, demonstrates that NADEP supervisors were aware of the need for torque tools to repair GCUs. The video warns of the potential safety and reliability problems with the GCU that result from improper repairs.

The following passages are excerpted from the NADEP training video<sup>7</sup>:

"The GCU is a **critical** component of the F/A-18 aircraft..."

"Topic 1: Proper installation procedures for SCR pulse network assemblies."

"[For proper installation] "finger tighten the screws and then **torque to 5 inch-pounds.**"

"**When improper or too tight torque is set on the SCR** the thermal insulation is cut and comes against the flange assemblies. As a result, the arching from the 155-volt on the back of the SCR to the back of the chassis causes damage to the thermal strip and **is not repairable.**"

[The next segment shows a GCU circuit board that has been damaged]

"**Damage will make the unit inoperable. It will turn itself off in-flight. This is the main power source. Tighten the screws in accordance with the torque specifications in manual A1-211AC-420-000 Work Package 5, Page 37...Because this is a high voltage line, 155 volts, screws will arch or burn if not properly tightened.**"

"Topic 2: Proper installation procedures for the A% circuit card assembly... **Use the torque wrench to torque to the proper values, 13-15 inch-pounds...Also use the torque wrench for the ground, number 10, 17-20 inch-pounds.**"

"Topic 3: "Proper installation procedures of

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<sup>7</sup> Enclosed.

Generator Assembly into the GCU... **"Make sure the bolts are torqued as per A1-211AC-420-000."**

Oddly, the investigators comment, at 19, that they "reviewed the video and determined that there is no mention of torque values or proper tools," ignoring the repeated, explicit references to both in the video.

The Command spent resources to produce a video to warn about the dangers of improper repairs of GCUs, yet did not act for over two years to make sure its own artisans had the equipment necessary to avoid these problems.

Mr. David Statham, NADEP Electronic Integrated Systems supervisor, stated that "he had no knowledge of the allegation that artisans were failing to properly torque screws in the GCUs prior to July 2005." While this may be true, as a shop supervisor, he is responsible for ensuring that artisans are equipped with necessary tools to meet military specifications. He is listed in the video's credits. It is worth noting that only one torque tool is used to demonstrate the "how to" in the video. This was the only torque tool available to GCU artisans prior to July 2005. It was only used by artisans to attach GCUs to the test bed, and not for general repair and overhaul of GCUs.

Mr. David Weddle, who, as NADEP Deputy Production Manager for Avionics, approved production of the training video, stated, "the GCU shop artisans always torqued screws to the requirement of the Manual and that torque tools were always available in the shop." At 30, the investigators "find that the testimony of supervisors who asserted the GCU artisans had the proper tools and were complying with torque values in the Manual is not credible."

While the investigators confirm Mr. Weddle's false statements to them, they inexplicably conclude that supervisors were unaware of the need for torque tools at NADEP. Again, the findings are not reasonable. Further, there should have been corrective action for the false testimony to government investigators.

A Material Request dated August 7, 2004,<sup>8</sup> and signed by Mr. Weddle, further calls into question his statements about the availability of proper torque tools. Mr. Weddle approved this request for three torque screwdrivers and three torque wrenches as Shop 93503 made preparations to begin repairs on GCUs for F/A-18 E/F's. The Request notes that "special torque wrenches are required for the overhaul and repair process for the E/F GCU." The same torque tools are necessary for repairs of GCUs for the A-D models. It is unclear why Mr. Weddle would have authorized the purchase of these tools if he believed they were already on-hand for repairs of the A-D model GCUs. It is not clear what happened to these tools after this initial request was authorized. As the investigators confirm, a full set of torque tools did not arrive until mid-November 2005, following a second request by Mr. Oxley on April 25, 2005.<sup>9</sup>

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<sup>8</sup> Attachment 7

<sup>9</sup> Attachment 8

At 32, the investigators conclude, "It is not clear why the lack of torque tools was not flagged as a major issue many years ago. The artisans may simply have been following long established procedures and working with the philosophy of "do the best you can with what you have." This analysis is flawed. The need for torque tools was raised as an issue, as the video and initial tool request indicate. NADEP asserts that immediate action was taken to address this issue. But when I first raised it through a disclosure to the NADEP WASTE/FRAUD/ABUSE hotline, it was dismissed entirely by the Command. The investigation report completed by NADEP, dated 29 September 2005,<sup>10</sup> in response to my initial complaint, concludes that there was "no evidence to substantiate" Mr. Conrad's allegation that "tooling and technical manuals were unavailable" to GCU artisans. Artisans were not operating under a philosophy of "do the best you can with what you have," as the investigators suggest. Artisans were concerned about the consequences of raising this issue more forcefully with supervisors unwilling to take responsibility for years of negligence in managing the GCU program.

I am an example to the rest of workforce of what happens to anyone trying to report Waste, Fraud, Abuse and violations of rules up the chain of command.

Indeed, a complete case of whistleblower retaliation has been established through this investigation. I made protected disclosures to the NADEP Waste, Fraud, Abuse Hotline, to the FAA, to NAVAIR Pax River, and to the U.S. Office of Special Counsel (in January 2006). With respect to the first element in a whistleblower reprisal case, protected activity, the "substantial likelihood" finding that led to the OSC to order this investigation more than meets the test for protected speech. The Whistleblower Protection Act only requires that I reasonably believed my information was evidence of misconduct. The substance of my whistleblowing also is confirmed in this investigation.

There is no question that management has been aware of my disclosures to responsible officials, the Waste, Fraud, Abuse Hotline, and to the OSC. It rejected and rebutted them in the earlier NADEP investigation.

After making nearly all of these protected disclosures, in December 2005 I was transferred to the Micro Min Soldering (2M) unit. The 2M work area requires a 2M Certification, which I do not have. In addition, there is virtually no work done in this area on second shift. Even with the necessary certification and available work, an arthritic condition in my hands limits my ability to work effectively in this area. All other personnel transferred from the GCU shop at this time<sup>11</sup> were reassigned to areas in which they could perform repairs. Mr. Weddle's statement that I now perform a "critical" job at NADEP is not credible, just as his statements about the availability of torque tools lacked credibility. I have been stripped of all meaningful job duties and lost all overtime pay since December 2005. The individuals responsible for these personnel actions against me are the same individuals who are ultimately responsible for guaranteeing the quality of the products in the GCU shop, and who would feel most threatened by my disclosures

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<sup>10</sup> Attachment 9

<sup>11</sup> See investigation, at 16

because of their inaction. The time lags, imposed lack of productivity, motive to retaliate, personal attacks on me during the OSC-ordered investigation, and discriminatory treatment further establish a retaliatory nexus for which there can be no independent, legitimate justification.

## SUMMARY OF RECOMMENDATIONS

1. I request that OSC require NAVAIR to investigate and make conclusions supported by a record whether the remaining improperly repaired GCUs in the Fleet and in the armed forces of our allies should be re-torqued immediately in order to address any remaining concerns about GCU reliability.
2. I request that OSC recommend that NAVAIR prepare corrective action by the Fleet with instructions for proper repair and overhaul of GCUs, and a recommendation to service the components during normal aircraft downtime.
3. Given the fact pattern outlined above, I request that the Office of Special Counsel exercise its authority under 5 USC 1214(a)(5) *sua sponte* open a reprisal investigation under the Whistleblower Protection Act (5 U.S.C. § 2302(b)(8)).
4. I request that OSC determine if NADEP has violated a law, rule, or regulation by continuing to pay me with taxpayer dollars for repairs that I do not do and am not certified to perform. I recommend that OSC request from NADEP a description of my duties at the 2M repair shop and a description of the certification necessary to work in that area.
5. I request that OSC determine if corrective action is necessary for false statements made to government investigators during the course of this investigation.
6. I request access to all investigative records so that I may review the information included by the investigators in the full context of the witnesses' statements. I request additional time to submit supplementary comments, if necessary, after reviewing the statements and other communications with witnesses.

