

**National Guard Pamphlet 750-59**

**Maintenance of Supplies and Equipment**

# **Army National Guard Corrosion Prevention and Control Program**

**National Guard Bureau  
Arlington, VA 22204  
19 MAY 2016**

**UNCLASSIFIED**

# ***SUMMARY of CHANGE***

NG PAM 750-59

Army National Guard Corrosion Prevention and Control Program

19 MAY 2016

o This is a new publication.

Maintenance of Supplies and Equipment  
Corrosion Prevention and Control Program

---

By Order of the Secretary of Army:

TIMOTHY J. KADAVY  
Lieutenant General, USA  
Director, Army National Guard

Official:

  
Charles P. Baldwin  
Deputy Chief of Staff

---

**History.** This is a new publication.

**Summary.** This pamphlet establishes corrosion prevention and control (CPC) guidance on Army National Guard (ARNG) materiel. This pamphlet expands on training, reporting, and procedural techniques.

**Applicability.** This pamphlet applies to all ARNG command-level CPC programs and Standing Operating Procedures (SOP). This pamphlet does not apply to aircraft; aircraft maintainers shall comply with AR 750-59 and applicable Army Aviation guidance.

**Proponent and Exception Authority.** The proponent of this pamphlet is the ARNG G4. The proponent has the authority to approve exceptions or waivers to this pamphlet consistent with controlling law and regulation. The ARNG G4 may delegate this approval authority in writing to a Division Chief within the proponent agency in the grade of Colonel or civilian equivalent.

**Supplementation.** Supplementation to this pamphlet is prohibited without prior approval from National Guard Bureau, ATTN: ARNG-LGZ, 111 S. George Mason Drive, Arlington VA 22204.

**Suggested Improvements.** Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to ARNG-LGZ, 111 S. George Mason Drive, Arlington VA 22204.

**Distribution:** This pamphlet is available in electronic media only and intended for A, B, and C command levels for the ARNG.

---

**Contents** (Listed by paragraph and page number)

**Chapter 1**

**Introduction**

Purpose • 1-1, *page 1*

References • 1-2, *page 1*

Explanation of Abbreviations and Terms • 1-3, *page 1*

History • 1-4, *page 1*

*(Contents Continued)*

Environment • 1-5, *page 1*

Program Benefits • 1-6, *page 2*

Corrosion Prevention and Control Tools • 1-7, *page 3*

Field Level Corrosion Assessment • 1-8, *page 4*

## **Chapter 2**

### **Corrosion Training Procedures**

Corrosion Training Procedures • 2-1, *page 5*

## **Chapter 3**

### **Controlled Humidity Preservation (CHP) Procedures**

General • 3-1, *page 5*

Equipment Eligibility • 3-2, *page 6*

CHP Benefits • 3-3, *page 6*

CHP Applications Types • 3-4, *page 6*

Shelter Based Application • 3-5, *page 6*

Operational Preservation Application • 3-6, *page 7*

CHP Monitors Oversight • 3-7, *page 7*

Request for CHP Support • 3-8, *page 9*

Installation of CHP Application • 3-9, *page 10*

## **Chapter 4**

### **Equipment Protective Cover Procedures**

General • 4-1, *page 11*

Eligibility • 4-2, *page 11*

Field Level Monitor Oversight • 4-3, *page 11*

Equipment Protective Cover Characteristics • 4-4, *page 12*

General Service Administration (GSA) Cover Products • 4-5, *page 12*

## **Chapter 5**

### **Corrosion Retardant Sprays & Protective Coating Procedures**

General • 5-1, *page 12*

Field Level Monitor Oversight • 5-2, *page 13*

Field Level Operations • 5-3, *page 13*

Corrosion Products • 5-4, *page 14*

## **Chapter 6**

### **Reports**

Purpose • 6-1, *page 14*

CPC Monitor Reporting • 6-2, *page 14*

CHP Idle Shelter and Line System Reporting • 6-3, *page 14*

CHP Utilization Reporting • 6-4, *page 14*

Quantifiable Benefits Reporting • 6-5, *page 15*

CPC Program Management Reporting • 6-6, *page 16*

## **Appendixes**

A. References, *page 17*

## **Table List**

Table 1-1. Corrosion Signs, Category, and Stages, *page 4*

Table 4-1. Equipment Protective Cover Characteristics, *page 12*

*(Contents Continued)*

**Figure List**

- Figure 1-1. Corrosion Impacts, *page 2*
- Figure 1-2. CHP Tool, Shelter, *page 3*
- Figure 1-3. CHP Tool, Equipment Protective Cover, *page 3*
- Figure 3-1. CHP Shelter Based Application, *page 7*
- Figure 3-2. CHP Operational Preservation Application, *page 7*
- Figure 3-3. CHP Support Request Memorandum, *page 9*
- Figure 3-4. CHP Termination or Temporarily Suspend Services Memorandum, *page 10*
- Figure 6-1. State/Territory Utilization Roll-Up Tab, *page 15*
- Figure 6-2. State/Territory Utilization Equipment Tab, *page 15*

**Glossary**

This page intentionally left blank.

## **Chapter 1**

### **Introduction**

#### **1-1. Purpose**

The purpose of this pamphlet is to provide commanders, staff, leaders, and Soldiers additional guidance and specific procedures for establishing a program designed to detect, mitigate, prevent, and control the effects of corrosion on ARNG equipment. Successful implementation of this pamphlet, associated Army Regulation (AR), Technical Manuals (TM), and Technical Bulletins (TB) will reduce the impacts of corrosion and improve equipment readiness. This pamphlet is to be used as a daily guidebook to the references, authorities, and principles of successful ARNG maintenance operations.

#### **1-2. References**

Required and related publications and prescribed and referenced forms are listed in Appendix A.

#### **1-3. Explanation of Abbreviations and Terms**

Abbreviations and special terms used in this publication are explained in the Glossary.

#### **1-4. History**

Headquarters, Department of the Army (HQDA) designated the ARNG as the Army Lead Organization (ALO) for the Controlled Humidity Preservation program. Controlled Humidity Preservation programs, as a sustainment level maintenance technology, has the potential to reduce moisture-related damage to weapon systems, as well as improve readiness and sustainability. The ARNG has over 20 years of CPC/Controlled Humidity Preservation (CHP) the use and means of both field and sustainment level maintenance efforts.

*a.* The field level maintenance effort is focused on near-term readiness that protects equipment stored outside using equipment protective covers and performing corrective actions that returns equipment back to a Category 1 corrosion status in accordance with (IAW) TM standards and corrosion assessments.

*b.* The sustainment level maintenance effort, from the National Guard Bureau's (NGB) role, focuses on a long-term strategy designed to provide up-front corrosion mitigation options (e.g., controlled humidity shelters and operational preservation line systems) that assist in the reduction of cost and programming of future Depot maintenance repairs on ARNG equipment.

#### **1-5. Environment**

ARNG ground combat equipment continues to operate in a number of environments that accelerate corrosion. Marine environments produce the most lethal accelerator that induces corrosion. Salts in seawater make it more electrically conductive; seawater is more corrosive to metals than fresh water. Understanding the factors that contribute to a corrosive environment will contribute to a successful CPC program. Contributing factors are described below:

*a.* Moisture. Salt is the most lethal accelerator; however, moisture is the greatest contributor to deterioration of metals and electrical components. Water vapor is present in air and often contains contaminants that are corrosive. These contaminants can turn rain into acid rain which is more corrosive. Figure 1-1 provides a visual of the impacts of corrosion.

*b.* Temperature. Corrosion rates increase as the temperatures rises. High temperatures often make corrosion of steel exhaust components very severe.

