

**BY ORDER OF THE COMMANDER
AIR FORCE SPACE COMMAND**



**AIR FORCE SPACE COMMAND
INSTRUCTION 21-105**

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Maintenance

**AIR FORCE SPACE COMMAND CORROSION
PROGRAM**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements Air Force Policy Directive [AFPD21-1](#), ***Managing Aerospace Equipment Maintenance***, and in conjunction with Air Force Instruction [AFI21-105](#), ***Aerospace Equipment Structural Maintenance***, establishes policy and procedures for managing an effective corrosion prevention and control program for all AFSPC aerospace and electronic systems, equipment, vehicles, and components. This instruction specifies the maintenance responsibilities and management procedures for all Logistics/Missile/Space/Communications Groups, missile maintenance/space warning/communications squadrons, the logistics support squadrons, range squadrons, rescue flight maintenance, and those operations squadrons with maintenance personnel assigned. This program consists of preventing, detecting, and treating corrosion on aircraft, missile, spacelift vehicles, communications-electronics equipment and Aerospace Ground Equipment (AGE). This instruction is consistent with the Air Force Occupational Safety and Health Standards (AFOOSH). This instruction has five chapters. Additionally, [AFI32-1054](#), ***Civil Engineering Corrosion Control***, explains the corrosion control program for civil engineering real property assets and installed equipment at installations and facilities. It does not apply to Air Force Reserve or Air National Guard units. This instruction applies to HQ AFSPC and all subordinate units. Units may supplement this instruction as needed. Send proposed supplements to HQ AFSPC/LGM, Stop 4470, before publishing.

Chapter 1

CORROSION CONTROL AND PREVENTION

1.1. Purpose. The purpose of this instruction is to define and implement a Corrosion Prevention and Control Program for Air Force Space Command (AFSPC) systems, subsystems, and support equipment. The purpose of this Corrosion Prevention and Control Program is to prevent, detect, and treat corrosion and conditions that contribute to corrosion. AFSPC vehicles and equipment operate in a wide range of climatic environments, to include severe corrosion environments. The intent of this program is to minimize the impact of corrosion, reduce maintenance, and extend the service life of AFSPC equipment.

1.2. Responsibilities . AFSPC units that possess, keep, maintain aircraft, missiles, communications-electronics systems, spacelift systems, AGE, and associated equipment will establish a corrosion prevention and control program in accordance with this instruction.

1.2.1. MAJCOM Responsibilities.

1.2.1.1. HQ AFSPC/LG will appoint a command focal point for the overall corrosion control and prevention program.

1.2.1.2. HQ AFSPC/LGM will act as Corrosion Prevention and Control Manager for LG and will:

1.2.1.2.1. Manage AFSPC's corrosion prevention and control program.

1.2.1.2.2. Serve as the Command's focal point for corrosion prevention and control issues and coordinate all actions with HQ AFSPC/SC/DO/CE as appropriate.

1.2.1.2.3. Prepare and update the operating command corrosion prevention and control program instruction.

1.2.1.2.4. Ensure all command units understand their responsibilities for the corrosion prevention and control program.

1.2.1.2.5. Serve on the Missile Corrosion Prevention Advisory Board (CPAB), Spacelift CPAB, Helicopter CPAB, C-21 CPAB, and Communications CPAB.

1.2.1.2.6. Develop and issue technical/administrative instructions for carrying out the command corrosion prevention and control program.

1.2.1.2.7. Ensure Air Force Materiel Command (AFMC) conducts annual site surveys. Assist AFMC to set up a program survey to include scheduling and arranging survey support.