Sincerely,

Tom Devine  
for

Richard Conrad



**CORRECTION OF DISCREPANCIES IDENTIFIED DURING PRELIMINARY EVALUATION, SUBSEQUENT FLIGHT TEST PROGRAMS AND FLEET OPERATIONS (OSIP 011-154)**  
**FA-18 A/B/C/D**

INDIVIDUAL MODIFICATION TYPE MODIFICATION: SAFETY/RELIABILITY/IMPROVEMENT

DESCRIPTION/JUSTIFICATION:

\*Corrections to discrepancies found during testing and evaluation can sometimes be incorporated into production aircraft, effective with the physical configuration audit which establishes the product baseline of the aircraft. However, when this cannot be done due to time constraints, retrofit of the changes into already delivered aircraft requires funding through the Aircraft Modification Program. Additionally, deficiencies discovered during fleet operations must be corrected. The unacceptable alternative to retrofitting would be multiple configurations in the fleet, which will create maintenance and supply problems, and in many cases the mission capability of the aircraft would be adversely affected as well as reduced service life. Corrections to the following items/conditions are required:

- External Stress EMI Protection (ECP 08751)
- Avio AC Bus Isolation (ECP 12181)
- Battery Control Relay Unit (ECP 165R1)
- FY86 Block Upgrade (ECP 178F1C1)
- Center Fuselage Structural Mods (ECP 241R1)
- Dorsal Longeron (ECP 251)
- Dorsal Longeron (ECP 251R1)
- 470.5 Bulkhead (ECP 262)\*
- Right Hand AMAD Bay (ECP 267R1)\*
- AFET Former (ECP 305R1)\*
- AFET Former (ECP 305R1)\*
- Y657.35 Engine Bay Door Former (ECP 306)
- Main Landing Gear (MLG) Planning Link (ECP 311)\*
- MLG Trunnion Upgrade (ECP 319)\*
- Y488 Bulkhead (ECP 320)
- Wing Fatigue Repair (ECP 353)
- Wing Fatigue Repair (ECP 353)
- ASB Shoulder Bolt (ECP 359)
- ASB Shoulder Bolt (ECP 364)
- Y470 Bulkhead Improvement (ECP 365)
- #1 Fuel Cell Floor (ECP 367)
- MLG Retractor Actuator (ECP 375)
- Fretting on Formers & Spindles (ECP 391)
- Fuselage Skin, Y318 to Y334 (ECP 402)
- Inlet Duct Skin at Y463 (ECP 417)
- Inlet Duct Skin at Y463 (ECP 417)
- Y470.5 Bulkhead MLG Trunnion (ECP 428)
- Speed Brake Trough (ECP 440)
- SUJ-63 Wing Pylon Door Panel (ECP 488)
- Y470.5 Bulkhead Fatigue Change (ECP 489)
- Fuselage Skin at Y453 (ECP 489)
- LAU-115 Sparrow Mod (ECP 506)
- LAU-115 Sparrow Mod (ECP 506)
- ST-16 Failures (ECP 536)\*
- Improvement of Inner Wing SPAR (ECP 544)
- Fuel Barrier Web (ECP 548)
- Wing Leg Longeron (ECP 550)\*
- Y26.5 Fatigue (ECP 561)
- Lower Center Keel Fire Hazard (ECP 562)
- Aileron/Trailing Edge Flap (ECP 574)
- Serocylinder Test Station (ECP 598)
- Flight Control Computer (ECP 595)
- Hydraulic Temp Gauges (ECP NI 879)
- Wing Fuel Cell Control System Wiring (NI 742)
- Wing Fuel Cell Control System Wiring (NI 742)
- Wing Fuel Cell Control System Wiring (NI 742)
- Heat Exchanger (NI 827)
- Night Vision Display System (NVDS) (NI 830)
- Trailing Edge Flap (NI 839)
- Birdstrike Res Windshield (NI 843)
- Wing Fuel Cell Control System Wiring (NI 843)
- AVT-G VALVE (ECP XXX)
- Fuel Cell Floor Crack (ECP 973)
- Side Fuselage Crack (ECP952)
- Wing SPAR Crack (ECP XXX5)
- Forward Lower Keel Modification (ECP NI 931)
- Main Landing Gear (MLG) Tire (ECP 952)
- LOX ORBS Conversion (ECP XXX9)
- Crease Longeron (ECP 608)
- Heat Dolerent (ECP NI-1019-05)
- Nose Landing Gear/MLG Control Valve Restrictor Bay 3 Sheff Redesign (ECP XXX1)
- Wing Fuel Cell Control System Wiring (NI 742)
- Cockpit Pressurization Warning System (ECP XXX-15)
- Vertical Tail (ECP XXX-16)
- Canopy/Windscreen (ECP XXX-17)
- NI/GMLG Fatigue Improvements (ECP-XXX18)
- Inner Wing Conversions (ECP XXX-19)
- Repeatable Release Hardware Bar (ECP XXX-20)
- Repeatable Release Hardware Bar (ECP XXX-20)

Provides for the application of external stress EMI Protection. This ECP includes installation Costs ONLY.  
 Modifies the 50A Battery Charging Converter installation to automatically isolate the busbars and reset the generators following a dual power outage.  
 Safety modification to the utility/energy battery control circuit and adds a battery relay control unit. Prevents inadvertent battery discharge.  
 Increases the power handling capabilities of the four port antenna and the RF switchable filter in order to accommodate the RF power output requirements of the ASP-J System.  
 Improves fatigue for the Dorsal Deck. Duct Skin rivets at Y442, ECS Inlet Casting, and Y419 Nacelle Former at Ramp Truss Attachment.  
 Life extension modification to the Dorsal Longeron.  
 Life extension modification to the Dorsal Longeron.  
 Improves the fatigue life of the Y470.5 Bulkhead Outer Cap.  
 Reliability and maintainability improvements to the engine fuel system by increasing the motive flow tube and the hot fuel recirculation tube.  
 Safety modification to the engine fuel system by increasing the flange thickness and reinforcing the former with integral ribs.  
 Safety modification improves the aft engine mount support to prevent cracking in the aft engine mount support fitting.  
 Modifies the existing door former to the engine cranking.  
 Safety modification to the existing planing link assembly. Belleville washers spring is replaced with nested external compression springs to provide additional overcenter locking force and stroke capability.  
 Safety modification reconfigures and strengthens the MLG trunnion assembly to prevent catastrophic failure upon landing or takeoff.  
 Modifies the Y488 bulkhead to reduce structural stress and improve fatigue life.  
 Modifies the fastener holes in the Wing Panel Forward Spar and the #4 Intermediate Wing Spar to increase fatigue life.  
 Improves reliability and maintainability by improving the cooling system and correcting transmit switchable filter qual test problems.  
 Modifies the Y470 bulkhead to reduce structural stress and improve cranking during catapult.  
 Safety modification to improve the fuel cell floor strength to prevent cracking during catapult.  
 Redesigns the MLG Retractor Actuator Support Fitting and the Flange of Y470.5 Bulkhead where the fitting attaches and reverses hydraulic timing to lengthen the Fatigue Life of the structures.  
 Safety modification to correct fretting observed on outward formers of horizontal stabilizer.  
 Modifies exterior fittings and adds and internal battubs to strengthen the area, reduce structural stress, and improve fatigue life.  
 Modifies the existing speed brake trough area to strengthen it and improve fatigue life.  
 Addresses the retrofit design which will provide 12,000 SFH of life without cracks for the Inlet Duct Skin.  
 Corrects the deficiency in the MLG Trunnion support at Y470.5 bulkhead.  
 Modifies the existing speed brake trough area to strengthen it and improve fatigue life.  
 Safety modification to the existing door panel to preclude loss of the door during flight.  
 Modifies the thickness of the existing bulkhead web to increase strength and improve fatigue life.  
 Modifies the thickness of the existing bulkhead web to increase strength and improve fatigue life.  
 Repairs the Inlet Nacelle Skin to correct acoustic vibration related fatigue failures.  
 Modifies the lower rail of the LAU-115 to strengthen the area of the AM-7 Sparrow missile forward hanger interface and improve fatigue life.  
 Modifies aircraft between Lot VI and Lot XVI to realize Full Airframe (6000 Fatigue Hours)  
 Strengthens the existing inner wing spar to improve fatigue life.  
 Safety improvement to the existing fuel barrier web to prevent fuel leaks.  
 Strengthens the existing fuel barrier web to prevent fuel leaks.  
 Modifies the existing fasteners at the Y26.5 Bulkhead to improve fatigue life.  
 Safety improvement to the secondary pressure regulator bay to eliminate fire hazards.  
 Provides a full-life improvement for aircraft degradation caused by cracked trailing edge flap and aileron hinges.  
 Provides for the upgrade of aging Peculiar Support Equipment. Improvements in reliability and maintainability of Peculiar Support Equipment and modification to existing Support Equipment.  
 Improves safety-of-flight for the recovery team, and resistance to, out-of-control flight (COCF) while also eliminating anomalies cited in FCC OPI 91C-004. (NON-RECURRING COSTS ONLY)  
 Improves the reliability of the 3 Bed Panel Assembly to connect the Left MainGear (LMG) Weight on Wheels (WOW) Relay/ABD the Dump/RAM Dump Relay.  
 Safety improvement modifies the inner wing inboard obscure rib to prevent fuel leaks.  
 Adds capability to the MLG trunnion assembly to improve fatigue life and prevent failed landing gear mishaps.  
 Provides for the removal of the nickel core and replaces with a more reliable stainless steel and nickel core.  
 Safety modification to the trailing edge flap to correct flap departures while in flight.  
 Safety modification to the wing root to protect against fuel leaks during flap and aileron hinges.  
 Improves pilot G-load tolerance as part of the Navy Combat Edge (NCE) Anti-G Protection System.  
 Safety improvement to correct cracks at Y431, Y442, and Y463 in the fuel cavity floor deck centerline under tank two and three.  
 Safety improvement to the fatigue life of the forward skin section of the chem-milled panels.  
 Strengthens the existing front inner wing SPAR to improve fatigue life.  
 Improves fatigue life of the Nose Landing Gear (NLG) Drag Brace.  
 Repairs Fuel Life to Y488 Bulkhead due to cracks around MLG bulkhead hardware holes.  
 Remount LOX equipped aircraft with OBOGS solutions that are integrated with supplemental oxygen systems.  
 Restores the load path lost when the Crease Longeron cracks at FS 453.  
 Modifies the aircraft to correct structural fatigue problems caused by degraded ECS Peri-Seals.  
 Improve hydraulic fluid rate and reduce hydraulic line failures.  
 Modify avionics shelves to withstand catapult fatigue loads.  
 Notify pilot when pressurization is lost in cockpit.  
 Modify vertical tail former and spars to prevent fatigue cracking.  
 Modify canopy/windscreen frames and address delamination.  
 Fatigue Improvements to include arresting gear bolts, planning link redesign, MLG planning bolts and MLG Bell Crank.  
 Repairs the existing fuel barrier web to prevent fuel leaks.  
 Removing the weapon systems from the aircraft, install Smoke Generation System and install Auxiliary Fuel Pumps for extended inverted flight.  
 Modifies the RRHB to correct problems caused by degraded primary locking segments.