*c.* Sunlight. Sunlight causes corrosion by breaking down coatings that leave metallic surfaces unprotected. Sunlight also heats the areas that it shines on and accelerates corrosion, due to the higher the temperature.

*d.* Sand, Coral, and Mud. Sand, coral, and mud can cause abrasion and wear on moving parts and coatings. Additionally, these contaminants can trap moisture and enhance corrosion.

*e.* Salt. Salt used to de-ice roads in colder areas are a major cause of corrosion on military equipment.

*f.* Road Debris and Stones. Debris, stones, and pebbles on roads are kicked up as a vehicle is driven causing "peck" holes in coatings on vehicle underbodies.

*g.* Coating Protection. Corrosion will occur in a short time if a protective coating such as paint or a preservative does not cover the metal surface. Once applied, the protective coating must be maintained. If protection of metal

surfaces is not done as part of preventive or corrective maintenance, loss of equipment from service and high replacement rates will continue to impact equipment readiness.



Figure 1-1. Corrosion Impacts

### 1-6. Program Benefits

The CPC program provides overarching guidance to both field and sustainment level maintenance requirements that mitigate the damaging effects of corrosion.

a. Field level maintenance is the first line of defense, with the biggest challenge keeping Commanders and Soldiers invested. Once fully vested, the benefits of the program produce the following:

- (1) Maintains and improves equipment readiness on reportable systems and equipment.
- (2) Bridges the gap between field level and sustainment level maintenance.
- (3) Authorizes scheduled preventive maintenance services to be suspended and/or deferred while materiel is in administrative storage.
- (4) Reduces maintenance backlogs and counts equipment as mission capable.
- (5) Provides the means to identify potential maintenance cost avoidance (not savings).
- (a) Savings is a cost reduction that enables a manager to reallocate funds within the budget or program period, while cost avoidance covers all other cost reductions.

(b) Potential maintenance cost avoidance for example: The ARNG CHP Utilization Report reported over 4,200 pieces of equipment in Long-Term Preservation (LTP) storage with the top 50 Line Item Numbers (LIN) reflecting over 2,900 items. These 2,900 items would represent a potential labor avoidance of over 680,000 man-hours which equates to ~390 Full-Time Equivalent (FTE) and a potential maintenance cost avoidance of approximately \$19M.

(6) Provides a means to mitigate full-time maintenance workforce shortfalls.

(a) An effective CPC program can provide that assistance; for example, if a percentage of a unit's equipment were identified and inducted into CHP/LTP storage program using administrative storage, maintenance backlog could effectively be reduced by that determined percentage.

(b) The remaining backlog percentage is absorbed through the following:

- (i) Low-usage equipment identified.
- (ii) Unit level maintenance performed during Inactive Duty Training (IDT) and Annual Training (AT).
- (iii) Remaining full-time maintenance workforce's ability to exceed their capabilities required for field maintenance hours from Army MARC (Manpower Requirement Criteria) Maintenance Database (AMMDB).

(c) Implementing CHP/LTP into CPC programs, allow States/Territories to be successful at operating with a less than authorized full-time maintenance technician workforce while maintaining ARNG equipment readiness.

b. The sustainment component of NGB's corrosion strategy is linked to centrally managing the CHP Program to ensure compliance with AR 750-59, Corrosion Prevention and Control for Army Materiel.

## 1-7. Corrosion Prevention and Control Tools

### a. CHP.

(1) CHP is a field-tested, time-proven maintenance technology designed to eliminate moisture-induced damage and the resulting sustainment costs.

(2) Dehumidification protection is the preferred method of storage for ARNG equipment. Appendix A provides the website to Weather Data (see ARNG Logistics Library) that identifies ARNG sites that have reported corrosive areas.

(3) Modern technology has made this concept applicable to equipment throughout its spectrum of operation and lifecycle. CHP storage plays a key role where the outdoor relative humidity is above 50% for more than 50% percent of the total time.

(4) A CHP system is an environment stabilization system that can be adjusted to meet operational requirements in the most cost effective manner. CHP is designed as a means for long-term and modified long-term storage of ARNG equipment.



Figure 1-2. CHP Tool, Shelter

b. Alternative Structures. States, Territories, and the District of Columbia who have selected alternative structure requirements (e.g., large area maintenance shelters, overhead pole-barn type structures, shelters without air dehydration, etc.) need to coordinate through the proper ARNG Facilities Construction channels.

(1) All alternative structures requirements need to be coordinated through State/Territory Construction and Facilities Management Office (CFMO) as outlined in National Guard Regulation (NGR) 415-10, ARNG Facilities Construction.

(2) If alternative structures are determined and require air dehydration once constructed, identify CHP program requirements and elevate to ARNG G4 Logistics Division Maintenance Branch (ARNG-LGM).

### c. Equipment Protective Covers.

(1) ARNG mission critical equipment not enrolled into air dehydration long-term and/or modified-long term CHP storage shelters will be considered for equipment protective covers to reduce the impacts of corrosion on equipment left exposed to environmental elements (e.g., extreme temperatures, dust, rain, wind, snow, ice, etc.).

(2) Modern equipment protective cover technology has made this concept applicable to equipment throughout its spectrum of operation and lifecycle.

(3) Equipment protective covers will be considered and can be utilized in conjunction with overhead structures.



Figure 1-3. CHP Tool, Equipment Protective Cover

d. Corrosion Retardant Spray and Protective Coatings. Continuous cleaning, painting, and application of corrosion inhibitors will be applied by field-level operators/crews while performing maintenance before, during, and after equipment use.

**1-8. Field Level Corrosion Assessment**

a. Corrosion assessment checklists are outlined in associated equipment’s technical bulletins that provide step-by-step guidance identifying corrosion-prone areas. The frequency of field level corrosion assessments will be identified in the unit’s SOP based on Operational Tempo (OPTEMPO), severity of environmental conditions, and priority of the equipment.

b. Corrosion assessments are completed, at a minimum, annually to determine the level of corrective actions necessary to return the equipment back to like new or functional condition. The following corrosion category codes (Reference Table 1-1) are used in identifying corrosion prevention and control program requirements:

Table 1-1. Corrosion Signs, Category, and Stages

SIGNS	CATEGORY		STAGE	
Shows no signs of visible corrosion	1	Corrosion efforts at Operator and/or Crew Level Maintenance; (Unit) Field Level Maintenance		
Simple discoloration and staining	2	Corrosion efforts at System Specialists and Field Mechanic; (Unit) Field Level Maintenance	1	Components corroded; coating damage that requires corrosion repair and preservatives applied. Spot painting applied where necessary.
Loose rust or pitting of the surface along with minor etching	3	Corrosion efforts at supporting SEMF; Field Level Maintenance above Operator and/or Crew Level Maintenance	2	Components corroded; remain sound. Metal requires surface repair and preservatives applied due to corrosion deterioration, minor physical damage, and coating damage.
Rust, minor etching, pitting, and more extensive surface damage	4	Corrosion efforts at supporting SEMF and/or Depot Sustainment (Repair & Return) Level Maintenance	3	Components corroded; remain structurally sound. Metal requires repair prior to surface preparation and preservative applied due to corrosion deterioration and minor physical damage.
Rust, etching, and pitting has progressed to the point where the life of the item has been affected	5	Corrosion efforts at Depot Sustainment Level Maintenance or slated for Defense Logistics Agency (DLA) Disposition Services due to unserviceability (Condition Code H)	4	Components corroded; structurally unsound. Metal requires replacement due to major physical damage that presents a safety hazard.

## **Chapter 2**

### **Corrosion Training Procedures**

#### **2-1. Corrosion Training**

*a.* All Soldiers performing corrosion focused maintenance can achieve basic corrosion control skills IAW AR 750-59 through numerous available options and opportunities.