1.2.1.2.8. Establish command training requirements for corrosion control.

1.2.1.2.9. Work with Air Education and Training Command (AETC) to recommend corrosion training course content changes.

1.2.2. Missile and Space Wing/Group Commander will:

1.2.2.1. Appoint a corrosion prevention and control manager.

1.2.2.2. Supplement this instruction as needed with approval from HQ AFSPC/LGM.

1.2.3. Wing/Group Corrosion Prevention and Control Program Manager will:

- 1.2.3.1. Serve as the point of contact for corrosion prevention and control between the units and HQ AFSPC/LGM.
- 1.2.3.2. Ensure each unit prevents and controls corrosion according to this instruction, AFI21-105, and applicable attachments to this instruction.
- 1.2.3.3. Maintain a current corrosion prevention and control program.
- 1.2.3.4. Provide technical corrosion prevention and control guidance.
- 1.2.4. Corrosion Control Shop NCOIC or cognizant contract Quality Assurance Representative will:
 - 1.2.4.1. Ensure military technicians, Department of Air Force (DAF) civilians, or equivalent government contractors prevent and control corrosion according to applicable Technical Orders (TOs), Air Force (AF) Manuals, AF Instructions, AF policies, AF policy directives, and all applicable AFOSH standards and use only authorized products and methods.
 - 1.2.4.2. Ensure military technicians, DAF civilians, or equivalent government contractors know and understand all safety and precautionary measures in accordance with (IAW) applicable TOs and AFOSH Standards.
 - 1.2.4.3. Ensure military technicians, DAF civilians, or equivalent government contractors handle and dispose of hazardous material and waste IAW federal, state, local, and county laws.
 - 1.2.4.4. Ensure protective equipment is available according to AFOSH Standards.

1.3. Training . Each wing/unit will implement a training program for corrosion prevention and control.

- 1.3.1. Annually train all AF maintenance technicians who maintain aircraft, missiles, spacelift systems, communications-electronics systems, or AGE and associated equipment. The training function will code training course completion into Core Automated Maintenance System (CAMS) or document it manually/electronically where CAMS is not available.
 - 1.3.1.1. Bases or units may use AETC course materials, or a locally developed corrosion training package. Obtain continuous education units through the Steel Structure Painting Counsel (SSPC) or the National Association of Corrosion Engineers (NACE) field units. Membership in SSPC or NACE is encouraged for corrosion shop chiefs and trainers. HQ AFSPC/LGM/SCM POCs must approve all training.
 - 1.3.1.2. The training must include the following:
 - 1.3.1.2.1. How to identify corrosion.
 - 1.3.1.2.2. How to report and record corrosion for the applicable system.
 - 1.3.1.2.3. Areas of the applicable system that are prone to corrosion.
 - 1.3.1.2.4. How to remove or treat minor corrosion.
 - 1.3.1.2.5. Proper types of authorized corrosion inhibitor sealant. (Normally directed by TO.)
 - 1.3.1.2.6. The possible causes of corrosion.
 - 1.3.1.2.7. Identification of applicable TOs, AF Manuals, AF Instructions, AF policies, AF policy directives, and all applicable AFOSH standards.

1.3.1.2.8. Identification of all safety and precautionary measures IAW applicable TOs and AFOSH Standards.

1.4. Prevention. Corrosion prevention must be a proactive program. AFSPC units will implement a proper corrosion control program.

1.4.1. Use conversion coatings when warranted. Use a corrosion preventive compound or another appropriate type of coating for unpaintable metal. Choice will depend on the system TO requirements, type of metal, equipment available for applying the coating, environmental restrictions resulting from Federal, State, and local laws, environment of the system, and system use peculiarities, etc.

1.4.1.1. Repainting any operational aircraft, missile, spacelift systems, communications-electronics systems, and their associated equipment solely for beautification purposes is neither appropriate nor authorized.

1.4.1.2. For system (aircraft, missiles, spacelift systems, and communications-electronics/C4 systems) specifics see Chapters 2 through 5 for prevention methods.

1.5. Detection . Conscientiously perform scheduled and unscheduled inspections to assure an effective detection program.

1.5.1. Scheduled Inspections:

1.5.1.1. Check for corrosion as a part of all scheduled routine Air Force technician or civilian contractor maintenance. Each system has its own special requirements for routine corrosion inspections. See Chapters 2 through 5 for system specifics.