Each change has been or will be tested prior to installation in the FA-18.  
 ECP 536 moved from OSIP 11-96 to OSIP 11-84 in FY02. No install currently planned; possible in future.  
 Unit cost varies due to: - Many ECP Kits were/are provided to the Navy at no additional costs (warranty kits).  
 - Some ECPs have numerous Technical Directives with different unit costs.









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## PETs Stand Up!

To date four PMA's have stood up Product Enterprise Teams (PETs) to a significant mission readiness and life cycle cost drivers: PMA 265 (F/A 18 Support Equipment), PMA 299 (H-60) and PMA 231 (E2/C2).

### PMA 265 F/A 18

1. GCU - Generator Converter Unit
2. F404 Afterburner Flameholder
3. F404 Material Aft Cooling Plate Evaluation
4. F404 Oil Pressure Transmitter Bracket
5. Roll Pitch Yaw Computer / Flight Control Computer
6. Radar Support Equipment Transmitter Self Test
7. Radar Support Equipment Operational Test Program Set Load Bo
8. Radar Transmitter
9. Cockpit Video Recording System (CVRS/CRS)
10. Enhanced Interference Blanker Unit

### PMA 299 H-60 Helicopter

1. Drag Beam
2. Flight Control Self Retaining Bolts
3. Damper Rod End Bearings
4. Kamatics Torque Shaft Bearing
5. Fuel Management Control Panel
6. Armament System Controller
7. Digital Video Recorder
8. Main Gearbox Housing
9. Counter Measures Receiver
10. Av-Dec Antenna gaskets
11. T700 engine

### PMA 260 Aviation Support Equipment

1. NC-10 - Mobile Electronic Power Plant

### PMA 231 E2/C2

1. E-2/C-2 Antenna
2. E-2 ALR-73 Passive Detection System
3. APS-145 Transmitter
4. 12-Ton Vapor Cycle Cooling System
5. C-2 Seats/Cargo
6. E-2 Dome Air Leak Test Set
7. E-2/C-2 Flight Control Set
8. Anti-Collision Light Assembly
9. C-2 Pressurization Seal
10. Structural Data Recording System
11. T-56-425 Inventory Right Sizing

### What is a PET?

A Product Enterprise Team (PET) is a cross-functional team of subject matter experts from the program office that is focused on one product/commodity line that has critical mission readiness (CWR). It provides CWR oversight and direction over the program and staff associated with that product/commodity applying the CWRRIIP process to the TMS/Product Team.

### Cost-Wise Readiness Integrated Improvement Process (CWRRIIP)

• **Glossary of Terms**

• **Operating &  
Reporting  
Procedures**

• **OCW**

• **NAVAIR AIRSpeed**

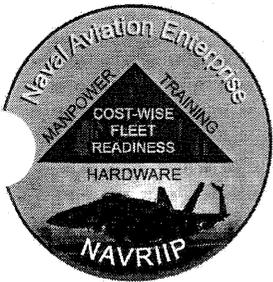
• **Assistance Request**

• **Curriculum  
Material**

The CWRIP process is designed to simplify the focus of improvement efforts through a lens of reliability, total cost, cycle time, and inventory. It provides tools to the Program manager to prioritize efforts and support decision-making. CWRIP supports a stronger alignment of both people and products.

Commander, Naval Air Forces  
Public Affairs Office (Code N01P)  
PO Box 357051  
San Diego, CA 92135-7051





# NAVRIP

## AIRSpeed

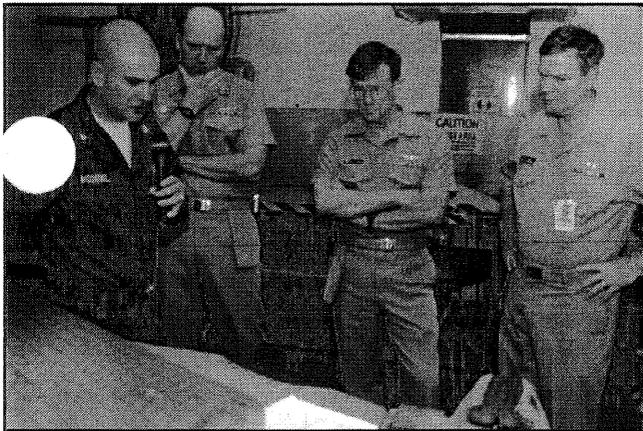
October 2005 Naval Aviation Readiness Integrated Improvement Program Volume 3 Issue 4

### Oceana TRIAD Works Together to Increase Flight-line Readiness

*Wing MO, ASD & AIMD are a Readiness Enabling Team*

By Christine Lawson  
NAVRIP/Enterprise AIRSpeed

On the first day of the Boots on the Ground (BOG) event, the Naval Aviation Integrated Improvement Program (NAVRIP) team was given a tag team brief by the Oceana TRIAD, whose members include CDR Bob Ramsey Wing Maintenance Officer, CDR Jim Weiser Wing Aviation Supply Division (ASD) Officer, and CDR Ellen Moore Aviation Intermediate Maintenance Division Officer In Charge.



AM2 Richard McDaniel from the AIMD Oceana Composite Repair Shop explains his job at Work Center 51F to RDML Shannon, RADM H. Denby Starling II Commander Naval Air Force Atlantic Fleet and VADM Wally Massenburg Commander Naval Air System Command during a Boots on the Ground visit June 29, 2005.

Commander Naval Air Systems Command, RADM Denby Starling, Commander Naval Air Forces Atlantic, senior leadership from Headquarters Marine Corps, NAVAIR program offices, fleet support teams, Navy Inventory Control Point and the Defense Logistics Agency.