*b.* Appointed corrosion monitor and unit level personnel engaged in duties that use CPC procedures should receive initial and annual corrosion focused training within the following applicable areas (see Appendix A for training website addresses):

- (1) Corrosion Theory.
- (2) CPC Publications.
- (3) Cleaning.
- (4) Inspection.
- (5) Preservation.
- (6) Storage.
- (7) Mitigation.
- (8) Reporting.

*c.* The Department of Defense (DOD) Corrosion Oversight Office continues to work contracted training opportunities that provide tuition-free courses in corrosion prevention and mitigation to DOD personnel.

*d.* Corrosion focused training is also available to Soldiers through the following, but not limited to:

(1) DOD Corrosion Policy and Oversight approved contracted courses through:

- (a) Society for Protective Coatings (SSPC).
- (b) National Association of Corrosion Engineers (NACE).
- (2) Corconnect 202 Series training courses.
  - (a) Corrosion Management.
  - (b) Corrosion Monitoring.
  - (c) Corrosion Techniques.
  - (d) Final Analysis courses.

(f) Corrosion Comprehension: Corrosion Basic course.

(g) Corrosion Overview course.

(3) Army Training Requirements and Resources System (ATRRS).

(4) Army National Guard Professional Education Center (PEC).

(5) Defense Acquisition University (DAU).

(a) Continuous Learning Module (CLM): CLM038 Corrosion Prevention and Control Overview.

(6) Corrosion Defense training courses.

(7) Internal State/Territory coordinated corrosion prevention focused training is the best form of corrosion awareness and prevention training. Based on geographical locations, it is highly encouraged to utilize senior maintenance Warrant Officers and Noncommissioned Officers to conduct internal corrosion awareness training to appointed corrosion monitors, Commanders, and Soldiers. Document all training conducted using a Memorandum for Record and maintain on file to satisfy the AR 750-59 training requirements.

*e.* Records of all corrosion related training, either certificate producing or memorandum for record documented, will be maintained on file within the organization and/or IAW State/Territory command level CPC Program guidance.

## **Chapter 3**

### **Controlled Humidity Preservation Procedures**

#### **3-1. General**

This chapter provides comprehensive and standardized CHP procedures throughout the 54 States, Territories, and the District of Columbia. The CHP program reduces the effects of corrosion by utilizing environmental stabilization systems to maintain the relative humidity of an environment at 50% or less. Systems are normally either shelter-based or outdoor in parking areas utilizing ducting to deliver dehumidified air into vehicle/equipment compartments.

#### **3-2. Equipment Eligibility**

All ARNG Modified Table of Organization and Equipment (MTOE) equipment is eligible for corrosion protection based on the environment and CPC Program established within each State, Territory, and the District of Columbia.

The primary focus of selected preservation equipment is placed on reportable Class VII major end items. In an effort to reduce maintenance backlog and improve equipment readiness, it is recommended for all command-level units to induct 20% to 25% of equipment into controlled humidity preservation programs. Different CPC tools may be recommended based on geographical location and environmental factors (see para 1-7 for CPC tool options).

*a.* CHP equipment criteria of support.

*(1)* Equipment criteria.

*(a)* Equipment Readiness Code (ERC) Pacing Items (e.g., M1A1 Abrams Tank, HIMARS, Radar, Avengers, etc.) are the primary items eligible followed by low density ERC A reportable items and high valued electronics equipment systems.

*(b)* Not all equipment requires CHP due to equipment can be equally protected with increased field level maintenance and OPTEMPO funding (e.g., washing, painting, corrosion inhibitor sprays, etc.) and housed in non-CHP warehouse type facilities.

*(c)* Equipment for CHP preservation must be approved by the ARNG-LGM CPC Program Manager.

*(2)* Corrosion criteria.

*(a)* The Weather Data produced by Army National Guard Installations Division (ARNG-ILI) will be the primary source of corrosion criteria data used in the ARNG-ILS staffing process. Appendix A provides the website (see Army National Guard Logistics Library) to view the most recent Weather Data IAW the following focused areas:

*(1)* Acid Rain.

*(2)* Sulfur Dioxide.

*(3)* Chloride Ion.

*(4)* Relative Humidity (RH). The annual means of relative humidity will be measured based on the following categories:

*(a)* Category 1 reflects humidity of 70% and higher

*(b)* Category 2 reflects humidity 69% and below

*(5)* Coastal Proximity. Measures the area within 10 miles of the ocean coast.

*b.* The Weather Data also provides temperatures and annual snowfall as other considerations in staffing CHP Program support requests.

### **3-3. CHP Benefits**

CHP is a field-tested, time-proven maintenance technology that is designed to eliminate moisture-induced damage and the resulting sustainment costs. CHP benefits include:

*a.* Readiness reportable systems are reported FMC.

*b.* Prevents additional corrosion and dry rot.

*c.* Prevents deterioration of fuel or fluids.

*d.* Eliminates Technical Inspection (TI) upon removal from CHP.

*e.* Preserves Left Behind Equipment (LBE) during deployments.

*f.* Defers Army Oil Analysis Program (AOAP) sample requirements.

*g.* Scheduled service inspections may be suspended while in administrative storage IAW AR 750-1, Army Materiel Maintenance Policy.

*h.* Reduces Class IX repair parts costs requirements.

*i.* Reduces maintenance man-hour requirements.

### **3-4. CHP Applications Types**

The ARNG employs shelter based and operational preservation line systems for controlled environment applications. CHP shelters are intended to protect Class VII major end items from corrosion and shall not be used for storage of Table of Distribution and Allowances (TDA) equipment, work spaces, training facilities, or additional maintenance bay space.

### **3-5. Shelter Based Application**

*a.* Long-Term Preservation is a shelter designed to maintain equipment stored for a period of one to three years at a specific relative humidity. While in LTP, the equipment will be placed in administrative storage status. All regularly scheduled preventive maintenance services are suspended while materiel is in administrative storage. Figure 3-1 provides an example of a CHP Shelter Base Application.

*b.* Modified Long-Term Preservation (MLTP) provides the same benefits of LTP, but is intended for storage of equipment for 90 days to one year.



Figure 3-1: CHP Shelter Based Application

### 3.6. Operational Preservation (OP) Application

*a.* Operational preservation lines help reduce moisture-induced corrosion and unscheduled maintenance on labor intensive and/or high cost communications, optics, fire control, and electronic components in selected weapons systems, and Communications Electronics (CE) equipment. This includes combat vehicles and high valued electronic equipment like M1, M2/3, M109, M992 Family of Vehicles (FOV), M113 FOV, Stryker FOV, and CE Systems.

*b.* OP systems do not require a shelter as part of the CHP application, as dehumidified air is ducted directly into the crew compartment/equipment enclosure.

*c.* OP systems are traditionally installed and operated within motor pool parking areas. Figure 3-2 provides an example of how OP systems are configured for equipment pre-staged in motor pools or designated assembly areas.

*d.* This form of dehumidification reduces unscheduled maintenance but does not authorize or defer scheduled maintenance (i.e. preventive maintenance checks and services (PMCS) and scheduled services).



Figure 3-2: CHP Operational Preservation Application

### 3-7. CHP Monitor Oversight

*a.* ARNG- LGM CPC Program Management Team. Executes the following responsibilities:

- (1) Manages the ARNG Corrosion Prevention & Control Program.
- (2) Analyzes State/Territory CHP requests.
- (3) Plans, prepares, and budget for CHP applications.
- (4) Processes, prioritizes, and maintains project database.
- (5) Provides feedback during site assessments, as required.

(6) Analyzes the quantifiable benefits reported.

