CELD-MS Engineer Regulation 750-1-1	Department of the Army U.S. Army Corps of Engineers Washington, DC 20314-1000	ER 750-1-1 30 January 1997
	Maintenance of Supplies and Equipment MATERIEL MAINTENANCE POLICIES	
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CELD-MS 26 February 1999

Errata Sheet

No. 3

MATERIEL MAINTENANCE POLICIES

ER 750-1-1

30 January 1997

Chapter 4, page 4-6, paragraph 4-5: Change "Maintenance of Federal Information Processing (FIP) Equipment" to read " Maintenance of Information Technology (IT) Equipment."

Chapter 4, page 4-6, paragraph 4-5: First sentence; Change "The maintenance of FIP equipment (formally ADPE) " to read "The maintenance of IT equipment." Strike-out "Federal Information Resources management Regulation (FIRMR) "

CELD-MS 20 October 1998

Errata Sheet

No. 2

MATERIEL MAINTENANCE POLICIES

ER 750-1-1

30 January 1997

Table of Contents, page iii: Add Appendix E, Management Control Evaluation Checklist for the Materiel Maintenance Program (beginning on Page E-l).

After page D-l, Add Appendix E, in it's entirety (pages E-l through E-xx) as follows:

CELD-MS

24 March 1997

Errata Sheet

No. 1

MATERIEL MAINTENANCE POLICIES

ER 750-1-1

30 January 1997

Chapter 1, page l-4, paragraph l-Se(4): Change to read "Appointed in writing as the Oil Analysis Program (OAP) monitor, who will:"

Chapter 3, page 3-3, paragraph 3-9c(2): Change to read "An automatic transmission or gearbox when attached to above engine in paragraph 3-9c."

Chapter 3, page 3-4, paragraph 3-9c(S)(a): Change to read "Auxiliary engines are those on a watercraft that are not used. for propulsion."

Chapter 5, page 5-1, paragraph 5-2: Change to read "Equipment Usage Standards. This section explains how personal property usage standards can be used as part of an overall personal property management program. Table 5-l (herein) and Appendix B, Table B-2, EP 750-1-1, are lists of USACE equipment that requires usage reporting and Table B-3 shows usage standards for selected equipment. Equipment that is exempt from usage reporting in USACE is shown in Table B-4 of the cited EP and Table 5-2 (herein)."

Chapter 5: Add page 5-9, Table 5-2, in it's entirety as follows:

DEPARTMENT OF THE ARMY
U. S. Army Corps of Engineers
Washington, D.C. 20314-1000

ER 750-l-l

CELD-MS

Regulation
No. 750-l-l

30 January 1997

Maintenance of Supplies and Equipment
MATERIEL MAINTENANCE POLICIES

Issuance of supplements to this regulation is prohibited except
upon approval of HQUSACE (CELD-MS) WASH, D. C. 20314-1000

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CHAPTER 1
INTRODUCTION

1- 1. Purpose. This regulation defines the policies and responsibilities of the United States Army Corps of Engineers (USACE), as they apply to personal property maintenance, and incorporates Department of the Army (DA) policies for general maintenance operations, commodity oriented maintenance, maintenance management, and contract maintenance support for personal property. This regulation sets policy and establishes responsibilities for the maintenance of military and civil personal property.

l-2. Applicability This regulation applies to all HQUSACE elements, major subordinate commands (MSC), districts, laboratories, and field operating activities (FOA) except active duty units. **Note: This regulation does not apply to "real property or dredges."**

a. This regulation also applies to all self propelled, towed, or stationary self-powered personal property, excluding equipment specified in ER 56-2-1. At the minimum, all personal property with an acquisition value criteria of $5,000.00 or more, including items used together to form a system with total acquisitionvalue of $5,000.00 or more, are subject to the full requirements and methods contained in this regulation.

b. This regulation also applies to all government furnished property, including that used at government owned, contractor operated (GOCO) projects. In accordance with the Federal Acquisition Regulation (FAR), section 45.102, contractors are required to furnish all property necessary to perform government contracts. However, there are times when it is in the best interest of the government to provide property to a contractor in performance of their contract. When this is the case, the Federal Acquisition Regulation (FAR), Defense Federal Acquisition Regulation Supplement (DFARS), and Army Federal Acquisition Regulation Supplement (AFARS) Subpart 45 (Government Property) become the governing regulatory system for that property.

c. The requiring activity must contact the appropriate Contracting Officer and discuss the appropriate method and conditions required for providing government property in accordance with FAR, DFARS and AFARS Subpart 45. At this time the Statement of Work (SOW) should be discussed so the appropriate requirements will be included therein.

d. Some examples to consider are:

(1) If automated systems are provided, the SOW needs to state the requirements of the contractor. It should explain what is expected from the contractor, but not how to accomplish the requirement.