The BOG group walked through 14 work centers where the Petty Officers briefed the group on how they were applying the Enterprise AIRSpeed tools of Theory of Constraints, Lean and Six Sigma to their work center and the successes they have produced.

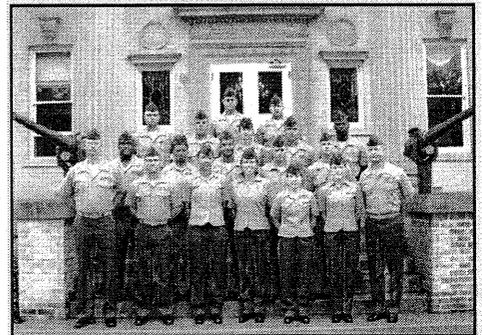
The team briefed the successes they were reaping using the NAVRIP and Enterprise AIRSpeed tools. However, the most significant success wasn't mentioned in the brief, but was illustrated in how the TRIAD addressed readiness as a team and less as individual stovepipes. "...The bottom line is flight-line support," said CDR Jim Weiser, the ASD Officer, as he discussed how his team works to support flight-line readiness.

The BOG was attended by VADM Wally Massenburg,

*(Continued on page 3)*

### Marine Aviation Logistics School Embraces AIRSpeed

School graduates its first Enterprise AIRSpeed class



By Capt. Bert Cruz, USMC

The 14 graduates of class 2005-10 became the first Aviation Logistics officers to have Enterprise AIRSpeed as part of their curriculum. Enterprise AIRSpeed is helping the Marine Aviation Logistics Squadrons (MALS) exploit modern logistics concepts in order to anticipate and respond to Sea Power 21, Marine Corps Strategy 21, Expeditionary Maneuver Warfare requirements as well as current operations such as Operation Iraqi Freedom, Operation Enduring Freedom and the Global War on Terror.

The Marines were taught the industry proven tools Theory of Constraints, Lean and Six Sigma and how they are applied at the MALS. These Enterprise AIRSpeed tools teach the Marines how to identify and address interdependencies, manage and reduce variability, identify and manage constraints and eliminate waste to properly manage aircraft ready for tasking requirements.

"Evidently, the new curriculum is working because several of the officers (at MALS 39) have been impressed with my knowledge of the Supply Accounting Division and AIRSpeed," remarked 2<sup>nd</sup> Lt Van Es.

For the past 18 months, Lt Col. Don Walter,  
*(Continued on page 3)*

#### Table of Contents

|                                  |   |
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| AIRSpeed How and Why .....       | 3 |
| NAVRIP University .....          | 4 |
| Type-Model-Series Schedule ..... | 4 |

### PETs Stand Up!

To date four PMA's have stood up Product Enterprise Teams (PETs) to address their most significant mission readiness and life cycle cost drivers: PMA 265 (F/A 18), PMA 260 (Aviation Support Equipment), PMA 299 (H-60) and PMA 231 (E2/C2).

*(Continued on page 2)*

**PMA 265 F/A 18**

- 1) GCU - Generator Converter Unit  
F404 Afterburner Flameholder  
F404 Material Aft Cooling Plate Evaluation
- 4) F404 Oil Pressure Transmitter Bracket
- 5) Roll Pitch Yaw Computer / Flight Control Computer
- 6) Radar Support Equipment Transmitter Self Test
- 7) Radar Support Equipment Operational Test Program Set  
Load Box and FET Tune CCA
- 8) Radar Transmitter
- 9) Cockpit Video Recording System (CVRS/CRS)
- 10) Enhanced Interference Blanker Unit

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- 1) Drag Beam
- 2) Flight Control Self Retaining Bolts
- 3) Damper Rod End Bearings
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- 5) Fuel Management Control Panel
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Counter Measures Receiver
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- 11) T700 engine

**PMA 260 Aviation Support Equipment**

- 1) NC-10 - Mobile Electronic Power Plant

**PMA 231 E2/C2**

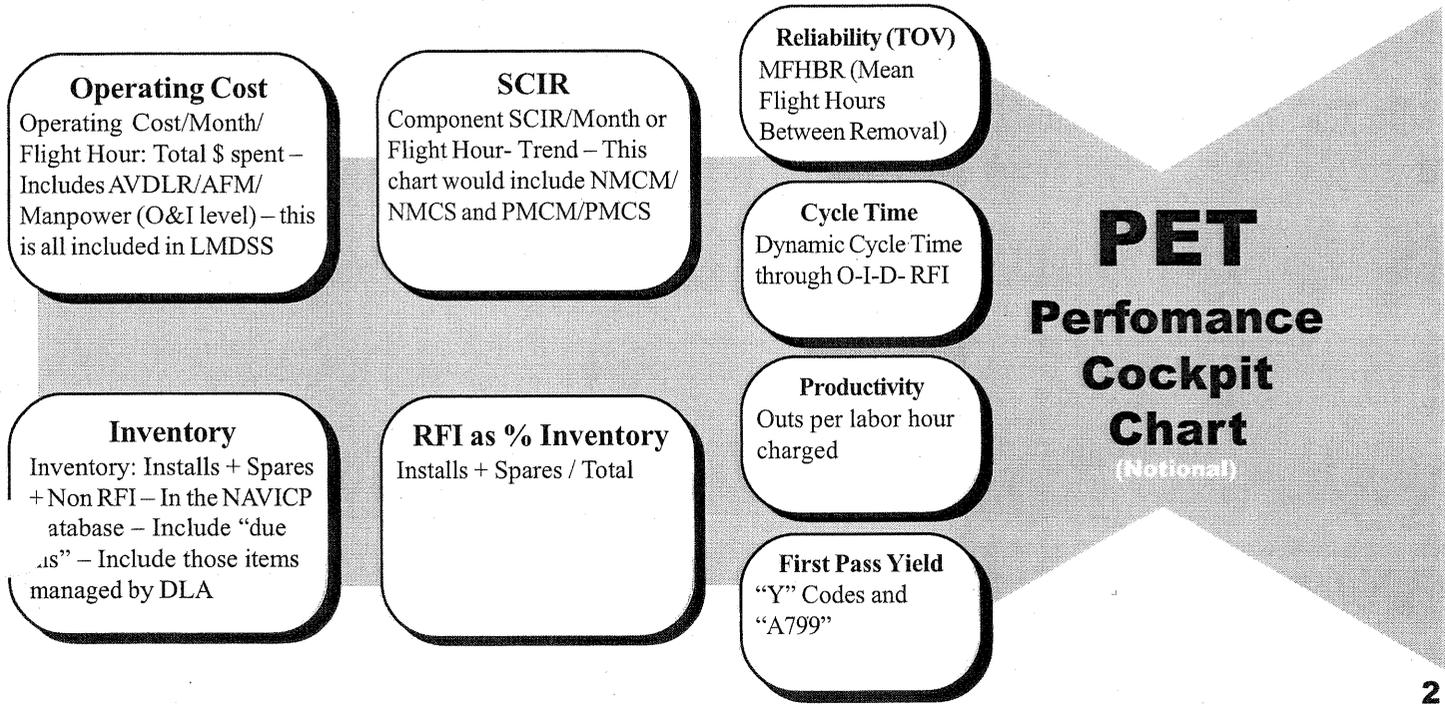
- 1) E-2/C-2 Antenna
- 2) E-2 ALR-73 Passive Detection System
- 3) APS-145 Transmitter
- 4) 12-Ton Vapor Cycle Cooling System
- 5) C-2 Seats/Cargo
- 6) E-2 Dome Air Leak Test Set
- 7) E-2/C-2 Flight Control Set
- 8) Anti-Collision Light Assembly
- 9) C-2 Pressurization Seal
- 10) Structural Data Recording System
- 11) T-56-425 Inventory Right Sizing

**What is a PET?**

A Product Enterprise Team (PET) is a cross-functional team of subject matter experts led by the Program office that is focused on one product/commodity line that has critical impact to cost-wise readiness (CWR). It provides CWR oversight and direction over the processes, people, money and stuff associated with that product/commodity applying the CWRIP process in support of the TMS/Product Team.