1.5.1.2. Evaluate program effectiveness as part of Quality Assurance (QA) technical inspections and scheduled Quality Assurance & Evaluation inspections for any maintenance under government contract.

1.5.1.3. Corrosion technicians, government contractor or military/civilian, will perform scheduled corrosion control on all AFSPC systems as determined by technical data or contract specifics, to include inspection and appropriate treatment.

1.5.2. Unscheduled inspections:

1.5.2.1. Routine checks for corrosion must be a part of all walk-through inspections or when performing any type of maintenance.

1.5.2.2. Perform special inspections as required.

1.5.2.3. Conduct inspections for corrosion in concealed areas when opened for any other work, i.e., opening drawers or chassis, separating an electrical connection, disassembling a valve, etc.

1.6. Treatment . There are two general categories of treatment. Perform each after detection.

1.6.1. Remove and Replace. Performed by the military, civilian, or government contractor responsible for maintenance of the system. Process all removed components through normal channels for repair or salvage.

1.6.2. Treatment in Place. Performed by the military, civilian, or government contractor corrosion specialist. The corrosion specialist may or may not be the same individual as the individual responsible for the system.

1.7. Corrosion Control Plan. Each wing unit will submit a Corrosion Control Plan to HQ AFSPC/LGM not later than (NLT) 31 August each year.

1.7.1. The plan will contain, as a minimum, the following:

1.7.1.1. Current corrosion problems impacting mission accomplishment and recommended solutions.

1.7.1.2. New or additional equipment needed.

1.7.1.3. Conferences and Corrosion Prevention Advisory Boards (CPABs) the unit plans to attend the next fiscal year.

1.8. Reporting and Recording. Report and document corrosion through CAMS or other training database tracking systems used for aircraft, spacelift, and communications-electronic systems. For ICBM units document corrosion discrepancies in Expanded Missile Data Analysis System.

1.8.1. Document aircraft corrosion on Aircraft AFTO Form 781A, **Maintenance Discrepancy and Work Document.**

1.8.2. To meet personnel, equipment, training, parts, and materials need, accurately record corrosion maintenance. Use the proper "How Mal" and "Action Taken" codes to ensure proper identification of corrosion and related maintenance actions.

1.9. CPAB. AFI21-105 stipulates System Program Directors (SPD) will establish and manage a CPAB for all systems and major subsystems, as defined by DoDI 5000.2, *Defense Acquisition Management Policies and Procedures*, and AF Supplement 1 to DoDI 5000.2.

1.9.1. The purpose of the CPAB is to ensure implementation of an effective corrosion prevention program and to control processes and procedures for each system in AFSPC.

1.9.2. Conduct a CPAB at least once annually for each system (aircraft, missiles, spacelift systems, and communications-electronics systems). The SPD and AFSPC corrosion program managers will co-chair the CPAB.

1.9.2.1. Conduct a CPAB at a mutually agreed upon location.

1.9.2.2. Seventy-five days prior to the CPAB, SPD/SSM will initiate a proposed meeting agenda and establish a meeting location agreed upon with AFSPC program manager.

1.9.2.3. Seventy days prior to the CPAB, AFSPC will task units to provide their concerns for agenda items for scheduled CPAB.

1.9.2.4. Sixty days prior to meeting, AFSPC will forward proposed agenda items to SPD/SSM.

1.9.2.5. Thirty days prior to CPAB, AFSPC will forward agenda to attendees for review and comment.

1.9.2.6. Membership of CPAB will consist of the SPD/SSM (chairperson), representative from the Air Force Corrosion Program Management Office, representation from the materials labora-

tory, the depot, and AFSPC (the co-chairperson), other MAJCOMs, and individual units/organizations identified in each system CPAB program plan.