*b.* State/Territory DCSLOG. Executes the following responsibilities:

- (1) Manages the appointment of CPC monitor to oversee CHP applications.
- (2) Provides guidance in identifying, justifying, and submitting CHP requirements.
- (3) Provides CHP SOP guidance.
  - (a) Includes MTOE equipment induction and removal procedures.
  - (b) Includes LTP procedures (if utilized) addressing maintenance deferral procedures IAW regulatory requirements highlighted in AR 750-1.
- (4) Considers utilities associated with CHP operations and monitoring.

- (a) States/Territories are responsible for providing all utilities to install and operate CHP applications (e.g., propane/natural gas, electricity, and telephone lines as applicable).
- (b) Utility costs incurred by CHP systems are the responsibility of the State/Territory to plan, program, budget, and execute.
- c. State/Territory CPC Program Monitor. Executes the following responsibilities:
  - (1) Identify CHP site point of contact (POC).
  - (2) Inquires on the status of the State/Territory CPC applications.
  - (3) Maintain or have access to a copy of this pamphlet.
  - (4) Ensure all CHP equipment is properly accounted for and placed on applicable organizational property books for 100% accountability.
  - (5) Ensure equipment prior to induction or removal is in compliance with TM 10/20 standards, Safety of Use Messages (SOU), and Modification Work Order (MWO).
  - (6) Maintain an inventory of the equipment placed into the CHP program and a record of all actions affecting the application.
  - (7) Provides semi-annual inventories feedback.
  - (8) Provides CHP utilization of space and process guidance.
- (a) MTOE equipment. Ensure that CHP shelters and line systems are only used to support MTOE equipment with priority being Class VII major end items.
- (b) TDA equipment. TDA equipment may be stored dependent upon available space. State/Territory CPC POC must first submit a formal request and obtain a Memorandum for Record (MFR) from the ARNG- LGM CPC Program Management Team to retain on file. This MFR will be required to justify TDA equipment being stored within CHP shelters during internal/external site visits and/or CPC program evaluations.
- (c) CHP shelters are not warehouses. Installation property is prohibited for storage inside CHP shelters.
- (d) Provide guidance to ensure CHP space and application accessories are fully utilized to maximize the benefits of the program.
- (e) Provide guidance in developing a plan to maximize utilization of existing CHP applications.
- (f) CHP systems no longer needed, or that cannot be reutilized, will be immediately reported to the State/Territory CPC/CHP program POCs. Once validated by the State/Territory DCSLOG, Force Integration Readiness Officer (FIRO), and Surface Maintenance Manager (SMM), the POC will notify the ARNG- LGM CPC Program Management Team to coordinate discontinuing Contractor Logistics Support (CLS) service support and help determine the application process for removal, disposition, or conversion.
- d. CHP Site POC. Executes the following responsibilities:
  - (1) Understands proper operation of the CHP application.
  - (2) Understands basic end-user maintenance of the CHP application.
  - (3) Provides guidance to ensure physical security measures are IAW AR 190-51, Security of Unclassified Army Property (Sensitive and Nonsensitive).
  - (4) Provides guidance to ensure CHP shelters and lines are maintained in good condition and report required repairs.
  - (5) Provides guidance to ensure CHP shelters are clean, organized, and properly being utilized.
  - (6) Provides guidance to ensure shelter doors are kept open to the absolute minimum amount of time. CHP shelter doors should only be open when equipment enters or exits the shelter. Leaving shelter overhead doors open only increases State/Territory utility costs and goes against the purpose of establishing a controlled dehumidified environment that reduces the effects of corrosion.
  - (7) Adhere to procedures outlined in the State's CHP SOP for equipment placed in administrative storage and all major sub-systems as directed by applicable TMs.
  - (8) Maintain direct contact with the contracted CLS Field Service Technicians (FST) for scheduled and unscheduled maintenance service visits of CHP applications.
  - (9) Ensure a back-brief is received on each visit by the CLS FST on routine system maintenance, non-mission capable status, and repairs. System issues will be coordinated through State/Territory CPC Program POC to ARNG- LGM CPC Program Management Team.
  - (10) Obtain access to Management Automated Reporting System (MARS) to review and maintain copies of the Field Service Report inputted by the CLS FST.

### **3-8. Request for CHP Support**

- a. States/Territories will identify, justify, and submit CHP equipment requirements to the ARNG-LGM CPC Program Management Team.

- b. The initial request must be vetted through SMM and signed by the State/Territory DCSLOG.
- (1) Support request contains the parent unit (“AA”) Unit Identification Code (UIC).
  - (2) Density and type equipment formatted by LIN, nomenclature, and quantity.
- Figures 3-3 and 3-4 provides additional information requirements within CPC/CHP support request memorandums.

(State Letterhead)	
Office Symbol	DATE
MEMORANDUM FOR Army National Guard Logistics Division (ARNG-ILS) Division Chief, 111 South George Mason Drive, Arlington, VA 22204	
SUBJECT: Corrosion Prevention and Control (CPC) Support Request	
<ol style="list-style-type: none"> <li>1. The XX ARNG requests CPC program support to provide corrosion protection measures on ARNG Modification Table of Organization and Equipment (MTOE) equipment located at (identify specific site and geographical location).</li> <li>2. The following conditions were identified in justifying this support request (specify in detail the conditions that determined the need for this request).</li> <li>3. Unit(s) identified is: “AA” UIC.</li> <li>4. Equipment Density: See attached equipment density listing. Attach equipment list by Line Item (LIN), nomenclature, and quantity.</li> <li>5. The XX ARNG acknowledges that all CPC/CHP related equipment approved and authorized to support the CPC Program will be placed onto organizational property books to maintain 100% accountability.</li> <li>6. The XX ARNG acknowledges that all utility costs associated with CHP shelters and/or OP lines systems will be at the cost of the state/territory.</li> <li>7. Point of contact is XXARNG, (rank) (first last), phone number, and email address.</li> </ol>	
Encl XX ARNG Equipment Density List	FIRST MI. LAST RANK, BRANCH, XXARNG Duty Position

Figure 3-3. CHP Support Request Memorandum

(State Letterhead)

Office Symbol DATE

MEMORANDUM FOR Army National Guard Logistics Division (ARNG-ILS) Division Chief, 111 South George Mason Drive, Arlington, VA 22204

SUBJECT: Notification to Terminate Corrosion Prevention and Control (CPC), Controlled Humidity Preservation (CHP) Support

1. The XX ARNG no longer requires (list CPC tool or tools) due to (list reason for termination in detail; such as, force structure or transfer of equipment), at (specific location).
2. The XX ARNG has verified and obtained internal Joint Force Headquarters (JFHQ) (list key/primary coordinated personnel; such as, The Adjutant General (TAG), Deputy Chief of Staff for Logistics (DCSLOG), Force Integration Readiness Officer (FIRO), J3/S3, etc.) consensus that the XX ARNG no longer requires these corrosion prevention measures to support the CPC Program.
3. Request Contractor Logistics Support (CLS) be terminated effective (dd mmm yy). (NOTE: Could also be used to temporarily suspend from dd mmm yy to dd mmm yy)
4. If applicable, attach a detailed list of equipment requesting disposition. (Attach a list by serial number and/or photos of equipment being requested for disposition.)
5. Please advise as to disposition instructions related to CPC/CHP equipment.
6. The point of contact is XX ARNG, (rank) (first last), phone number, and email address.

Encl FIRST MI. LAST  
 Re-Use Plan (If Applicable) RANK, BRANCH, XXARNG  
Duty Position

Figure 3-4. CHP Termination or Temporarily Suspend Services Memorandum

**3-9. Installation of CHP Application**

*a.* If a CHP application is recommended, the State/Territory CPC Program POC and/or SMM will coordinate the formal request through the respective J4/G4 and CFMO offices and forward to the ARNG-LGM CPC Program Management Team.