(2) If documenting and reporting is required, the SOW needs to state the requirements of the contractor. It should explain what is expected from the contractor, but not how to accomplish the requirement.

(3) If there is a different requirement for maintaining the property, than as listed in FAR, DFARS, or AFARS Subpart 45, then the specific requirement should be stated.

(4) If there are regulations that the contractor must have in order to comply with some requirements, those regulations must be provided and listed in an appendix of the contract. The SOW must indicate what the requirements are. When the contractor is furnished GOCO equipment that requires maintenance actions, this regulation and EP 750-1-1 will be provided and cited in a contract appendix.

(5) The contracting officer will control government property IAW the FAR, DFARS and AFARS Subpart 45.

1-3. References. References are listed in Appendix A.

1-4. Exceptions. Requests to waive applications to any provisions of this regulation will be submitted through command channels to HQUSACE (CELD-MS), Washington, D.C. 20314-1000. The request for waiver will include:

a. A recommended alternative course of action.

b. An analysis that shows that the alternative course of action is the best solution under the circumstances.

1-5. Responsibilities.

a. Commander, USACE:

(1) Provide command-wide emphasis to the materiel maintenance management program.

(2) Emphasize the importance of maintenance and ensure that commanders at all levels are accountable for the execution of the maintenance program and operations.

b. Director, Logistics Management, HQUSACE:

(1) Develop concepts, policies, doctrine, and plans for the maintenance of personal property.

(2) Develop and distribute implementing instructions to assist commanders in complying with this regulation.

(3) Conduct periodic inspections and staff visits, as appropriate, to determine the adequacy of command maintenance operations, document deficiencies, and recommend corrective action.

c. Commanders:

(1) Provide local command emphasis to the Materiel Maintenance Management Program.

(2) Ensure sufficient resources are dedicated to the Materiel Maintenance Management Program.

(3) Ensure the maintenance operations at all levels within their command are properly staffed and supervised.

(4) Appoints a qualified maintenance officer in writing, to manage the materiel maintenance program, as his or her primary duty.

d. Chief, Logistics Management Office:

(1) Implement HQUSACE guidance and standards and advise HQUSACE of major changes necessary to improve the maintenance policies of the Corps.

(2) Assure compliance with the materiel maintenance standards and maintenance related logistic performance standards.

(3) Develop policies and procedures as necessary to implement the District Materiel Maintenance Program.

(4) Assist supervisors in implementing policies and procedures for the Materiel Maintenance Program.

(5) Ensures that equipment disposal inspection are completed.

e. Maintenance Officers: (Refer to Table 1 - 1, EP 750- 1 - 1).

(1) Monitor the maintenance programs and advises the Chief of Logistics Management of changes necessary to improve local maintenance policies and procedures.

(2) Assure that materiel maintenance standards are being complied with.

(3) Assist local supervisors in implementing the policies and procedures for the materiel maintenance program.

(4) Appointed in writing as the Oil Analysis Program (AOP) monitor, who will:

(a) Provide management guidance, technical supervision and assistance activities affiliated with your division, district, etc.

(b) Assure that all activities participate in an OAP program.

(c) Recommend systems for inclusion in the OAP and sampling intervals for systems.

(5) Appointed in writing as the Test, Measurement, and Diagnostic Equipment (TMDE) Coordinator, responsible to develop a TMDE program which will ensure compliance with the maintenance plan, regulations, manuals, and bulletins in order to reinforce maintenance discipline.

(6) Manage the activity's warranty program to include all matters related to warranty claim actions (WCA).

(7) Conduct annual site visits and prepare written evaluations, and reviews the Materiel Maintenance Program within the district. Annual evaluation will be sent through the Chief, LMO, to the activity commander.

(8) Develop and implement the maintenance plan with annual reviews and changes posted as needed.

f. Maintenance Managers:

(1) Assure that scheduled and unscheduled maintenance of all personal property is performed expeditiously and by the most economical means.