1.9.2.7. (For Spacelift) The board will review contractual requirements, prepare design guidance for the system and periodically survey contractor, through the cognizant contracting officer, to provide whatever technical guidance is necessary to ensure the contractor conforms to the goals of the program.

1.9.2.8. (For all other systems) The board will provide engineering assistance in resolving corrosion related problems in materials, procedures, and processes.

1.9.2.9. The CPAB's findings and recommendations represent the consensus of the board members.

1.9.2.9.1. Units will take action to implement the CPAB approved resolutions.

1.9.2.9.2. The board has authority to assign action items to specific organizations. Minutes of the CPAB meetings will contain the status of all action items.

1.10. Contract Modifications. If contract modifications are required to implement any element of this instruction, they should be completed within 180 days from the date of this publication. Exceptions should be coordinated with HQ AFSPC/LGM.

Chapter 2

AIRCRAFT CORROSION CONTROL PROGRAM

2.1. Purpose. This chapter provides guidance for the AFSPC corrosion control and prevention program for UH-1N, HH-1H helicopters, and the C-21A Aircraft. It applies to all personnel engaged in UH-1N, HH-1H helicopters, and C-21A maintenance or associated maintenance.

2.2. General Policy. Maintain aircraft paint scheme, markings, and decals IAW applicable aircraft technical data; TO 1-1-4, *Exterior Finishes, Insignia and Markings Applicable to USAF Aircraft*; TO 1-1-8, *Application and Removal of Organic Coatings, Aerospace and Non-Aerospace Equipment*; and TO 1-1-691, *Aircraft Weapon Systems--Cleaning and Corrosion Control*, and this instruction.

2.2.1. Do not apply unauthorized art, decals, or markings to aircraft. HQ AFSPC/LGM will approve any deviations from the instructions or technical data. Submit drawings or paintings for approval to HQ AFSPC/LGM.

2.2.2. Aircraft transferring from other commands should comply with AFSPC instructions within 90 days after transfer.

2.2.3. Appearance Standards. Maintain aircraft paint, markings, and corrosion preventive coatings in a manner that will enhance the overall appearance and provide for the best corrosion protection.

2.2.3.1. Do not paint aircraft solely for beautification.

2.2.3.2. Markings, warnings, and decals shall be legible and distinct.

2.2.3.3. Inspect and clean aircraft IAW applicable TOs or as needed to maintain acceptable cleanliness and corrosion prevention.

2.2.3.4. Organizational Insignia. Application of organizational insignia, pilot/copilot, and crew chief's names will be at the Commander's discretion and applied IAW TOs and instructions. Nicknames and/or call signs are unauthorized. Subdued paint schemes will have only subdued insignia and markings.

2.2.3.4.1. Remove command and unit insignia prior to aircraft transfer.

2.2.3.4.2. Silk screen printing. Silk screen printing is an approved method for applying insignia and markings instead of decals.

2.2.3.5. Aircraft mission equipment (C-21A). Maintain, clean, and paint IAW TO.

2.3. Corrosion Prevention Program. All unit personnel must identify problem areas and maintenance personnel must identify, inspect, repair, and prevent corrosion.

2.3.1. Salt Water Environment. Aircraft subject to a salt water environment will require additional emphasis to prevent corrosion during daily and phase/periodic inspections.

2.3.1.1. AFSPC aircraft flying over salt water below 3000 feet above ground level (AGL), except during take-off and landings, will require a fresh water rinse after the last flight of the day. Document discrepancies on Aircraft AFTO Form 781A.

2.3.1.2. AFSPC aircraft flying over salt water below 30 feet AGL will require an airframe and engine fresh water rinse after the last flight of the day. Document discrepancies on Aircraft AFTO Form 781A.

2.3.1.3. Helicopters operating in a salt water environment will require a 30-day wash cycle and a 15-day condition and cleanliness inspection.