*b.* CFMO Coordination. Coordination with CFMO is critical to ensure shelters are properly located and sited, listed on the Facilities Inventory Support Plan (FISP) for resource planning, and all environmental requirements identified and met.

*(1)* The CFMO will provide proposed site(s) for CHP applications.

*(2)* The CFMO proposed site will be accompanied by a Statement as to the site's suitability and ownership (e.g., State, Federal, etc.).

*c.* All new CHP construction, or modification of existing buildings, will be conducted on leased or owned State and/or Federal property. The United States Property & Fiscal Office may perform Federal contracting on State property only if it meets the requirements IAW National Guard Pamphlet (NG PAM) 415-5, Army National Guard Construction Program Execution, that authorizes the Federal Government to perform Federal contracting on State land and the State Attorney General provides a written opinion to that effect.

*d.* Project POC. The State/Territory will provide a designated POC for each CHP project. The State POC will act as Contracting Officer Representative (COR) on-site representative to ensure contractor accountability. The State

POC will provide ARNG-LGM CPC COR with timely updates of installation progress for verification of contractor invoices.

*e. Site Assessment.* Once the project is approved and properly resourced, the ARNG-LGM CPC Program Management Team will schedule and conduct a site assessment. The implementing contractor and ARNG CHP Program/Project Manager will then conduct site visit to determine its suitability for the project, verify the equipment requirement, and develop a site plan.

*f. CHP Shelter Allowances.* All CHP facilities will comply with the following (see Logistical Facilities guidance provided in NG PAM 415-12, Army National Guard Facilities Allowances):

(1) CHP shelters space shall be unheated and shall be calculated based on the operations shipping configuration of each approved piece of equipment plus one foot in all directions for circulation space.

(2) When enclosed CHP space is provided, the amount of paved area (authorized for parking of military vehicles at the site) shall be reduce by the area of the preservation space.

(3) CHP shelters shall be pre-engineered, un-insulated, unheated, and unlighted metal shelters of a design to accommodate a RH of less than 50% RH at all times, and less than 40% RH 90% of the time; subject to conditions caused by an act of nature.

(4) CHP shelters shall not be provided with fresh water or sewer facilities and shall not be used for any purpose other than controlled humidity preservation unless specifically approved by the ARNG G4 Logistics Division.

(5) CHP shelters shall be provided with a moisture vapor barrier and concrete floors designed for the heaviest vehicle to be preserved (eight inches for track vehicles; six inches for wheel vehicles).

(6) Manually operated overhead or roll-up doors at each end of the shelter are authorized as follows:

(a) Two doors for each 5,000 Square Foot (SF) or 10,000 SF shelter.

(b) Four doors for each 15,000 SF; 20,000 SF; 25,000 SF; or 30,000 SF shelters.

(7) A 20 foot deep concrete apron is authorized in front of each vehicle entrance.

*g. Site/Project Approval.* The Architecture and Engineering (A&E) design and site plan for CHP applications, acquired by ARNG, is subject to approval by the CFMO to ensure that all local and State building, safety, and fire codes have been incorporated.

*h. Design/Construction.* Once the CFMO approves the site plan at the State/Territory level, the CFMO will coordinate with the CPC Program Manager for final approval before the implementing contractor schedules construction.

*i. Project Hand-Off.* Upon completion, the project application is handed off to the State CFMO office using DD Form 250, Material Inspection and Receiving Report, along with a completed DD Form 1354, Transfer and Acceptance of DOD Real Property, for the building to be accepted and signed by the Installation Real Property Accountable Officer (RPAO).

## **Chapter 4 Equipment Protective Cover Procedures**

### **4-1. General**

This chapter provides comprehensive and standardized guidance for equipment covers throughout the 54 States, Territories, and the District of Columbia. Equipment protective covers reduce the potential risk of corrosion and assist Commanders in maintaining the readiness of ARNG Class VII major end items and critical MTOE equipment. Equipment protective covers are available in various sizes and costs depending on the type of equipment and level of protection desired. Some cover variants have built-in corrosion combating elements to enhance the ability in preventing corrosion.

### **4-2. Eligibility**

All ARNG mission critical MTOE equipment not enrolled into controlled humidity long-term and/or modified-long term CHP storage shelters will be considered for equipment protective covers to reduce the impacts of corrosion on equipment left exposed to environmental elements (e.g., extreme temperatures, dust, rain, wind, snow, ice, etc.).

### **4-3. Field Level Monitor Oversight**

*a. State/Territory CPC Program Monitor.*

(1) Identify, justify, and elevate program requirements to the ARNG-LGM CPC Program Management Team.

(2) Ensure unit level corrosion monitors receive product training in regards to equipment cover responsibilities (removal/installation procedures and serviceability inspections).

- (3) Maintain accountability of equipment protective covers and place on applicable organizational property books.
- (4) Inquiries and Request from Vendors, Consultants and Prospective Contractors. To prevent violation of federal procurement statutes and regulations, direct all inquiries and requests from corrosion vendors to the USPFO or the SCS within the Office of the USPFO.
- b. Unit monitors and/or identified Site POC.
  - (1) Coordinate product training to ensure proper installation and removal procedures of equipment covers.
  - (2) Ensure equipment covers are installed when equipment is not in use.
  - (3) Inspect covers for serviceability.
  - (4) Maintain 100% accountability of the equipment protective covers.
  - (5) Inquiries and Request from Vendors, Consultants and Prospective Contractors. To prevent violation of Federal procurement statutes and regulations, direct all inquiries and requests from corrosion vendors to the USPFO or the SCS within the Office of the USPFO.

**4-4. Equipment Protective Cover Characteristics**

When purchasing covers to protect equipment, the minimum characteristics referenced in table 4-1 must be considered.

Table 4-1. Equipment Protective Cover Characteristics

Characteristic	Requirement
Waterproof; resistance to leakage	No leakage; 100% waterproof; no penetration by moisture, rain, snow, sleet, etc. Must be effective in all climates.
Fit to equipment dimensions	Must be fitted to the equipment desired to be protected, without the use of heat shrinking or wrap technology.
Reusable	Must be able to be installed and removed on a weekly basis for the duration of the service life span ( <i>Reference Durable</i> ).
Durable	Service life of 3 years minimum.
Mildew resistance	The cover must resist the accumulation of mold or mildew. Mold or mildew shall cover no more than 5% of the cover during normal use.
Tearing Strength after Degradation	Covers shall have a minimum tear resistance of 50 lbs. throughout accelerated weathering/degradation.
Inclusion of Express Warranty: (IAW FAR 12.404(b))	Standard commercial manufacturer’s warranty that includes a minimum of a 1 year warranty on materials and workmanship.

**4.5. GSA Cover Products**

Equipment protective covers can be purchased from the GSA catalog, as referenced Appendix A websites, based on CPC program requirements. GSA Advantage highlights manufacture/brands available and current pricing by searching for “protective covers”.

**Chapter 5  
Corrosion Retardant Sprays & Protective Coating Procedures**

**5-1. General**

This chapter provides corrosion retardant spray and protective coating instructions for the 54 States, Territories, and the District of Columbia CPC Programs. The primary purpose for cleaning, inspecting, annotating, painting, and applying inhibitors is to protect ARNG assets from accelerating the impacts of corrosion. The impacts of corrosion continue to be seen in rusted chassis frames, trailer floors incapable of supporting load requirements, corroded battery boxes, and rusted wheel lug nuts, to only list a few.