(2) Oversee Maintenance Coordinators functions within their activity.

(3) Identifies maintenance requirements.

(4) Prepare and implement the activity's maintenance sub-plans.

(5) Determine resources and personal property specific requirements.

(6) Monitor personal property performance and evaluates maintenance program.

(7) Assure all maintenance programs are executed.

g. Maintenance Coordinators: (Refer to Table 1-1, EP 750- 1-1).

(1) Assure that maintenance data are maintained and transferred to permanent records.

(2) Are responsible for tracking and complying with warranty requirement.

(3) Are responsible for dispatching functions.

(4) Assure that scheduled and unscheduled maintenance is performed.

(5) Are responsible for upward reporting requirements through maintenance channels.

(6) Are responsible for the maintenance of specific item(s) of personal property or for groups of personal property.

(7) Receive Preventive Maintenance Checks and Services (PMCS) and determines if personal property is operational and safe for use.

(8) Maintain operator/utilization records.

CHAPTER 2
MAINTENANCE POLICIES AND STRUCTURE

2-1. General Maintenance Policy

a. Proper use, care, handling, and conservation of materiel (personal property) in accordance with public law is mandatory. The USACE Maintenance Program will be overseen in the Logistics Management Office and executed by assigned functional area. The following descending order of precedence will apply to all maintenance policies: Federal, Department of Defense, Department of the Army, and Engineer Regulations. When there is a conflict between any two regulations, the higher precedence will apply. If the conflict is between two regulations on the same level of precedence, HQUSACE will determine which has precedence.

b. The commander will appoint an individual in Logistics, in writing, as the maintenance officer to oversee the command's Materiel Maintenance Program. This appointment will be made at all division, district, laboratory and field operating activities.

c. Functional managers at all USACE activities are encouraged to cease spending for acquisition of development of nonstandard automated equipment management system when one exists else- where in the Corps, Army, or Government that meets the needs. Before starting major development efforts, field commanders will coordinate with the appropriate headquarters functional manager.

d. Maintenancemanagers will be appointed in writing (with the concurrence of the appropriate function division chief) at all activities requiring maintenance. The maintenance manager will maintain a consolidated list of all equipment and the maintenance coordinator assigned to support it.

(1) All USACE activities will established a maintenance "History Jacket" file for each item of equipment assigned or attached.

(2) Maintenance managers assure the collection and recording of cost of parts, labor and contracts for each piece of personal property.

(3) Methods listed in EP 750-1-1 will be used to document maintenance actions.

e. Maintenance coordinators will be designated in the maintenance plan at all activities requiring maintenance.

2-2. The Maintenance System. Maintenance of personal property will be sustained at a level to assure responsiveness to mission requirements and readiness, as described in EP 750-1-1 and as specified in maintenance manuals and the local maintenance plan.

2-3. Equipment Training and Licensing. Equipment training and licensing in all USACE activities is mandatory. Commanders and/or directors are responsible for ensuring a comprehensive training and licensing program is established, maintained and executed in accordance with AR 600-55 and EM 385-1-1.

2-4. Maintenance Assistance and Instruction Team (MAIT). Department of the Army has developed a maintenance and instruction program at the decentralized level. Corps activities may request assistance from the MAIT by contacting the Directorate of Logistics (DOL) of the nearest Army installation and request the support needed (reimbursement may be required). Usually, a MAIT is in place at most Army installations to support the active Army.

2-5. Materiel Maintenance Management Business Process. Appendix C is an outline of the maintenance management business processes required for Corps of Engineers activities, with suggested forms and media, plus related references in parenthesis.

CHAPTER 3
MAINTENANCE OPERATIONS

3-1. General. To ensure the most cost-effective use of maintenance resources, the economic repairability of unserviceable personal property will be determined prior to the initiation of any action to restore the personal property to a serviceable condition.

3-2. Personal Property Evaluations.

a. Unserviceable personal property, or personal property needing expensive repairs will be evaluated using equipment maintenance and serviceability standards. This evaluation may be used to determine if the unserviceable condition is the result of other than fair wear and tear. When the determination is made to repair or replace this item, a DA Form 3953 (Purchase Request and Commitment) will be submitted to include a justification statement supporting the decision.

b. When the evaluation is in conjunction with a Report of Survey and the actual cost cannot be determined, an itemized listing of the Estimated Cost of Damages (ECOD) will be included. Instructions for preparing an ECOD are found in DA PAM 738-750.

c. Equipment evaluations should become part of the history jacket.