2.3.2. Aircraft Wash. Aircraft wash cycles will be IAW TO 1-1-691 or as required to maintain a clean, corrosion, and dirt-free condition. Organizations operating in a salt water environment will wash aircraft on a maximum 30-day cycle. C-21A wash cycle is 45 days.

2.3.2.1. Prepare aircraft for applicable technical data. Ensure technicians comply with safety and environmental concerns.

2.3.2.2. Maintain and use proper protective equipment to include rain gear, face shields or goggles, rubber gloves, boots, and safety harness as required by AFOSH standards.

2.3.2.3. Aircraft wash rack shall meet all Federal, State, local, and county environmental requirements, to include disposal of waste water, storage, and use of aircraft soaps/cleaning agents.

2.3.2.4. Use the proper aircraft cleaning materials as required by specific aircraft TOs and ensure the actual on-hand materials are on the Qualified Products Listing.

2.3.2.5. Lube helicopters and drain pitot-static system within four hours after wash. Enter a red X entry for lube and pitot-static drain on Aircraft AFTO Form 781A.

2.3.2.6. Apply soil barrier as needed to the tailboom areas affected by engine exhaust on HH-1H/UH-1N helicopters.

2.3.2.7. Wash aircraft and cowling prior to phase inspections input.

2.3.2.8. For aircraft away from home station for more than 30 days, comply with appropriate wash cycle, if a wash facility is available.

2.3.3. Aircraft Coatings. Repair deteriorated aircraft coatings and areas of corrosion when discovered in order to provide continued surface protection. Protect metals unable to receive a primer with a corrosion preventative compound or another type of coating. Paint or touch up camouflaged aircraft with subdued coatings.

2.4. UH-1N and HH-1H Paint:

2.4.1. Paint scheme, markings, and insignia. Use a camouflage paint scheme on main airframes.

2.4.2. Organizational Insignia. 18-inch insignia, both sides of aircraft. Vertical Station: water line 33, Horizontal Station: fuselage station 80 (optional).

2.4.3. Crew Chief and Pilot name: TO 1-1-4, para 4-6 (optional).

2.4.4. Tail Markings. For UH-1N and HH-1H tail markings, use two-letter base designation in ten-inch black letters. Aircraft Serial Number-Year Group: four-inch numbers on top of eight-inch last four or five of serial number. Locate "RESCUE" below the serial number in six-inch letters.

2.5. C-21A Paint:

2.5.1. Paint scheme, markings, and insignia. Use gloss white for main airframe paint.

2.5.2. Mark aircraft markings IAW Gates-Learjet drawing Design Engineering-1.1051

2.5.3. Naming C-21A aircraft, e.g., "City of Colorado Springs." Locate the name just forward of entry door in four inch letters.

Chapter 3

INTERCONTINENTAL BALLISTIC MISSILE (ICBM) CORROSION CONTROL PROGRAM

3.1. Purpose. This chapter provides guidance for the corrosion control program for ICBM units. It pertains to all equipment and facilities. It applies to all personnel and activities directly or indirectly engaged in ICBM maintenance.

3.2. General Policy:

3.2.1. Beyond Unit Capability. Schedule corrosion control beyond the capability of missile maintenance for depot-level support. Identify depot discrepancies in the Work Requirement File (WRF) and to the depot.

3.2.2. Delayed Discrepancies. Work corrosion control delayed discrepancies on scheduled site visits by qualified corrosion control teams.

3.2.3. Protective Coatings. Maintenance of protective coatings on ICBM real property installed equipment (RPIE) and operational ground equipment (OGE) is the responsibility of the organization charged with intermediate-level maintenance of that equipment.

3.2.4. Color Plan. Units will establish an ICBM Facility Protective Coating Color Plan. This plan must:

3.2.4.1. Comply with T.O. 21M-LGM-30F-101, *Weapon System Corrosion Control and Treatment/21-LG118A-101, Weapon System Corrosion Control and Treatment.*

3.2.4.2. Generally follow the present color scheme, if practical.

3.2.4.3. Indicate top colors for all major surface areas.

3.2.4.4. Identify all major surface areas not to be painted.

3.2.5. Corrosion shop supervisors will perform the duties of wing/unit corrosion prevention and control program manager. Support units, i.e., communications, civil engineering, and operations will provide members to support this program.