## **5-2. Field Level Monitor Oversight**

All ARNG MTOE equipment not enrolled into air dehydration long-term and/or modified long-term CHP storage shelters require continuous operator/crew, special systems, and unit field level maintenance attention to detail before, during, and after PMCS.

### *a. State/Territory CPC Program Monitor.*

(1) Ensure CPC corrosion retardant sprays and protective coatings procedures are integrated into the State/Territory command level program.

(2) Ensure that State/Territory command level program includes a thorough corrosion inspection that incorporates the corrosion assessment down to the operator/crew level of maintenance and used to capture measurable objectives.

### *b. Unit Commanders.*

(1) Face day-to-day struggles in maintaining readiness of ARNG Class VII major end items. Commanders will develop and enforce corrosion retardant sprays and protective coating procedures within CPC program SOP.

(2) Develop a robust and achievable corrosion retardant and protective coating plan that incorporates all levels of field level maintenance that provides repetitious maintenance oversight on equipment under their command and control.

(3) Ensure CPC inspections are conducted on equipment/components at a minimum of a 180 day interval if no TM depicts corrosion specific inspections.

(4) Ensure safety remains the number one focus for Soldiers engaged with the application of corrosion retardant sprays and protective coatings. Training is the key to success in ensuring equipment readiness is properly being maintained and Soldiers are performing the task safely.

### *c. Unit CPC Corrosion Monitors.*

(1) Act as the Commander's direct representative to oversee, coordinate, and implement corrosion retardant sprays and protective coating procedures.

(2) Continuously work with operators/crews, maintenance supervisors, and mechanics to determine the effectiveness of the Commander's CPC policy/SOP.

## **5-3. Field Level Operations**

### *a. Cleaning.*

(1) Cleaning is the first step in preventing corrosion and wear.

(2) All geographical areas have their own unique environmental elements that impact equipment and induce the impacts of corrosion. Most equipment cleaning is training or calendar based while corrosion is both time and environment based. The operational environment shall dictate the frequency of corrosion cleaning procedures depicted in organizational CPC SOP.

### *b. Inspections.*

(1) Corrosion detection is everyone's responsibility.

(2) Visual inspections are essential to the overall corrosion prevention and control program. Through early detection, identification, and treatment, the costs resulting from corrosion are minimized.

(3) Without regular systematic inspections, corrosion will seriously damage ARNG equipment. All inspections should be performed IAW applicable TMs and Corrosion Assessment Checklist.

*c. Annotating.* Once corrosion has been identified, annotate and retain corrosion corrective actions and associated cost that can be used for historical facts and statistical reporting to the DCSLOG and ARNG CPC Program Management Team.

### *d. Painting.*

(1) Applying surface paint onto a clean metal surface is the first line of corrosion defense in providing the necessary protection to mission critical equipment.

(2) Scratches, chips, or marring of the paint surface observed during PMCS will be repaired at the field-level to prevent corrosion damage.

(3) Proper paint touch-up involves a series of preparatory steps that include contaminant removal, cleaning, pretreatment, and priming.

*e. Corrosion inhibiting preventative maintenance application.* CPC inhibitors can be applied by field-level personnel and are encouraged as a minimum measure to prevent the effects of corrosion.

*f. Training.* Training will be conducted by the means of available courses through ATRRS, PEC, DAU, or State/Territory coordinated corrosion focused training.

#### **5-4. Corrosion Products**

Military Standard Requisitioning & Issue Procedures (MILSTRIP) will always be the first option used to purchase corrosion products based on products highlighted in the equipment's technical manual and associated technical bulletin. For example, some corrosion National Stock Number (NSN) products outlined in TB 43-0213, Corrosion Prevention and Control (CPAC) for Army Wheeled Vehicles, are as follows:

- a.* Corrosion Preventive Compounds:
  - (1) Rust Inhibiting Compound (RIC), NSN 8030-01-414-8947.
  - (2) Rust Inhibiting Compound, T-32CP90S6, NSN 8030-01-414-8947.
  - (3) MIL-PRF-16173 Class II, Grade 4 (81349), NSN 8030-00-903-0931.
  - (4) Solvent Cutback, Cold-Application, NSN 8030-00-062-5866.
  - (5) Water Displacing, Type I, Class 2 (81349), NSN 8030-00-213-3279.
  - (6) Water Displacing, Type II, Class 2 (81349), NSN 8030-00-938-1947.
  - (7) Water Displacing, Type III, Class 2 (81349), NSN 8030-00-546-8637.
- b.* Corrosion Preventive Lubricant and Penetrant, NSN 8030-01-387-1131.
- c.* Corrosion Inhibiting Lubricant, NSN 9150-01-360-1906.
- d.* Vapor Corrosion Inhibitors Foam Tape, NSN 6850-01-338-1392.
- e.* Corrosion prevention products can also be purchased from the GSA catalog. GSA Advantage highlights manufacture/brands and products available by searching for "corrosion lubricants" and "corrosion inhibitors".

### **Chapter 6 Reports**

#### **6-1. Purpose**

This chapter provides standardized reporting procedures associated with data collection and analysis viable in justifying CPC Programs throughout the 54 States, Territories, and the District of Columbia.

#### **6-2. CPC Monitor Reporting**

- a.* Appointed State/Territory CPC Program Monitor will be the primary point of contact.
- b.* Provide CPC program monitor name, rank, office symbol, telephone number, and email address to the ARNG-LGM CPC Program Management Team.
- c.* Update accordingly upon changes of assignment or reassignment.

#### **6-3. CHP Idle Shelter and Line System Reporting**

- a.* The CPC Program POC will report temporarily idled CHP shelters or line systems to the ARNG-LGM CPC Program Management Team. This coordination will properly adjust the contracted CHP CLS support plus save State/Territory utility costs. The notification will include a re-use plan with projected timeframe.
- b.* If a State/Territory no longer requires CHP systems due to force structure modifications, unit re-stationing, etc., then the CPC program POC will notify the ARNG-LGM CPC Program Management Team.

#### **6-4. CHP Utilization Reporting**

- a.* ARNG semi-annual inventories will be conducted March and September.
- b.* The State/Territory CPC Program POC will provide the ARNG-LGM CPC Program Management Team with the results of the semi-annual CHP application utilization inventory no later than the 30<sup>th</sup> of March and September.
- c.* Specific instructions for completing the inventory will be provided by the ARNG-LGM CPC Program Management Team along with individual State/Territory spreadsheet no later than 30 days prior to the 1<sup>st</sup> of March and September. Figures 6-1 and 6-2 provide a snapshot of the semi-annual inventory format.

	# Apps	% util					<b>Utilization - Color Code</b>			
Shelters	4	81.3%					85% or higher			
OP Lines	0	NA					50% - 84.9%			
<b>Total</b>	<b>4</b>						Below 50%			

  

Shelters					
Location	Size	NSS Avail	NSS SF Used	RAW SF	% Utilized
Juneau	10,000	7,500	7330	4312	98%
Anchorage - Sh1	20,000	15,000	15000	11409	100%
Anchorage - Sh2	20,000	15,000	9437	5551	63%
Anchorage - Sh3	20,000	15,000	10936	6433	73%
<b>Total</b>	<b>70,000</b>	<b>52,500</b>	<b>42703</b>	<b>27705</b>	<b>81.3%</b>

  

OP Lines			
Location	Size	Used	% Utilized
			NA
			NA
			NA
<b>Total</b>	<b>0</b>	<b>0</b>	<b>NA</b>

Figure 6-1. State/Territory Utilization Roll-Up Tab

Location	Juneau							
Sq FT	10,000							
NSS Util	7330.4							
RAW SF	4312.0							

  