3-3. Controlled Exchange. Controlled exchange is authorized only when it meets the criteria below and is approved in writing (including electronic mail or similar means), by the commander or designated representative of the organization performing the controlled exchange action.

a. Required serviceable parts, components and assemblies cannot be obtained through repairable exchange, maintenance (repair and return), or supply channels in time to meet mission requirements. The maintenance officer must ensure that a valid request has been submitted to replace the unserviceable item prior to using controlled exchange procedures.

b. All the unserviceable,repairable materiel involved is owned or under control of the activity performing the controlled exchange action.

c. The maintenance effort required to restore all the unserviceable,repairable personal property to a full mission capable condition is within the capability of the activity performing the controlled exchange.

d. The action will immediately restore the unserviceable, repairable materiel involved to a fully operable condition.

e. Such action will not degrade any of the materiel involved to an uneconomically repairable condition.

f. Actions are immediately taken to prevent further degrading of materiel from weather or other adverse conditions. The activity performing the controlled exchange will take prompt action to restore the unserviceable materiel to a fully capable condition.

g. Approved in writing (including electronic mail or similar means) by the commander or designated representative of the organization performing the controlled exchange action.

h. Controlled exchange is only authorized to be performed by internal maintenance personnel. Materiel from controlled exchange will not be provided when the equipment is at contract maintenance or other outside activities.

3-4. Materiel Records and Reports. Materiel records and reports for maintenance management will be prepared and maintained as prescribed in EP 750- 1-1. These maintenance forms should be phased in over a 6-month period of time beginning on the effective publish date of this regulation. See your activity publications officer for ordering information.

3-5. Contract Maintenance. USACE activities may use competitive private enterprise for maintenance support consistent with effective and efficient accomplishment of USACE programs and missions. Contract maintenance will not be used when:

a. Contract maintenance support will result in higher cost than the support provided by the Army, DOD and other Federal agencies within a reasonable vicinity and time constraints. The commander is responsible for determining the distance ("reasonable vicinity") and time constraints based on mission needs and a location survey of available resources.

b. The use of contract maintenance transfers the management responsibility outside the activity requesting support.

3-6. Interservice and Intraservice Maintenance Support.

a. Interservice and intraservice support agreements will be used to provide maintenance support services when:

(1) This means is the least costly to the government.

(2) Materiel to be supported is common to another service.

(3) The supporting agency or component has the available capability to render timely support.

b. Interservice and intraservice support agreements will not be used to document transfer of responsibility for the maintenance function from one DOD activity to another.

3-7. Materiel Warranty Program. Materiel under warranty will be identified and maintained in accordance with terms of the warranty, and records will be maintained by the maintenance officer or designated representative.

a. As a minimum, maintenance procedures recommended by the equipment manufacturer will be scheduled, and performed throughout the equipment's warranty program.

b. Military standard equipment under warranty will follow the procedures outlined in EP 750-1-1 and DA PAM 738-750.

3-8. Duplicate Facilities. When additional facilities are needed to support maintenance operations, with the exception of personnel, local DOD activities and Federal agency will be surveyed to verify whether they have additional capability prior to referring this issue to HQUSACE (CELD-MS).

3-9. Oil Analysis Program (OAP). The objectives of an OAP are to improve readiness rates, promote safety, detect impending component failure and conserve lubricating and hydraulic fluids by applying on-condition oil changes (OCOC). An OAP that uses OCOC is mandatory for all USACE activities.

a. On-condition oil change. An oil change directed by the Army Oil Analysis Program laboratory as a result of finding relative to the condition of the oil and its lubricating capability.

b. Army Oil Analysis Program (AOAP) Participation. Participation in the AOAP is mandatory for equipment listed in Tables 4-2 thru 4-7 of DA PAM 738-750.

c. Equipment meeting the following criteria must be enrolled in a commercial OAP or the AOAP:

(1) A diesel engine with an oil capacity of five gallons and over.

(2) Automatic transmission/gearbox, meeting criteria in paragraph 3-9a, above.

(3) Hydraulic system over five gallons, excluding brakes, meeting criteria in 3-9a, above.

(4) All watercraft engines, main and auxiliary, meeting criteria in 3-9a, above.

