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FM WL ROBINS AFB GA//MLS-OL//

TO RUEAHQA/HQ USAF WASHINGTON DC//ILMM//

RHDIAAA/HQ ACC LANGLEY AFB VA//LGMS//

RHFQAAA/HQ USAFE RAMSTEIN AB GE//LGMAS//

RHWRAAA/HQ AETC RANDOLPH AFB TX//LGMTS//

RUVAFMC/HQ AFMC WRIGHT PATTERSON AFB OH//LGMA//

RUVAFMC/WL WRIGHT PATTERSON AFB OH//MLS/MLSS//

RUVRAFA/HQ AFRC ROBINS AFB GA//LGMSS//

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RHCDAAA/HQ AFSOC HURLBURT FLD FL//LGMW//

RHCUAAA/HQ AMC SCOTT AFB IL//LGAB//

RHDJANG/ANGRC ANDREWS AFB MD//LGMM//

RUHVPAAC/HQ PACAF HICKAM AFB HI//LGMFA//

INFO RUVRAAA/WL ROBINS AFB GA//MLS-OL//

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SUBJ: UNAUTHORIZED PRIMERS, PAINTS, AND CLEANERS

1. DURING RECENT MAJCOM CORROSION PREVENTION AND CONTROL SURVEYS, WE

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NOTICED MANY UNITS WERE PRIMING, PAINTING, AND SPOT-CLEANING AIRCRAFT AND SUPPORT EQUIPMENT WITH UNAUTHORIZED MATERIALS. THIS IS AN UNACCEPTABLE SITUATION WHICH SHOULD BE ADDRESSED BY ALL LEVELS OF MANAGEMENT.

2. ALTHOUGH MANY DIFFERENT NONAPPROVED MATERIALS WERE BEING USED, THE MOST COMMONLY USED NONAPPROVED PRIMERS AND PAINTS WERE MANUFACTURED BY PACIFIC WEST CORPORATION. THESE AEROSOL SPRAY PRODUCTS WERE PRIMARILY BEING USED TO TOUCH-UP AIRCRAFT AND SUPPORT EQUIPMENT BECAUSE THEY ARE CONVENIENT AND PROVIDE GOOD INITIAL COLOR MATCH. ALSO, THE LABELING ON THESE PRODUCTS IS SOMETIMES CONFUSING AND FREQUENTLY LEADS USERS TO ASSUME THE PRODUCTS MEET APPROVED MILITARY SPECIFICATIONS (MIL-P-23377 OR MIL-C- 83286/85285). HOWEVER, THESE MATERIALS DO NOT CONTAIN THE REQUIRED RESINS OR SOLVENTS AND FAIL TO PROVIDE FILM PROPERTIES REQUIRED BY APPROVED MILITARY SPECIFICATIONS. THESE SHORTFALLS CAUSE INADEQUATE CORROSION PROTECTION, AND SEVERE PROBLEMS WITH ADHESION, FLEXIBILITY, AND FADING. ALTHOUGH USING THESE NONAPPROVED PAINTS AND PRIMERS MAY INITIALLY SAVE A FEW MAN-HOURS, THE SEVERE FADING AND DISCOLORATION OF THESE COATINGS ULTIMATELY LEADS TO AN ACTUAL INCREASE IN WORK.

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3. WE ALSO NOTICED MANY UNITS WERE USING VERY HARSH INDUSTRIAL CLEANERS TO SPOT-CLEAN AIRCRAFT. THE MOST COMMONLY USED NONAPPROVED CLEANER WAS A COMMERCIAL PRODUCT MARKETED UNDER THE TRADE NAME "SIMPLE-GREEN." THIS MATERIAL WAS INITAILLY PURCHASED BY MANY LOCAL UNITS TO CLEAN HANGER FLOORS. HOWEVER, PERSONNEL WERE FREQUENTLY USING IT TO SPOT-CLEAN AIRCRAFT BECAUSE IT HAS OUTSTANDING DEGREASING AND CLEANING PROPERTIES. THIS MATERIAL HAS NEVER BEEN APPROVED FOR USE ON AIRCRAFT, AND WE ARE NOT AWARE OF ANY VENDOR MARKETING IT FOR THIS PURPOSE.