ITEM #	TYPE	UIC	NSN	LIN	MODEL_DES	LIN_DES	RAW SF	SF w/Buffer
1	LTP	WPMNAA	2320015402038	T34704	M1151A1	TRK UTILITY	123	209.1
2	LTP	WPMNAA	2320015402038	T34704	M1151A1	TRK UTILITY	123	209.1
3	LTP	WPMNAA	2320015402038	T34704	M1151A1	TRK UTILITY	123	209.1

Figure 6-2. State/Territory Utilization Equipment Tab

- (1) Gross Square Footage (GSF) is the total physical space of the shelter (e.g., 5K, 10K, etc.)
- (2) Unavailable Storage Space (USS) is the remaining calculated square foot floor space once the NSS is subtracted from the GSF (GSF-NSS = USS). USS varies based on shelter configuration and traditionally averages 25% of the GSF.
- (3) Net Storage Space (NSS) is the GSF of a shelter minus the USS. NSS averages out to be about 75% of the GSF. The goal is maintaining an 85% or better utilization of NSS.
  - (a) States/Territories may report more NSS utilized than NSS available, as that is determined by shelter configuration and type of equipment stored.
  - (b) Example 1. If a State has four 10K & one 15K shelter or 55,000 SF of GSF available. Subtract the USS (25%) or 13,750 SF. NSS is 41,250 SF (55,000 SF - 13,750 SF = 41,250 SF). The State reports utilizing 36,000 SF. The CHP Shelter rating would be Green (36,000 utilized / 41,250 NSS = 87.3%).
  - (c) Example 2. If a State has 5 Operational Preservation (OP) lines with 20 positions each and reports 64 positions. (5 x 20 positions = 100 total positions. 64 utilized / 100 positions = 64% (Amber)).
- (4) Buffer Space is included around the equipment to provide maneuvering space. This buffer space varies but averages approximately 70% the size of the equipment. For example, a 10' by 10' piece of equipment would be 100 SF + (100 SF x 70%) or 170 SF allowed.
- (5) Utilization Ratings is based on the total NSS utilized divided by total NSS available. OP system rating is the total number of OP positions utilized divided by the total number of OP positions.
  - (a) Green: 85% or higher.
  - (b) Amber: 50% to 84.9%.
  - (c) Red: Below 50%.

### 6-5. Quantifiable Benefits Reporting

a. States/Territories with CHP applications will report quantifiable benefits resulting from the use of CHP applications. This will be reported to the ARNG-LGM CPC Program Management Team no later than the 31<sup>st</sup> of December annually.

- (1) Cost reduction. List reductions in the number of dollars needed to meet an established requirement by improving a process or function (e.g., compare assigned vehicles/equipment utilizing to CHP to vehicles/equipment not utilizing CHP).
- (2) Cost avoidance. List any cost reduction that is not a saving (e.g., Direct Production (DP) Field Maintenance Hours saved from storing equipment in administrative storage).
- (3) Productivity improvements. List any productivity improvements experienced (e.g., DP Field Maintenance

Hours avoided by suspending regularly scheduled preventive maintenance services while in LTP administrative storage).

(4) There are three non-financial, quantifiable benefits and methods of measurement. Mission Capability lists increases in mission capable rates, Maintenance Backlog lists comparative decreases in backlog, and System Reliability lists increases in terms of probable failure ratio maintainability/supportability measures, or fewer replacement parts compared to assets not utilizing CHP.

b. Maintenance Manpower Cost Avoidance/Deferral reporting format, at a minimum, will have the following columns of information:

- (1) Column 1: State, Territory or District of Columbia.
- (2) Column 2: National Stock Number (NSN).
- (3) Column 3: Line Item Number (LIN).
- (4) Column 4: Model Description (Model\_DES).
- (5) Column 5: Line Item Number Description (LIN\_DES).
- (6) Column 6: State Quantity.
- (7) Column 7: Annual Direct Production (DP) Field Maintenance Hours Required Per Unit.
- (8) Column 8: Total Annual DP Field Maintenance Hours Required. Obtain "Annual DP Field Maintenance Hours" required by LIN from the Force Management System Web Site (FMSWEB), Force Management Bulletin Board, and Army MARC (Manpower Requirement Criteria) Maintenance Database (AMMDB).
- (9) Quantity of Equipment in LTP using administrative storage.
- (10) Productivity Improvements Hours Avoided.

#### **6-6. CPC Program Management Reporting**

a. All levels of leadership will conduct CPC Program evaluations IAW with State/Territory CPC policies and/or SOP.

b. ARNG-ILS will synchronize with the ARNG Command Logistics Review Team (ARNG-ILS-C) for State/Territory level CPC Program Evaluations into FY16 and Beyond scheduled visits.

c. The CLRT will be utilizing the Area 11, Corrosion Prevention and Control Program Management Checklist when conducting on-site CPC Program evaluations. The ARNG Logistics Library provides access to the most up-to-date Area 11 checklist that can be utilized as a template for internal CPC program evaluations.

## **Appendix A References**

### **Section I Required Publications**

#### **AR 190-51**

Security of Unclassified Army Property (Sensitive and Nonsensitive), 30 September 1993 (Cited in paras 3-5, 3-6)

#### **AR 750-1**

Army Materiel Maintenance Policy, 12 September 2013 (Cited in paras 8-11, 8-20)

#### **AR 750-59**

Corrosion Prevention and Control for Army Materiel, 19 March 2014 (Cited in paras 2-8, 2-9, 2-10, 3-5, 3-6, B-2, B-3, B-4)

#### **NG PAM 415-5**

Army National Guard Construction Program Execution, 31 July 2013 (Cited in para 12-3a)

#### **NG PAM 415-12**

Army National Guard Facilities Allowance, 25 January 2015 (Cited in para 3-6)

#### **NGR 415-10**

Army National Guard Facilities Construction, 25 July 2003 (Cited in para 3-5)

#### **TB 43-0213**

Corrosion Prevention and Control (CPAC) For Army Wheeled Vehicles, 24 September 2012 (Cited in Work Packages (WP) 0001 – 0037)

#### **FAR 3.000**

Federal Acquisition Regulation Procurement Integrity (Cited in subpart 3.1)

### **Section II Related Publications**

#### **AR 190-13**

The Army Physical Security Program, 25 February 2011

#### **AR 190-16**

Physical Security, 31 May 1991.

#### **AR 740-1**

Storage and Supply Activity Operations, 26 August 2008.

#### **AR 740-3**

Stock Readiness, 11 September 2012

#### **DA PAM 70-3**

Army Acquisition Procedures, 11 March 2012

#### **DA PAM 750-1**

Commanders' Maintenance Handbook, 04 December 2013

#### **Manpower Requirements Criteria**

Policy and Procedures, 20 January 2009

**NGR 750-2**

Army National Guard Maneuver Area Training Equipment Site and Unit Training Equipment Site Operations, 20 January 2006

**TM 38-470**

Storage and Maintenance of Army Prepositioned Stock Materiel, 15 November 2013

**10 United States Code (USC) § 2228**

Office of Corrosion Policy and Oversight, 27 January 2015

**10 United States Code (USC) § 18233a**

Notice and wait requirements for certain projects

**Section III**

**Prescribed Forms**

This section contains no entries.