(5) **NOTE:**

(a) Auxiliary engines are those engines on a watercraft which are used for propulsion.

(b) No gasoline engines or manual transmissions may be enrolled.

(c) Automatic transmissions and hydraulics cannot be enrolled in the AOAP unless the equipment engine is enrolled.

d. Real property that meets the criteria of Phase II above, may be enrolled in the OAP.

e. HQUSACE (CELD-MS) will:

(1) Develop policy pertaining to the OAP.

(2) Exercise program management over the OAP.

(3) Ensure the AOAP is coordinated with the U.S. Army Logistics Support Activity.

(4) Established a requirements lost for items to be enrolled in the OAP.

f. MSC commander will:

(1) Recommend items for inclusion in the AOAP.

(2) Provide management guidance, technical supervision and assistance to all activities within their command.

(3) Ensure all activities within their command participate in an OAP.

(4) Have an OAP monitor appointed in writing.

g. The following policies apply to the AOAP:

(1) The AOAP is mandatory at all levels of maintenance operations for specified personal property, including overhaul for quality assurance purposes.

(2) The AOAP will be executed between the laboratory and the user activity.

(3) The lubricating-and hydraulic oils from all components enrolled in the program will be evaluated by the servicing AOAP laboratories. Intervals are specified in DA PAM 738-750, chapter 4, or upon notification by the servicing AOAP laboratory.

(4) Upon receipt of a DA Form 3254-R (Oil Analysis, Recommendation, and Feedback) issued by the AOAP laboratory, the activity commander will place the equipment in a nonmission capable maintenance status until the maintenance action is completed.

(5) All activities and levels of command will have an AOAP monitor who is adequately trained by the supporting lab or installation AOAP monitor.

(6) Each AOAP laboratory will provide oil analysis support per applicable publications and supplemental guidance provided by the program director.

h. Detailed operating procedure for the AOAP are contained in DA PAM 738-750, chapter 4.

3-10. Administrative Storage of Materiel. Administrative storage is the placement of materiel in a limited care and preservation status for short periods of time.

a. Administrative storage will be considered when:

(1) An activity lacks operating funds, people and other resources, or normal usage of its equipment is not adequate to sustain materiel readiness.

(2) Lack of maintenance resources causes an activity to be incapable of performing the required routine maintenance of its personal property.

(3) Equipment that exceeds the activity's capability to operate or maintain but is required to be retained for contingency or other valid reasons as determined by the commander.

(4) Completion of current mission does not require the use of authorized personal property on a routine basis (seasonal).

(5) Before the decision to use administrative storage, the commander will consider all workable options for maintaining personal property readiness.

b. Commanders/directors may authorize the administrative storage of their personal property within guidance furnished by this regulation. To maximum extent practical, administrative storage of personal property will be controlled and supervised at district/laboratory level or above.

c. Commanders/directors will:

(1) Furnish assistance as required in carrying out an administrative storage program.

(2) Monitor the condition of materiel in administrative storage in their commands.

(3) Conduct a command level review of administrative storage at least every 6 months to determine the need and effectiveness of the program.

d. When more than 15 percent of an organization's on-hand equipment must be placed in administrative storage, the commander/director will consider initiating action to reorganize the activity at a level of equipment authorization that can be operated and maintained.

e. Equipment in administrative storage will have all major subsystems exercised as directed by applicable owners' manual. Any faults detected will be corrected. The personal property will then be completely reprocessed if it is to be returned to administrative storage.

f. All regularly scheduled preventive maintenance services are suspended while materiel is in administrative storage. Before personal property is placed in administrative storage, all operator maintenance must be completed.

g. Special scheduled services, inspections, maintenance standards and procedures, or other evaluations prescribed in applicable materiel operators' manuals will be followed. Performance of the services is the responsibility of the activity storing the materiel. Faults noted during these required services, inspections and evaluations are corrected as quickly as practicable.

h. Equipment will be rotated per a rotational plan that will keep it exercised and reduce maintenance effort.

i. Equipment will be stored to provide maximum protection from the elements, to provide access for inspection, maintenance, and exercising, and to provide physical separation from active personal property.

j. The access to materiel in administrative storage will be strictly controlled to prevent cannibalization of pilferage.