**Cost-Wise Readiness Integrated Improvement Process (CWRIP)**

The CWRIP process is designed to simplify the focus of improvement efforts through a lens of reliability, total cost, cycle time, and inventory. It provides tools to the Program manager to prioritize efforts and support decision-making. CWRIP supports a stronger alignment of both people and products.





# PET SUMMARY

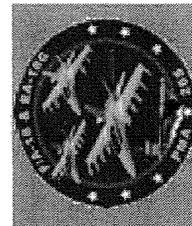
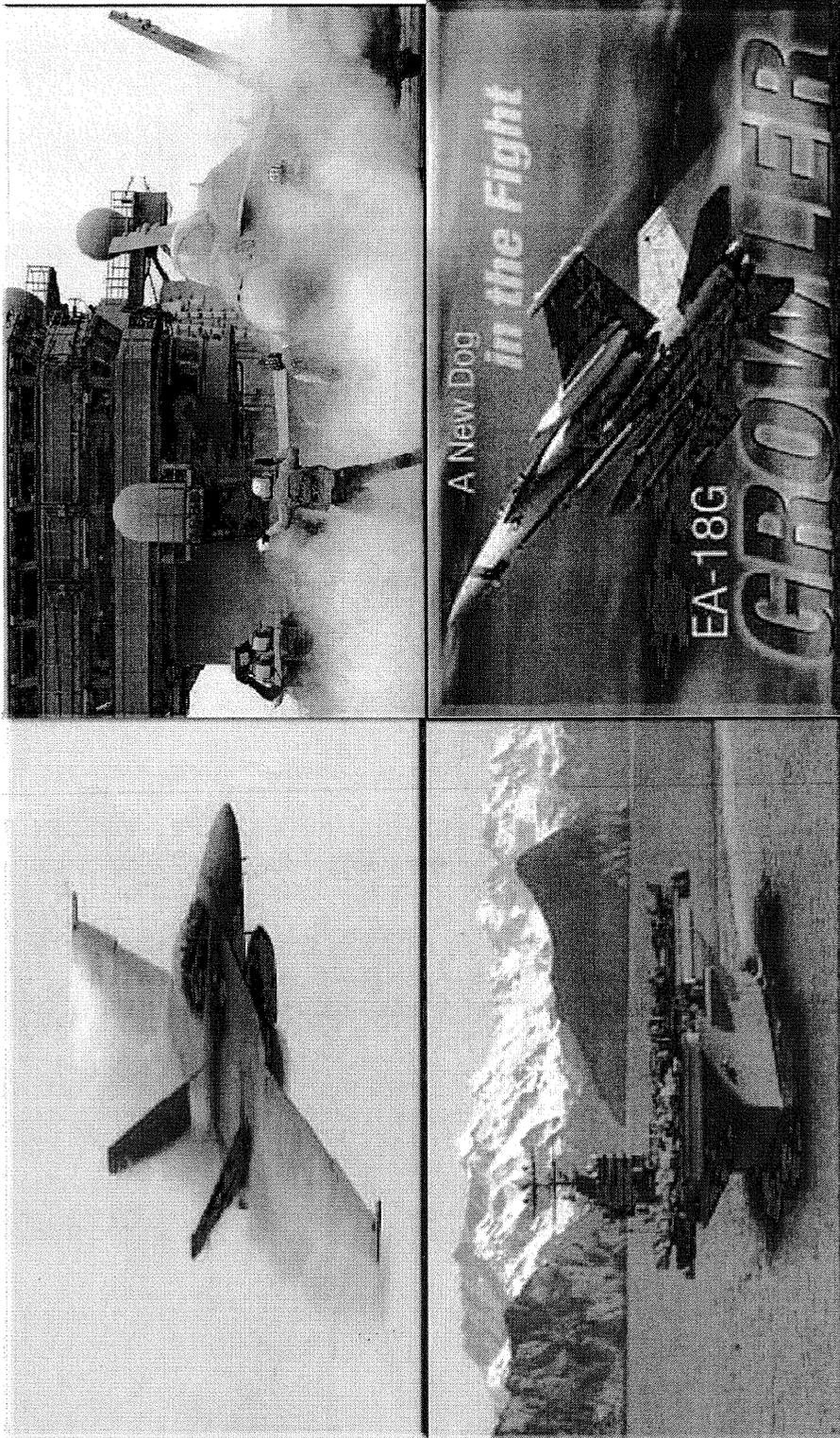
| PET COMPONENT                                | PET THESIS  | IPT / PET LEADS  | STATUS / REMARKS   | POTENTIAL ROI (\$M)<br>(BASED ON ROM ESTIMATE) |
|--|---|--|--|--|
| GENERATOR CONTROL UNIT (GCU)                 | F/A-18A-D TOP 10 READINESS DEGRADERS - GCU RANKED AS #3 IN READINESS, #10 IN CANNIBALIZATION, AND #8 IN AVDLR | PROPULSION & POWER JILL MOORE / TOM PHAN (NADEP NI)        | SOLUTIONS IDENTIFIED & RANKED WITH ROMS; READY TO BRIEF ALTERNATIVES<br>ECD: 03/25/05                          | \$4.20   |
| F404 FLAMEHOLDER                             | RELIABILITY / READINESS ISSUE -400 -600 HRS TOW, - 402 (SLOTTED) -270 HRS TOW                                 | PROPULSION & POWER JILL MOORE / BLAISE TYBOR (AIR-4.4)     | IDENTIFIED BASELINE, SLOTTED AND RADIAL IN R&S; DETERMINE BEST ALTERNATIVE FOR PRIORITIZATION<br>ECD: 03/25/05 | (-) \$0.70                                     |
| F404 GRAY CABLE CONNECTOR                    | FALSE "LOW OIL" SIGNAL SENT TO COCKPIT, CAUSING COMMANDED IN-FLIGHT SHUTDOWNS AND MISSION ABORTS              | PROPULSION & POWER JILL MOORE / BLAISE TYBOR (AIR-4.4)     | FULLY FUNDED; MINIMAL EFFORT TO COMPLETE, LIMITED \$<br>ECD: 03/25/05  | \$99.00  |
| F404-400 HPT ROTOR (AFT COOLING PLATE & PBL) | LOWEST LIFE LIMITED COMPONENT OF THE HPT ROTOR ASSEMBLY AND ENGINE  | PROPULSION & POWER JILL MOORE / BLAISE TYBOR (AIR-4.4)     | FULLY FUNDED; \$ INVESTED DEVELOP BEST IMPLEMENTATION ALTERNATIVES AND ROMS<br>ECD: 03/25/05                   | \$89.00  |
| <b>AN/APG-65/73 XMTR ID SELF-TEST</b>        | <b>XMTR IS THE #2 AVDLR DEGRADER ON THE TOP TEN; IMPROVEMENT OF SELF-TEST SHOULD REDUCE BCM RATES</b>         | <b>RADAR CDR BOWMAN / GERMAN LOPEZ (NADEP NI)</b>          | <b>FULLY FUNDED ECP IMPROVEMENTS<br/>ECD: 04/14/05</b>   | <b>\$327.57</b>                                |
| AN/APG-65/73 XMTR ID SELF-TEST               | XMTR IS THE #2 AVDLR DEGRADER ON THE TOP TEN. IMPROVEMENT OF SELF-TEST SHOULD REDUCE BCM RATES                | RADAR CDR BOWMAN / GERMAN LOPEZ (NADEP NI)                 | FULLY FUNDED ECP IMPROVEMENTS<br>ECD: 04/14/05   | \$327.57                                       |
| AN/APG-65/73 XMTR                            | XMTR IS THE #2 AVDLR DEGRADER ON THE TOP TEN  | RADAR CDR BOWMAN / GERMAN LOPEZ (NADEP NI)                 | PBL NEGOTIATIONS IN PROCESS<br>ECD: 04/14/05   | UNDER ANALYSIS (NOTE: 3)                       |
| CVRS FLEET SUPPORT                           | CVRS HAS AN EXCESSIVE BCM RATE, AND CND FROM THE OEM DUE TO THE LACK OF TESTING CAPABILITY @ THE OVI-LEVEL    | CORE AVIONICS DON BLOTTENBERGER / BRETT GARDNER (NADEP NI) | FULLY FUNDED; FLEET IMPLEMENTATION IN PROCESS<br>ECD: COMPLETE AS OF 02/11/05                                  | \$10.72  |
| <b>TOTAL</b>                                 |   |  |  | <b>\$551.29</b>                                |