3.3. Procedures. The corrosion program is divided into three phases.

3.3.1. Prevention Phase:

3.3.1.1. Document all major corrosion discrepancies.

3.3.1.2. Perform initial inspections after initial posturing, force modernization posturing, hardness posturing, or anytime a site is returned to the AF by a contractor.

3.3.1.3. Ensure housekeeping and normal cleaning are an integral part of every maintenance action.

3.3.2. Detection Phase:

3.3.2.1. Check for corrosion as part of every Dash-6 inspection.

3.3.2.2. Evaluate program effectiveness as part of QA inspections.

3.3.2.3. Check for corrosion as part of all walk-through inspections.

3.3.2.4. Inspect for corrosion in concealed areas when open for any other work (for example: removal and opening of panels).

3.3.3. Treatment Phase. There are two methods of treating corroded components:

3.3.3.1. Remove and replace.

3.3.3.2. Treat in place.

3.4. Beautification or Appearance Painting:

3.4.1. Preserve professional paint appearances as an integral part of a well-managed corrosion control program.

3.4.2. Limit painting to the smallest practical area required to maintain an effective, protective, and professional appearing coating system. Temper the requirement to repaint with good judgment and consider funds availability, and long-term protection.

3.4.3. Recommend use of coating systems as directed in 21M-LGM-30F-101 and 21-LG118A-101 on all AGE/OGE such as shock-isolated floor isolation system, environmental control system components, electronic racks, etc. Maintain the original color of electronic drawers, racks, and OGE. Use Federal Standard 595a for color matching.

3.4.4. Do not paint any equipment where the application of paint will impair its operational capability or designed function. Use 21M-LGM30F-101, 21-LG118A-101, and 21M-LQM30F-101 for guidance. Protect all areas where paint is not being applied (for example: inside electronic drawers, radio frequency interference shields, mating surfaces, and engraved lettering). Do not apply paint to the following:

3.4.4.1. Fabric or plastic surfaces (as directed by 21M-LGM30F-101, unless factory coated).

3.4.4.2. Bare or untreated concrete surfaces (except for warning lines, caution lines, etc.).

3.4.4.3. Surfaces in contact with weather seals or gaskets (except as directed by 21M-LGM 30F-101, 21-LG118A-101, and 21M-LQM30F-101).

3.4.4.4. Machined surfaces of moving parts.

3.4.4.5. Identification plates and warning signs.

3.4.4.6. Lubrication devices, grease fittings, etc.

3.4.4.7. Electrical hardware-terminal strips, ground straps, connectors, wires, bus bars, plated metal parts, etc.

3.4.4.8. Electrical and mechanical cables.

3.5. Corrosion Control Team (CCT) Scheduling :

3.5.1. For general corrosion control inspections and treatment, inspect and treat 50 percent of the facilities annually.

3.5.2. Technicians responsible for the specific system will perform general corrosion control inspections on support equipment annually. CCTs will perform treatment as required to maintain equipment in serviceable condition.

3.6. Training:

- 3.6.1. Develop and implement an initial corrosion control training program for all maintenance technicians (exclude corrosion technicians from this requirement).
- 3.6.2. Ensure training in the detection and proper documentation of corrosion.
- 3.6.3. Develop and implement a recurring training program for corrosion technicians.