3-11. Calibrations Programs. The use and care of test, measurement and diagnostic equipment within USACE is extremely important. Commanders at all levels will ensure a calibrations program is used to the maximum extent possible. AR 750-43 and TB 43-180 outline the policies and procedures to be followed if the Army's program is used. The equipment that is covered by this

program are items used to troubleshoot and repair other items, i.e., multimeters, torque wrenches, gauges, etc. It can be used for, but is not solely intended for, laboratory equipment. The program is item-specific and the use of other calibration sources is allowed for Corps equipment.

3-12. Cannibalization of Materiel.

a. Cannibalization is the authorized removal of components from materiel designated for disposal. Cannibalization supplements supply operations providing assets not immediately available through the supply system. Degradation of resale value should be considered prior to the determination to use cannibalization.

b. Materiel awaiting disposition will not be cannibalized. Parts will only be removed after the end item is accepted into a cannibalization point and with the approval of the accountable officer.

c. Policies and procedures for the establishment and operation of cannibalization points are contained in AR 710-2, DA PAM 710-2-2 and ER 700-1-1.

3- 13. Maintenance of Pneumatic Tires.

a. Public Law 99-272 requires all government agencies to use and procure retread tires to the maximum extent possible. The following paragraphs address the basic policy pertaining to retread tires.

(1) Command emphasis is required at all levels to obtain maximum safety, savings and environmental benefits from the use of retread tires.

(2) Surveillance procedures will be established to ensure that all repairable vehicle and equipment tires are recovered prior to the end of their useful life.

(3) Repairable tires will be retreaded, not discarded or processed through Defense Reutilization and Marketing Office (DRMO), unless classified not repairable/not economically repairable by qualified technical inspectors. Repairable tires will not be given or sold to commercial vendors for disposal.

(4) Except for the restrictions listed below, or as approved by waiver from HQUSACE (CELD-MS), all activities will use retread tires in accordance with Public Law 99-272.

(a) Two-ply tires, without breaker strips or belts will not be retreaded.

(b) All buses and passenger vans with an occupancy capacity of 15 personnel or more will not be operated with retread tires on the steering axles.

(c) M520 truck series and M747 (or equivalent) semitrailers will not be operated with retread tires.

(d) All IO-ton and above, truck tractors will not be operated with retread tires on the steering axles.

(e) All emergency vehicles (i.e., fire trucks, police/ranger vehicle, etc.) will not be operated with retread tires on the steering axles.

(f) All activities will comply with Federal, state or local codes that prohibit the use of retreads.

(5) Regrooving of tires is not permitted because it is not structurally viable or cost-effective.

b. Responsibilities of all commanders/directors are:

(1) Obtain the most cost-efficient use of the retread tire program and maximize safety during pneumatic tire maintenance.

(2) Maximize the use of training courses dealing with pneumatic tires.

(3) Ensure thorough inspections of pneumatic tires mounted on vehicles and equipment during PMCS and their removal when tread depth reaches the dimension for retreading.

(4) Ensure all maintenance personnel are in compliance with TM 9-2610-200-24, TM 9-2610-201-14, and applicable OSHA regulations.

(5) Assuring that qualified personnel are available to inspect and classify tires prior to turn-in for retreading or for disposal and to perform acceptance inspections upon receipt of retread tires.

c. Quality of retread tires. Retreading can be performed several times as long as the casing is removed from the vehicle/equipment before damage occurs. Activities and stock record accounts will ensure retread tires are inspected for quality of workmanship upon receipt. If deficiencies in quality or workmanship are noted, the inspector will initiate a Quality Deficiency Report/ Equipment Improvement Recommendation (QDR/EIR) to the applicable command.

d. Training. All commanders will ensure that training is provided to personnel who service single-piece or multi-piece rims and wheels. Records will be maintained documenting this training.

e. Warranties. Tires repaired or retreaded by General Services Administration contractor or local commercial sources are guaranteed against defects for the tread life of the tire. Defective tires will be returned to the contractor for repair or adjustment. Defective tires rebuilt by government facilities will be retained as exhibits and reported for disposition.

f. Mixing of radial and bias ply tires is not permitted. Mixing of radial and bias ply tires can result in the loss of steering control, inadequate vehicle handling and/or mechanical damage. Radial tires should always be used in sets. The term "sets" means all tires on the vehicle including the spare.