NOTE 1: COST TO COMPLETE UNKNOWN; THREE COMPETING ALTERNATIVES; PET TO DETERMINE MOST EFFECTIVE STRATEGY  
 NOTE 2: COST TO COMPLETE UNKNOWN; PET TO ANALYZE CORRECTIVE ACTION  
 NOTE 3: PROJECT CHANGED FROM RELIABILITY PROCESS TO THE XMTR AS THE PRODUCT; ROI IS BEING RECALCULATED





# F/A-18 BOD



**CAPT "BD" Gaddis**  
**F/A-18 Hornet & EA-18G Program Manager**  
**01 November 2006**

# F/A-18 A-D Top Performance Degraders

| READINESS (NMC)                     |         |         | CANNIBALIZATIONS                    |       |         | AVDLR                              |       |              |
|-------------------------------------|---------|---------|-------------------------------------|-------|---------|------------------------------------|-------|--------------|
| Nomenclature                        | WUC     | Hours   | Nomenclature                        | WUC   | Actions | Nomenclature                       | WUC   | \$\$\$       |
| CP1330(/)ASW44 ROLL-PITCH-YAW CMPTR | 57D91   | 140,047 | T1377/APG65 RADAR TRANSMITTER       | 742G1 | 521     | HIGH PRESSURE TURBINE ROTOR ASSEMB | 27441 | \$34,045,633 |
| GENERATOR CONVERTER UNIT            | 42118   | 126,134 | CP1330(/)ASW44 ROLL-PITCH-YAW CMPTR | 57D91 | 383     | LOW PRESSURE TURBINE ROTOR ASSEMB  | 27451 | \$20,852,982 |
| HYDRAULIC SWITCHING VALVE           | 1421230 | 125,491 | GENERATOR CONVERTER UNIT            | 42118 | 341     | FAN ROTOR ASSEMBLY                 | 27412 | \$15,789,232 |
| DRIVE UNIT AND SERVOVALVE ASSEMBLY  | 1451310 | 112,780 | R2484/APG73 RADAR RECEIVER          | 74B24 | 333     | MAIN FUEL CONTROL ASSEMBLY         | 27474 | \$12,655,840 |
| TRAILING EDGE FLAP INSTALLATION     | 14611   | 90,147  | R2089/APG65 RADAR RECEIVER EXCITER  | 742G2 | 332     | T1377/APG65 RADAR TRANSMITTER      | 742G1 | \$11,495,470 |
| FUEL STORAGE SYSTEM                 | 46116   | 88,323  | AS3254/APG65 ANTENNA                | 742G6 | 307     | COMPRESSOR ROTOR ASSEMBLY          | 27422 | \$11,039,879 |
| STABILIZER CONTROL INSTALLATION     | 14312   | 80,860  | IP1556/A DIGITAL DISPLAY INDICATOR  | 74Y4W | 269     | VAR EXHAUST NOZZLE POWER UNIT ASSY | 27478 | \$7,863,091  |
| T1377/APG65 RADAR TRANSMITTER       | 742G1   | 79,228  | CP1726/ASQ194 SIGNAL DATA COMPUTER  | 58391 | 251     | MX10086(/)AAS38 AFT SECTION POD    | 74D9B | \$7,803,792  |
| RUDDER HYDRAULIC SERVO CYLINDER     | 1441210 | 72,136  | C10382/A CONVERTER CONTROL          | 67X21 | 215     | SU112(/)AAS38 OPTICS-STABILIZER    | 74D92 | \$7,579,982  |
| POWER PLANT MECHANICAL INSTALLATION | 29131   | 70,779  | IP1317/A DIGITAL DISPLAY INDICATOR  | 74681 | 204     | STABILIZER CONTROL INSTALLATION    | 14312 | \$7,252,506  |

Source: MOQS - LMDSS Databases by WUC Oct 05-Sep06



| ACTION ROUTING                                       |          |  |                                    | SUBJECT  |  |                         | BENEFITING SHOP |                | BLDG. NO.             |            | NEW BOARD      |
|--|----------|--|------------------------------------|--|--|-------------------------|-----------------|----------------|-----------------------|------------|----------------|
| SEQ  | CODE     | INIT.  | DATE                               | Tods for F/A-18 E/F GCU  |  |                         | 93503           |                | 66                    |            | REQUEST NUMBER |
| 1  | 930B     | OP   | 8/9/04                             | ORIGINATOR<br>Carlos Normandia   |  |                         | CODE<br>93503   | EXT.<br>57687  | DATE<br>7 August 2004 |            |                |
| 2  | 630      | RCW  | 8-10-04                            | APPROVED BY (Drawing Supp.)<br>Amin Jeddell  |  |                         | CODE<br>93500   | EXT.<br>7-7056 | DATE<br>8/9/04        |            |                |
| 3  | 63001    | OK   | 8-12-04                            | STATEMENT OF PROBLEM AND JUSTIFICATION<br>Special torque wrenches are required for the overhaul & repair process for the E/F GCU |  |                         |                 |                |                       |            |                |
| 4  | 1130     | OK   | 8-18-04                            |  |  |                         |                 |                |                       |            |                |
|  |          |  |                                    |  |  |                         |                 |                |                       |            |                |
|  |          |  |                                    |  |  |                         |                 |                |                       |            |                |
| <b>ORIGINAL</b>                                      |          |  |                                    |  |  |                         |                 |                |                       |            |                |
| 4231-7B77  |          |  |                                    |  |  |                         |                 |                |                       |            |                |
| ITEM   | QUANTITY | DESCRIPTION OF MATERIAL OR SERVICES REQUESTED        |                                    |  |  |                         |                 |                |                       | COST       |                |
| 1  | 1        | Torque Screwdriver (0-20 in. lbs.)                   |                                    |  |  |                         |                 |                |                       |            |                |
| 1  | 1        | <del>Torque Screwdriver (10-30 in. lbs.)</del>       |                                    |  |  |                         |                 |                |                       |            |                |
| 1  | 1        | <del>Torque Screwdriver (20-60 in. lbs.)</del>       |                                    |  |  |                         |                 |                |                       |            |                |
| 1  | 1        | Torque wrench (60-80 in. lbs) 3/8" drive.            |                                    |  |  |                         |                 |                |                       |            |                |
| 1  | 1        | <del>Torque wrench (75-110 in. lbs) 3/8" drive</del> |                                    |  |  |                         |                 |                |                       |            |                |
| 1  | 1        | <del>Torque wrench (80-140 in. lbs) 3/8" drive</del> |                                    |  |  |                         |                 |                |                       |            |                |
|  |          | * SEE QUOTE  |                                    |  |  |                         |                 |                |                       |            |                |
|  |          | 5-40 IN LBS SCREWDRIVER TORQUE WRENCH                |                                    |  |  |                         |                 |                |                       | 500-5171   |                |
|  |          | 30-250 IN LBS 3/8 DR TORQUE WRENCH                   |                                    |  |  |                         |                 |                |                       | 500-5172   |                |
| (Continue on Reverse)                                |          |  |                                    |  |  |                         |                 |                |                       | TOTAL COST |                |
| SUBJECT  |          |  |                                    |  |  |                         | DATE REQUIRED   |                | REQUEST NUMBER        |            |                |
| JOB ORDER NUMBER<br>GQ4240C                          |          |  | WORK ORDER NUMBER                  |  |  | STUB REQUISITION NUMBER |                 |                | EST. COMP. DATE       |            | PRIORITY       |
| INVESTIGATED BY                                      |          |  | CODE                               | APPROVED BY  |  |                         |                 | CODE           | DATE                  |            |                |
| MATERIAL OR WORK FOR<br>SHOP NO. 93503 BLDG. NO. 463 |          |  | DELIVER TO<br>SHOP 93503 BLDG. 463 |  |  | ATTN: C. NORMANDIA      |                 |                | EXT. 5-7687           |            |                |
| REMARKS<br><br>Completed Delivered 10-6-04           |          |  |                                    |  |  |                         |                 |                |                       |            |                |