Chapter 4

SPACELIFT SYSTEMS CORROSION CONTROL PROGRAM

4.1. Purpose. This chapter provides guidance for the corrosion control program for Space Launch Squadrons (SLS), Operations Support Squadrons (OSS), and organizations responsible for corrosion control. It pertains to all government-owned, AGE, and cathodic protection systems. It applies to all personnel (military, civilian, or contractor) who are directly or indirectly engaged in spacelift systems maintenance. This chapter is designed to complement the corrosion control efforts on real property, RPIE, and facilities as outlined in AFI32-1054. Incorporate the requirements outlined in this chapter into all future launch base support, corrosion control, and launch services contracts.

4.2. General Policy:

4.2.1. In most cases, the launch base support, launch services, and special contractors will perform corrosion control.

4.2.2. Schedule corrosion control beyond the capability of field level maintenance for depot maintenance through the SPD.

4.3. AFSPC/Unit Responsibilities:

4.3.1. HQ AFSPC/LGM will:

4.3.1.1. Develop, review, and update the field level corrosion control plan for spacelift systems within this instruction.

4.3.1.2. Advocate funding of field level corrosion control projects within the OSSs or SLSs.

4.3.1.3. Act as liaison between OSS and SLS corrosion manager, HQ AFSPC/LGC, DRS, DOO, and CEC on corrosion matters.

4.3.1.4. Conduct Annual CPAB.

4.3.1.5. Develop a corrosion control requirement list for inclusion in new and modified contracts, and coordinate with HQ AFSPC/DOO/DRS/CEC.

4.3.2. The OSSs and SLSs will:

4.3.2.1. Assign a corrosion control manager for the squadron. The corrosion manager will:

4.3.2.1.1. Manage all corrosion control activities for the squadron.

4.3.2.1.2. Manage an OSS/SLS equipment coating color plan from guidance outlined in this instruction.

4.3.2.1.3. Manage a Corrosion Control Program, ensuring identified coatings meet applicable specifications and environmental regulations.

4.3.2.1.4. Develop a squadron corrosion control priority list, documenting all corrosion discrepancies in order of repair priority, to be used in the budget process.

4.3.2.1.5. Develop annual corrosion control budget inputs reflecting priority list mentioned above.

4.3.2.1.6. Coordinate with applicable contractor/AF organization to ensure timely effective repair of corrosion discrepancies. Provide award fee inputs on contractor's efforts, if applicable.

4.3.2.1.7. Develop a maintenance schedule for field level corrosion control and integrate with launch processing schedule. Review schedule annually for effectiveness and make applicable changes.

4.3.2.1.8. In conjunction with BCE, conduct annual corrosion inspections of all AF hardware, AGE, RPIE, and real property within the OSS and SLSs to determine effectiveness of corrosion control efforts.

4.3.2.1.9. Act as liaison between OSS, SLS, BCE, AFSPC, and applicable contractors for corrosion control matters.

4.3.2.1.10. Attend annual CPABs.

4.3.2.2. In addition to the above responsibilities, unit Corrosion Managers will provide an annual corrosion control report and submit to HQ AFSPC/LGM by 1 October each year. As a minimum, the update should contain the following:

4.3.2.2.1. OSS/SLS corrosion control priority list.

4.3.2.2.2. Updated maintenance schedule for corrosion results of periodic corrosion control inspections.

4.3.2.2.3. Assessment of OSS/SLSs overall corrosion control effort to include strengths, weaknesses, and shortfalls.

4.4. Procedures. The corrosion program is divided into three phases: Prevention, Detection, and Treatment. The contractor, OSS, and SLS personnel are responsible for these phases. Unit Corrosion Managers and technicians will comply with guidelines outlined in paragraphs 1.4 - 1.6 for these three phases. (See Atlas Comprehensive Plan for data on design and construction considerations.)

4.5. Beautification or Appearance Painting:

4.5.1. Preserve a professional paint appearance as an integral part of a well-managed corrosion control program.

4.5.2. Limit painting to the smallest practical area required to maintain an effective, protective, and professional coating system. The requirement to repair must be based on a valid corrosion control concern and not for purposes of beautification or appearances.