3-14. Maintenance Expenditure Limits (MEL).

a. The MEL is a total allowable one-time cost to restore an end item, major component or repairable component to a fully serviceable condition.

b. MELs will be used to ensure economic and operational effectiveness of USACE maintenance. Required repairs will not be broken into separate job estimates to bypass prescribed MELs.

c. MELs for Revolving Fund and Project Fund owned equipment are contained in ER 1125-2-301. MELs for Administrative Use Vehicles are contained in ER 56-2-l. Department of the Army has published MELs for military standard equipment in the Technical Bulletin (TB) series 43-0002. MELs for office machines, furniture and materiels handling equipment is contained in CFR Title 41. Equipment not covered by any of the above publications will have a MEL assigned locally. This process will take place within 30 days of item being posted to the property book. Life expectancy, depreciation, uniqueness, repair parts and labor costs are some of the items to consider when establishing the MEL. The MEL can be expressed by either a dollar amount or by percentage and will be reviewed and updated annually. Document the MEL in the equipment maintenance records.

d. Request for permission to exceed the MEL cited in publications above should be made to authorities cited in the publication. Permission approvals should be in writing. Permission to exceed locally assigned MEL (only for items not covered in publications) must be in writing and signed by the District Commander or equivalent, for separate operating activities.

CHAPTER 4
COMMODITY - ORIENTED MAINTENANCE POLICIES

4- 1. Maintenance of Watercraft and Amphibians.

a. Purpose. To establish policies which are specific to the maintenance of Corps watercraft.

b. Objective. The objective of watercraft maintenance is to ensure safe, seaworthy, reliable, and fully capable watercraft.

c. Scope. This section applies to all Corps watercraft and amphibians worldwide.

(1) Watercraft and amphibians are defined in EP 750-1-1, para. 7-1a., and DA PAM 738-750.

(2) To accomplish the objectives of watercraft maintenance, tasks are distinctly organized into wholesale and retail maintenance. Each is responsible for the performance and management of its materiel maintenance functions. This responsibility is established in regulatory and maintenance publications.

(3) Wholesale maintenance is that maintenance which is beyond the capability of the operating activity and is commonly referred to as depot level maintenance. Specifically, wholesale maintenance is defined as that level of maintenance requiring the necessary personnel, skills, facilities and equipment to perform industrial type maintenance functions.

(4) Retail maintenance is that maintenance which is within the capability of and is the responsibility of the operating activity. The responsibility to perform retail maintenance operations within a given level is assigned based on mission, degree of complexity, availability of personnel, skills and materiel resources. Actual maintenance tasks to be performed are listed in applicable maintenance manuals.

d. General Maintenance Policies.

(1) Emergency repairs. A thorough marine condition survey/technical inspection will be performed by qualified personnel to ascertain the scope of work necessary to return a watercraft to a serviceable condition. When emergency repairs dictate that a watercraft be dry docked to accomplish the necessary repairs, it will be considered wholesale maintenance. When this condition exists, suitable repairs may be accomplished to correct the emergency. However, personal property so repaired must be removed from operation as soon as possible and properly repaired before being returned to an operational condition.

(2) Watercraft awaiting disposition instructions will be maintained in administrative storage.

(3) When engaged in operations (underway/deployed) and maintenance problems occur where normal corrective action can not be completed, a vessel master is authorized to perform any level of maintenance required to maintain the watercraft in, a seaworthy, safe and operable condition. This decision shall be made while considering the availability of resources, the skill of the crew, and the impact the repairs will or will not have on the basic seaworthiness and operability of the watercraft.

(4) This policy also applies to electronic equipment installed on-board watercraft.

e. On-Condition Cycle Maintenance (OCCM). All watercraft will undergo OCCM in accordance with the intervals established in Table 4-1. The intervals in Table 4-1 are the maximum time intervals. If more than 3 months deviation is anticipated, a request for waiver with justification will be sent to the district commander. OCCM consists of a series of inspections and maintenance actions which are designed to assure that a watercraft's structure (internal and external), piping, main and auxiliary engines, electrical installations, life-saving appliances, fire detecting and extinguishing equipment, pollution prevention equipment, and other equipment/systems are maintained in a suitable, seaworthy and safe condition.

f. Inspections. Marine condition surveys incident to the performance of OCCM will be accomplished in accordance with the following paragraph.

(1) One hundred eighty days prior to the scheduled OCCM, a marine condition survey will be performed. This survey will provide the basis for written specifications by which OCCM will be accomplished. This will be a dock side inspection. When possible, the services of qualified divers will be utilized to ascertain the condition of the watercraft's hull and appendages below the deep load waterline.