# MATERIAL AND WORK REQUEST

BENEFITING SHOP **93503**

BLDG. NO. **66**

REVIEW BOARD

| ACTION ROUTING |      |      |      | SUBJECT  |  |  | REQUEST NUMBER |        |             |
|----------------|------|------|------|--|--|--|----------------|--------|-------------|
| SEQ            | CODE | INT. | DATE | Tool Request   |  |  | 93503-XXXX-05  |        |             |
|                |      |      |      | ORIGINATOR   |  |  | CODE           | EXT.   | DATE        |
|                |      |      |      | Oxley, Robert, J.  |  |  | 93503          | 5-8349 | 25 APR 2005 |
|                |      |      |      | APPROVED BY (DVRM) SIGN  |  |  | CODE           | EXT.   | DATE        |
|                |      |      |      | STATEMENT OF PROBLEM AND JUSTIFICATION   |  |  |                |        |             |
|                |      |      |      | Special Tools required for proper repair and maintenance of F/A-18A-F Generator Converter Units, part numbers: 293E775G40, 971E325G1, & FH30001G2, 1AW NAV AIR Intermediate Maintenance manuals A1-211AC-420-000, and A1-211EF-420-000. These tools are not currently carried in the Main Tool Room. |  |  |                |        |             |
|                |      |      |      | Duplicated quantities of tools are required due to imminent plans by management and LEAN AIRspeed to split GCU shop into two or more widely separated locations. Both locations will need a full set of the requested tools.   |  |  |                |        |             |

| ITEM | QUANTITY | DESCRIPTION OF MATERIAL OR SERVICES REQUESTED                 | COST       |
|------|----------|---|------------|
| 1    | 2        | Screwdriver, torque, SnapOn # ODRIVER3, price each \$71.91    | 143.82     |
| 2    | 2        | Screwdriver, torque, SnapOn # ODRIVER4, price each \$77.55    | 155.10     |
| 3    | 2        | Torque Wrench, SnapOn # OD150, price each \$88.36             | 176.72     |
| 4    | 2        | Torque Wrench, SnapOn # OD1R200, price each \$96.35           | 192.70     |
| 5    | 2        | Torque Wrench, SnapOn # OD21000, price each \$93.53           | 187.06     |
| 6    | 2        | Wrench, hex, PN: FAGLE, NSN: 5120013786671, price each \$8.68 | 17.36      |
| 7    | 2        | 3/8" 6 point socket set SnapOn # 222AFSP price each \$200.36  | 400.72     |
| 8    | 2        | Bit, square, 1/4" SnapOn # CRD8B price each \$4.98            | 9.96       |
| 9    | 2        | Bit, Phillips #2, SnapOn # SDM222ZB price each \$0.96         | 1.92       |
| 10   | 2        | Bit, Phillips #1, SnapOn # SDM221C price each \$0.96          | 1.92       |
|      |          |   | TOTAL COST |
|      |          |   | 1287.28    |

|         |  |               |                |
|---------|--|---------------|----------------|
| SUBJECT |  | DATE REQUIRED | REQUEST NUMBER |
|         |  | 16MAY2005     |                |

|                      |  |                   |             |                        |      |                 |  |                |  |
|----------------------|--|-------------------|-------------|------------------------|------|-----------------|--|----------------|--|
| JOB ORDER NUMBER     |  | WORK ORDER NUMBER |             | STUD REQUESTION NUMBER |      | EST. COMP. DATE |  | PRIORITY       |  |
| INVESTIGATED BY      |  | CODE              | APPROVED BY |                        | CODE | DATE            |  |                |  |
| MATERIAL OR WORK FOR |  |                   |             | DELIVER TO             |      |                 |  |                |  |
| SHOP NO. 93503       |  | BLDG. NO. 66      |             | SHOP 93503             |      | BLDG. 66        |  | ATTN. R. Oxley |  |
|                      |  |                   |             |                        |      |                 |  | EXT. 5-8349    |  |

REMARKS

Attachment ONE



DOD/NAVY/NAVAIR HOTLINE COMPLETION REPORT  
As of 29 September 2005

1. Investigator(s) and Identifying Information and Location of Working Papers

COLLIN WRAY, GS-0343-12, CODE 6.0B2  
COMMAND INVESTIGATOR  
COMMAND EVALUATION AND CONTROL OFFICE,  
NADEP NORTH ISLAND, SAN DIEGO, CA  
COMMERCIAL (619) 545-5522/DSN 735-5522  
E-MAIL COLLIN.WRAY@NAVY.MIL

JULIE TASTET, GS-0343-12, CODE 6.0B2  
COMMAND INVESTIGATOR  
COMMAND EVALUATION AND CONTROL OFFICE,  
NADEP NORTH ISLAND, SAN DIEGO, CA  
COMMERCIAL (619) 545-5521/DSN 735-5521  
E-MAIL JULIE.TASTET@NAVY.MIL

Naval Air Depot North Island  
Command Evaluation & Control Office  
Code 6.02B

2. Background and Summary

a. Hotline control #s and Origin of Complaint.

NAVAIR 2005-128  
NAVAIR DEPOT NORTH ISLAND  
HL-05-NI-03

This complaint came to this office through the Fraud, Waste, Abuse, and Mismanagement phone line.

b. Summary of the Complaint.

Complainant claims that duplicate decks of cards (work documents) were being cut in order to not have Generator Converter Units (GCU) with large amounts of expended hours surveyed. Complainant also stated he was unable to obtain needed tooling and technical manuals in order for his work to be completed. Complainant later added that Quality Assurance (QA) was not doing their job and he was being written up because of calling the hotline.

c. Additional Information (Optional). N/A

d. Summary of Outcome of Investigation.

**FOR OFFICIAL USE ONLY**  
**PROTECT IN ACCORDANCE WITH THE PRIVACY ACT OF 1974, AS AMENDED.**  
**5 USC SECTION 552a**

ANY MISUSE OR UNAUTHORIZED DISCLOSURE MAY RESULT IN BOTH CIVIL AND CRIMINAL PENALTIES  
THE INFORMATION CONTAINED HEREIN RELATES TO THE INTERNAL PRACTICES OF THE NAVAL AIR SYSTEMS COMMAND, AND IS AN  
INTERNAL COMMUNICATION WITHIN THIS COMMAND. THIS REPORT IS NOT RELEASABLE WITHOUT THE SPECIFIC WRITTEN  
PERMISSION OF THE INSPECTOR GENERAL, NAVAL AIR SYSTEMS COMMAND. ITS CONTENTS MAY NOT BE DISCLOSED, OR  
RELEASED, OUTSIDE THE ORIGINAL DISTRIBUTION, NOR MAY IT BE REPRODUCED IN WHOLE OR IN PART. ALL INFORMATION  
REPORT, EXTRACTS THEREFROM, OR CORRESPONDENCE RELATED THERETO SHALL BE RETURNED TO THE  
NAVAL AIR SYSTEMS COMMAND

Subj: DOD/NAVY HOTLINE COMPLETION REPORT

There were a total of 4 allegations. After the investigation was complete, the outcome resulted in 3 of the 4 being unsubstantiated. The one substantiated allegation was corrected prior to the completion of the investigation. No further action was required.

e. List of Allegations

1. Complainant alleges that the Production Controller was cutting a new deck for GCU with large amounts of expended hours and then surveying it with few hours expended, thus creating extra decks. (UNSUBSTANTIATED)
2. Complainant alleges that tooling and technical manuals were unavailable. (UNSUBSTANTIATED)
3. Complainant alleges that QA was not performing their function by not signing off on internal operations. (SUBSTANTIATED)
4. Complainant alleges he was written up for calling the hotline. (UNSUBSTANTIATED)

3. **First Allegation:** Complainant alleges that the Production Controller (PC), Cindy Zimmerman, was cutting a new deck for GCU with large amounts of expended hours and then surveying it with few hours expended, thus creating extra decks. **UNSUBSTANTIATED**

a. Facts

GCU's are level loaded, a continuous flow of work into the shop, by the PC, one deck for each GCU. A deck, also known as a work document, is a list of the operations required to repair/rework the item. Production Controller stated that new decks are never cut because items are to be surveyed. There is only one deck for each GCU. However, the decks are generic and only after the unit is ready for sale is the serial and part number entered on the work order. If an item is returned to PC to be surveyed it usually has only 1 to 2 hours charged against them. In the case of Mr. Conrad, the four GCU's he wanted surveyed had 30 or more hours already logged against them. These items have a 38-hour standard. The PC noted this and returned the decks to be used on the next GCU produced. The deck for the new GCU was then applied to the surveyed unit. The rationale for this is that the NADEP does not get paid for hours expended against surveyed items. Since the decks are generic and there is no history logs for these items the decks could be exchanged.