**Section V**

**Referenced Forms**

**DA Form 11-2**

Internal Control Evaluation Certification

**DA Form 2028**

Recommended Changes to Publication and Blank Forms

**DD Form 250**

Material Inspection and Receiving Report

**DD Form 1354**

Transfer and Acceptance of DOD Real Property

## **GLOSSARY**

### **Section I Abbreviations**

#### **AA**

Parent Unit Identifier

#### **A&E**

Architecture and Engineering

#### **ACB**

Army Corrosion Board

#### **ALO**

Army Lead Organization

#### **AMMDB**

Army MARC (Manpower Requirement Criteria) Maintenance Database

#### **AOAP**

Army Oil Analysis Program

#### **AR**

Army Regulation

#### **ARNG**

Army National Guard

#### **ARNG-ILI**

ARNG G4, Installations Division

#### **ARNG-ILS-C**

ARNG G4, Command Logistics Review Team

#### **ARNG-LGM**

ARNG G4, Logistics Division - Maintenance Branch

#### **AT**

Annual Training

#### **ATRRS**

Army Training Requirements and Resources System

#### **CAT**

Category

#### **CE**

Communications-Equipment

#### **CFMO**

Construction and Facilities Management Office

#### **CHP**

Controlled Humidity Preservation

**CLM**

Continuous Learning Module

**CLRT**

Command Logistics Review Team

**CLS**

Contractor Logistics Support

**COR**

Contracting Officer Representative

**CPAC**

Corrosion Prevention and Control

**CPC**

Corrosion Protection and Control

**CSMS**

Combined Support Maintenance Shop

**DAU**

Defense Acquisition University

**DARNG**

Director, Army National Guard

**DCS**

Deputy Chief of Staff

**DCSLOG**

Deputy Chief of Staff for Logistics

**DLA**

Defense Logistics Agency

**DOD**

Department of Defense

**DODI**

Department of Defense Instructions

**DP**

Direct Production

**ERC**

Equipment Readiness Code

**FAR**

Federal Acquisition Regulation

**FIRO**

Force Integration Readiness Officer

**FISP**

Facilities Inventory Support Plan

**FMC**

Fully Mission Capable

**FMSWEB**

Force Management System Web Site

**FOV**

Family of Vehicles

**FST**

Field Support Technician

**FTE**

Full-Time Equivalent

**GSF**

Gross Square Footage

**GSA**

General Services Administration

**HQDA**

Headquarters, Department of the Army

**IAW**

In accordance with

**IDT**

Inactive Duty Training

**JFHQs-State**

Joint Forces Headquarters

**KO**

Contracting Officer

**LBE**

Left Behind Equipment

**LIN**

Line Item Numbers

**LTP**

Long-Term Preservation

**MARC**

Manpower Requirement Criteria

**MARS**

Management Automated Reporting System

**MFR**

Memorandum For Record

**MILSTRIP**

Military Standard Requisitioning & Issue Procedures

**MLTP**

Modified Long-Term Preservation

**MTOE**

Modified Table of Organization and Equipment

**MWO**

Modification Work Order

**NACE**

National Association of Corrosion Engineers

**NGB**

National Guard Bureau

**NGB-AQ**

National Guard Bureau, Operational Contracting Division

**NGB-OPARC**

National Guard Bureau, Office of Principal Assistant Responsible for Contracting

**NGB-SBP**

National Guard Bureau, Office of Small Business Programs

**NG PAM**

National Guard Pamphlet

**NGR**

National Guard Regulation

**NSS**

Net Storage Space

**NSN**

National Stock Number

**OCONUS**

Outside the Continental United States

**OP**

Operational Preservation

**OPTEMPO**

Operational Tempo

**PEC**

Professional Education Center

**PMCS**

Preventive Maintenance Checks and Services

**POC**

Point of Contact

**RH**

Relative Humidity

**RIC**

Rust Inhibiting Compound

**RPAO**

Real Property Accountable Officer

**SCS**

Senior Contracting Specialist

**SEMF**

Surface Equipment Maintenance Facility

**SF**

Square Feet

**SMM**

Surface Maintenance Manager

**SOP**

Standing Operating Procedures

**SOUM**

Safety of Use Message

**SSPC**

Society for Protective Coatings

**TAG**

The Adjutant General

**TB**

Technical Bulletin

**TDA**

Tables of Distribution and Allowance

**TI**

Technical Inspection

**TM**

Technical Manual

**UIC**

Unit Identification Code

**USC**

United States Code

**USPFO**

United States Property & Fiscal Office

**USS**

Unavailable Storage Space

**VIA**

Vehicle Interface Adapter

## **Section II**

### **Terms**

#### **Administrative Storage**

The placement of materiel in a limited care and preservation status.

#### **Buffer Space**

The maneuvering space identified around equipment.

#### **Gross Square Footage**

The total physical space of the shelter.

#### **Combined Support Maintenance Shop**

An ARNG TDA activity that provides field and sustainment level of maintenance on Federal surface equipment issued to the ARNG.

#### **Corrosion**

The deterioration of a material, or its properties, due to a reaction of that material with its chemical environment.

#### **Corrosion Prevention**

The effort to reduce or prevent damage of material from corrosion by proper and timely identification, isolation, documentation, and implementation of appropriate corrective actions.

#### **Corrosion Prevention and Control Program**

A planned and organized effort to limit the damage to any systems or equipment due to exposure to corrosive conditions.

#### **Cost Avoidance**

Covers all other cost reductions that is not a savings (Reference Savings).

#### **Deferred Maintenance**

Authorized delay of maintenance and/or repair uncorrected faults.

#### **Depot Maintenance**

Materiel maintenance requiring major overhaul or a complete rebuilding of parts, assemblies, subassemblies, and end items, including the manufacture or parts, modifications, testing, and reclamation as required.

#### **Field Maintenance**

Field maintenance is the first line of maintenance effort from the organizational level that performs maintenance tasks “on system” in a tactical environment using trained personnel and tools.

#### **Fully Mission Capable**

Systems and equipment that are safe and have all mission-essential subsystems installed and operating as designated by applicable Army Regulation.

#### **Gross Square Footage**

The total floor square foot space of the shelter (e.g., 5K, 10K, etc.). Gross square footage is calculated by multiplying the building length by the building width ( $L \times W = GSF$ ).

#### **Left Behind Equipment**

MTOE equipment that a deploying unit leaves behind at its home station.

#### **Maintenance**

All actions necessary for retaining an item in or restoring it to a specified condition.

**Maintenance Technician**

Full-time technician normally having dual status as a member of a ARNG unit.

**Net Storage Space**

Square foot floor space of equipment stored within the CHP Shelter. Net storage space is calculated by subtracting the gross square footage from the unavailable storage space ( $GSF - USS = NSS$ ).

**Operating Tempo**

As used by Army for Commanders to forecast and allocate fund for fuel and repair parts for training events and programs.

**Pacing Items**

Major weapon system, aircraft, and other items of equipment central to an organization's ability to perform its designated mission.

**Preventive Maintenance**

All actions performed in an attempt to retain an item in a specified condition by providing systematic inspections, detection, and prevention of incipient failures.

**Readiness**

The ability of U.S. military forces to fight and meet the demands of the National Military Strategy. Unit readiness is the ability to provide capabilities required by the combatant commanders to execute their assigned mission.

**Savings**

The cost reduction that enables a manager to reallocate funds within the budget or program period.

**Surface Equipment Maintenance Facilities**

Maintenance facilities for surface equipment fall into five categories: Field Maintenance Shop (FMS); Unit Training Equipment Site (UTES); collocated Maneuver Area Training Equipment Site (MATES); non-collocated MATES; and Combined Support Maintenance Shop (CSMS).

**Sustainment Maintenance**

Sustainment maintenance is the second maintenance effort designed to repair and return equipment and systems to like new conditions that fall outside of Field Maintenance's capability. Preventative measures also play a key role in sustainment maintenance by centrally managing and overseeing life cycle maintenance efforts to reduce the impacts of corrosion.

**Unavailable Storage Space**

Calculated square foot floor space once the net storage space is subtracted from the gross square footage ( $GSF - NSS = USS$ ). Unavailable storage space varies based on shelter configuration and traditionally averages 25% of the gross square footage.