4. DURING OUR SURVEYS, WE ALSO DISCOVERED MANY MAINTENANCE TECHNICIANS WERE NOT AWARE OF THE POTENTIAL DAMAGE NONAPPROVED CLEANERS CAN CAUSE TO AIRCRAFT STRUCTURES. TECHNICIANS FREQUENTLY CHOSE TO USE THESE NONAPPROVED CLEANERS SOLEY BECAUSE THEY CLEAN WELL. IN MOST CASES, TECHNICIANS WERE NOT AWARE OF THE OTHER IMPORTANT REQUIREMENTS A CLEANER MUST MEET BEFORE IT CAN SAFELY BE USED ON AIRCRAFT OR RELATED SUPPORT EQUIPMENT. THE ABILITY OF A MATERIAL TO CLEAN WELL, MEET ENVIRONMENTAL AND HEALTH RESTRICTIONS, NOT CAUSE UNDUE DAMAGE, AND NOT PROMOTE CORROSION LEADS TO MANY

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COMPROMISES. FREQUENTLY, MATERIALS WITH VERY GOOD CLEANING PROPERTIES CANNOT BE APPROVED BECAUSE THEY DO NOT MEET THE OTHER VITAL REQUIREMENTS CONTAINED IN THE MILITARY SPECIFICATIONS.

5. FOR EXAMPLE, THE MOST COMMONLY USED NONAPPROVED CLEANER (SIMPLE-GREEN) WAS TESTED AND FAILED SEVERAL SIGNIFICANT REQUIREMENTS CONTAINED IN MILITARY SPECIFICATION MIL-C-87937. THE MATERIAL FAILED THE HYDROGEN EMBRITTLEMENT, LOW EMBRITTLING CADMIUM PLATE, EFFECT ON PAINTED SURFACES, AND SANDWICH CORROSION TESTS. THE FAILURE OF THE HYDROGEN EMBRITTLEMENT TEST WAS ESPECIALLY DISTURBING BECAUSE EXPOSURE TO THE CLEANER CAUSED A TENSILE BAR SUBJECTED TO A LOAD TO FRACTURE AFTER ONLY 2.5 HOURS OF EXPOSURE. TEST CRITERIA REQUIRES THE EXPOSED BAR TO WITHSTAND A MINIMUM OF 150 HOURS OF EXPOSURE WITHOUT A FRACTURE. THE TENDENCY OF THIS CLEANER TO CAUSE HYDROGEN EMBRITTLEMENT IN HIGH-STRENGTH STEELS COULD HAVE CATASTROPHIC CONSEQUENCES WHEN IT CONTACTS HIGH-STRENGTH STEEL FASTENERS OR

CRITICAL LANDING GEAR AND FLIGHT CONTROL COMPONENTS. FOR EXAMPLE,  
THERE IS STRONG EVIDENCE THAT THE FRACTURE OF A CRITICAL ATTACH  
FITTING FROM CORROSION AND EMBRITTLEMENT WAS CAUSED BY "SIMPLE-GREEN"  
BECOMING ENTRAPPED IN THE AREA FOLLOWING WASH OPERATIONS. THE

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CLEANER'S INABILITY TO PASS THE SANDWICH CORROSION TESTS ALSO  
DEMONSTRATES THE POTENTIAL FOR NONAPPROVED CLEANERS TO ACTUALLY CAUSE  
CORROSION INSTEAD OF PREVENTING IT. OBVIOUSLY, THIS DEFEATS THE  
PRIMARY OBJECTIVE OF THE ENTIRE AIRCRAFT WASH PROGRAM.

6. MOST LOCAL SUPPLY AND CONTRACTING FUNCTIONS MAINTAIN A QUALIFIED  
PRODUCTS LIST FOR THE VARIOUS APPROVED MILITARY SPECIFICATIONS  
COVERING PRIMERS, PAINTS, AND CLEANERS. IF ANY UNIT IS UNABLE TO  
PROCURE THESE LISTS LOCALLY, WE CAN PROVIDE COPIES.

7. THE AIR FORCE CORROSION PROGRAM OFFICE POC IS CMSGT OWEN JETT, DSN  
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