Interviews with co-workers indicated that they were unaware of any duplicate decks for GCU's. They did state that when multiple numbers of GCU's enter the shop, they are accompanied by a group of work documents. They work the GCU with the deck on the top of the stack. Both artisans and supervisors stated that no more than 2-3 hours are required to determine if a GCU is beyond economic repair and needs to be surveyed.

b. Analysis/Discussion/Conclusion

There is no evidence to substantiate this allegation. The process of switching decks when an item is to be surveyed may not be proper, but it is not illegal.

c. Recommendation(s). N/A

d. Disposition. N/A

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4. **Second Allegation:** Complainant alleges that tooling and technical manuals were unavailable.  
**UNSUBSTANTIATED**

a. Facts

Interview with Mr. Burkett (second shift supervisor) revealed that the technical manuals were in the shop, which was verified. The tools required were torque wrenches, which are required to torque down internal parts between 10-13 inch pounds. Mr. Burkett stated that some wrenches were available, however some were still on order. Artisans in the shop stated that the wrenches and manuals were around if needed.

Mr. Burkett stated that, at one point, some torque wrenches had been on order for thirty days. Mr. Weddell, Deputy Program Manager (DPM) was questioned about this and stated that the pocket torque wrenches were available for use but they did not have enough for every artisan, but were on order. The larger wrenches were available for use by anyone in the shop.

b. Analysis/Discussion/Conclusion

There is no evidence to substantiate this allegation. Having a pocket torque wrench in every toolbox is not a mandatory requirement. The DPM is working towards this goal.

c. Recommendation(s). N/A

c. Disposition. N/A

5. **Third Allegation:** Complainant alleges that QA was not performing their function by not signing off on internal operations. **SUBSTANTIATED**

a. Facts

Going through Manual A1-211AC-420-000, it did list a number of QA requirements throughout the assembly portion of the manual. The investigator contacted both QAs for the GCU shop and they stated that the only QA requirement was for them to verify the units at final test. They stated that all certified artisans are required to perform the internal QA requirements. If they did not rely on the artisans, there would not be enough hours in a day to complete all the inspections. They stated that if an item requires Quality Verification then they are there.

Contacted the Electrical Engineer, Thomas Pham, responsible for the Local Engineering Spec, in order to confirm what the requirements were. He produced Local Engineering Specification (LES) NIF18-010-05/routine. The engineer stated that certified artisans should perform the internal QA requirements. He felt that the items in the fleet were perfectly sound and they had been doing them for years without any failure. However, the shop is being transferred to Code 933 in bldg 378 and a Rapid Reply Request (3R) was submitted for authorization to assemble units without having QA perform all the requirements. The requirement now exists where QA randomly inspect one of 12 silicon controlled rectifiers and one of six interphase transformers.

b. Analysis/Discussion/Conclusion

There is evidence to substantiate this allegation. The technical manual does call for a variety of QA requirements. As the engineer stated, the artisan is also responsible for quality. The process of having

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QA sign off only after final test has been going on for years and working without a failure. Complainant has been in this shop for almost a year and been certified to work on GCUs since April 2005.

c. Recommendation(s). N/A

d. Disposition. A LES has been incorporated where QA is randomly verifying internal operations.

6. **Fourth Allegation:** Complainant alleges he was written up for calling the hotline.  
**UNSUBSTANTIATED**

a. Facts

The day after phoning the hotline, Mr. Conrad left his area in bldg. 378, went to Bldg. 66 and took the work orders for the surveyed units he felt had duplicate decks produced. He felt he was being set-up to take a fall for the large amount of hours over expended on these items. He then took these documents to his supervisor, Mr. Burkett, requesting an explanation. Mr. Burkett stated he explained the process and figured Mr. Conrad would return the documents to bldg. 66. Mr. Conrad locked the documents in his rollaway. When first shift came in and could not find the documents, a fact finding was conducted. The fact finding led to a documented discussion between Mr. Burkett and Mr. Conrad. Mr. Conrad stated that the documented discussion was held because Mr. Weddell, DPM, was upset with him because he made the initial call to the hotline. Mr. Conrad said that they have proposed a Letter of Reprimand.

The interview with Mr. Weddell indicated that he was upset because the work documents were locked in complainant's toolbox and had Mr. Burkett do a fact finding and a documented discussion with Mr. Conrad. Mr. Weddell stated that he was not aware that complainant had called the hotline. He stated that it is not his responsibility to determine what type of remedial action is taken. He stated that disciplinary action was up to the Competency Office.

Interviewed Mr. Burkett regarding the incident which led up to the documented discussion. Mr. Burkett stated that Mr. Conrad did in fact leave his area without permission and was in possession of the documents. When questioned about the rest of the shop leaving the area without permission, he stated that most (about 90%) of the time they tell him if they were leaving the area. Mr. Burkett has not had documented discussions with anyone else for leaving the area. When asked about knowing that Mr. Conrad had called the hotline he stated that he thought Mr. Conrad told him. Mr. Burkett stated that he informed Mr. Statham, the 1<sup>st</sup> shift supervisor, that Mr. Conrad had called the hotline but did not know if Mr. Weddell knew.

When Mr. Burkett was questioned again about the discussion he stated that Mr. Weddell was very upset with the documents being locked up in Mr. Conrad's toolbox and ordered him to have the documented discussion. When Mr. Burkett was asked why he recommended the Letter of Reprimand instead of an Oral Reprimand or a Letter of Caution he stated that Mr. Weddell told him to do it.

Mr. Burkett also stated that he and Mr. Weddell spoke to their competency, Mr. Asuncion, regarding this issue.

Interview with Mr. Frederick Asuncion (Competency Office) indicated that he had discussed this action with the involved parties and, in fact, it was his decision on what action would be taken. He stated that the action would be based on such factors as severity of the infraction and any previous actions against the employee. Mr. Asuncion indicated that he would recommend a Letter of Reprimand.

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b. Analysis/Discussion/Conclusion

The facts show that the complainant did have possession of work documents without permission. He also left his work area without permission. However, it seems that his supervisor would not have taken the actions against him except for the instructions from Mr. Weddle.

c. Recommendation(s). N/A

d. Disposition. N/A.

7. Interviews and Documents

Interviews:

|    |                                  |  |             |
|----|----------------------------------|--|-------------|
| a. | Asuncion, Frederick – GS-1601-13 | Deputy Competency Manager                    | Witness     |
| b. | Burkett, Douglas – WS-2610-12    | Supervisory Electronic Integrated Sys. Mech. | Witness     |
| c. | Conrad, Richard – WG-2604-10     | Electronic Mechanic                          | Complainant |
| d. | <input type="checkbox"/>         | (b)(6)                                       | Witness     |
| e. | <input type="checkbox"/>         | (b)(6)                                       | Witness     |
| f. | Phan, Thomas – GS-0855-12        | Electronic Engineer                          | Witness     |
| g. | Statham, David – WS-2610-12      | Supervisory Electronic Integrated Sys. Mech. | Suspect     |
| h. | <input type="checkbox"/>         | (b)(6)                                       | Witness     |
| i. | Weddell, Dennis – GS-1610-12     | Avonics DPM                                  | Suspect     |
| j. | <input type="checkbox"/>         | (b)(6)                                       | Witness     |
| k. | Zimmerman, Cynthia – GS-1152-11  | Production Controller A/C                    | Suspect     |

Documents Reviewed:

- Material Review Board Disposition Records – Generator Converter Units
- Work Order documentation (Decks)
- Individual Qualification Record - Conrad
- Local Engineering Specification – Overhaul Inst. For F/A-18A GCU
- Tech manual A1-211AC-42-000 – Overhaul Inst. For F/A-18A GCU
- Engineering Info Rapid Reply Request (3R) 3R-933-2005-0077
- Directive Release Notice F18-010-05