4.5.3. Recommend use of enamel coating system TT-E-529 or TT-E-489 on all AGE, such as electronics racks, etc. Federal Standard 595a should be used for color matching. However, federal, state, local, and county environmental regulations and guidelines will determine materials and methods to be used in corrosion control.

4.5.4. Do not paint any equipment where the application will impair its operational capability or designed function. Protect all surrounding areas where paint is not being applied (e.g., inside electronic drawers, mating surfaces, engraved lettering). Do not apply paint to the following:

4.5.4.1. Fabric or plastic surfaces (unless factory coated).

- 4.5.4.2. Base or untreated concrete surfaces.
- 4.5.4.3. Surfaces in contact with weather seals or gaskets.
- 4.5.4.4. Machined surfaces of moving parts.
- 4.5.4.5. Identification plates and warning signs.
- 4.5.4.6. Lubrication devices, grease fittings, etc.
- 4.5.4.7. Electrical hardware, terminal strips, etc.
- 4.5.4.8. Mating surfaces.

4.6. Training . Unit Corrosion Managers will comply with the training requirements and guidelines outlined in paragraph 1.3 of this instruction.

Chapter 5

COMMUNICATIONS-ELECTRONICS CORROSION CONTROL PROGRAM

5.1. Purpose . This chapter and AFI21-116, chapter 5 provide guidance for the AFSPC corrosion prevention and control program for all command, control, communication, and computer (C4) equipment. It applies to all personnel and activities engaged in Communications-Electronics and C4 equipment maintenance.

5.2. General Policy:

5.2.1. Each Wing shall establish a corrosion control program designed to meet the unique operational and environmental conditions of their systems equipment. The following guidelines shall be used to develop this program.

5.2.1.1. The organization charged with maintaining the equipment is responsible for organizational level maintenance of protective coatings on C4 systems.

5.2.1.2. Accomplish application and maintenance of protective coatings in accordance with AF equipment maintenance TOs, general maintenance standards TOs, and commercial manuals when authorized in place of AF TOs.

5.2.1.3. Document corrosion that exceeds the repair capabilities of the organizational-level maintenance organization and forward to the appropriate depot support agency for assistance. Identify facility and RPIE corrosion control problems and requirements to the BCE.

5.2.1.4. Organizations that have facilities housing C4 equipment that require protective coatings shall coordinate with BCE for assistance.

5.2.1.5. Coordinate Corrosion Prevention and Control activities with wing/unit Corrosion Prevention and Control Program Manager. The use of wing/unit CCTs to assist in performing corrosion maintenance is authorized.

5.3. Procedures. The corrosion program will consist of three phases:

5.3.1. Prevention Phase:

5.3.1.1. Document all major corrosion discrepancies.

5.3.1.2. Ensure inspections for corrosion and proper corrosion prevention procedures are applied on initially installed systems, after major repairs, and after modifications, but prior to the system being returned to an operational status.

5.3.1.3. Include corrosion prevention procedures in each maintenance and housekeeping action.

5.3.1.4. Preserve a professional paint appearance as an integral part of a well-managed corrosion control program.

5.3.1.5. Limit painting to the smallest practical area required to maintain an effective, protective, and professional appearing coating system. Temper the requirement to repaint with good judgment and in consideration of funds availability and long-term protection.

5.3.1.6. Do not paint equipment where the application of paint will impair its operational capability or designed function (for example: lead paint on antenna feedhorn receiver). Protect all areas

where paint is not being applied (for example: inside electronic drawers, RFI shields, mating surfaces, ventilation ducts, and engraved lettering).

5.3.2. Detection Phase. Inspect for corrosion during any type of maintenance action.

5.3.3. Treatment Phase:

5.3.3.1. Treat corrosion as soon as possible.

5.3.3.2. Limit corrosion prevention treatment to the smallest practical area required to restore protection.

5.4. Training. Develop and implement a corrosion control training program for all maintenance technicians to include prevention, detection, treatment, and proper documentation of corrosion.

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