(2) At the time of dry-docking, if required, a dry-dock inspection will be performed to identify additional repair/maintenance requirements not observable at the time of the 180-day inspection (dockside).

(3) Periodic surveys required by the United States Coast Guard (USCG) and the American Bureau of Shipping (ABS) for retention of loadline certification will be accomplished in accordance with 46 CFR subchapter E and TB 55-1900-201-45/1. When such inspections are required, the service of ABS will be employed.

(4) In addition to the marine condition survey, an interim survey after 50% of the OCCM/dry-docking time has elapsed will be conducted. Whenever possible, this survey will also include an underwater hull survey as defined by TB 55-1900-201-45/1.

g. Maintenance. The scope of work to be accomplished during OCCM will vary dependent on watercraft conditions, resource limitations, class of vessel and other factors. As a minimum, the following maintenance and repair actions will be accomplished during OCCM if the inspection so indicates:

(1) Bottom cleaning and painting up to the deep load waterline.

(2) All repairs below the deep load waterline as identified during the dry-dock inspection/underwater hull survey.

(3) Overhaul/replacement/renewal of all major components identified for overhaul at the depot level. The requirements will be determined through diagnostic testing, hours of operation, and inspection of internal parts.

(4) All other maintenance and/or repairs identified by the marine/ship surveyor required to effect a permanent change in the watercraft's condition so as to assure the following:

(a) Capability of operating in an unrestricted manner for the purpose intended.

(b) Capability of being maintained and operated in accordance with all applicable regulations, rules, laws, and policies.

(c) The sustainment of the inherent reliability and maintainability designed and manufactured into the equipment between repair cycles (OCCM).

(d) The sustainment of acceptable rates of readiness between OCCM cycles.

(e) Application of all outstanding Modification Work Orders (MWO), minor alterations, modernization and/or special inspections will, to the maximum extent feasible, be accomplished concurrently with OCCM.

h. Marine Condition Surveys. Marine condition surveys are technical inspections and written evaluations performed by qualified marine surveyors in accordance with TB 55-1900-201-45/1 and other applicable publications.

(1) Marine condition surveys on watercraft shall only be performed by experienced and qualified technical experts. This requires the surveyor to be thoroughly familiar and capable of interpreting written standards, Federal laws. rules and regulations affecting watercraft inspections, common watercraft construction, and maintenance and repair procedures. The marine surveyor must

also be capable of preparing written repair specifications and estimating repair costs (man-hour and personal property costs).

(2) When qualified marine surveyors are not available, assistance may be requested through command channels to HQUSACE, ATTN: CECW-OD.

i. Maintenance Reporting. Forms and records on watercraft and amphibians will be completed according to DA PAM 738-750, TB 43-0002-26, TB 55-1900-205-24 and TB 55-1900-201-45/l.

j. On-Condition Cycle Maintenance. Table 4-1 is a list of the proposed Corps dry dock intervals, compared to the required Coast Guard intervals. Based on periodic marine surveys, dry docking intervals may be extended for freshwater vessels, and the extended intervals must be fully documented and justified in accordance with paragraph 7-3c of EP 750-1-1.

k. In some cases, the Corps would be required to dry-dock more often than the proposed intervals if the Coast Guard standards are adapted. However, in other cases, particularly with double hull vessels, the dry-docking intervals can be greatly extended. The Corps has been designing and building newer double hull tank barges, so using the Coast Guard intervals would be an opportunity to take advantage of the increased savings available to these types of vessels. Other advantages for adopting the Coast Guard dry-docking schedules are the general acceptance of the American Bureau of Shipping to the Coast Guard intervals, and the decreased liability of adopting the industry schedule of maintenance in the event of a mishap or oil spill.

4-2. Maintenance of Aircraft and Aviation Electronics AVIONICS). The object of USACE aviation maintenance is to ensure safe and reliable aviation systems. Aviation systems maintenance will be accomplished in accordance with Army regulations and applicable Federal Aviation Administration (FAA) requirements. Contracted maintenance agreements will be reviewed by the aviation manager.

Table 4-1

Dry-docking Intervals (In Months)

Corps Recommendations		Vessel Class	Coast Guard Requirement	
Salt Water	Fresh Water		Salt Water	Fresh Water
36	60	Class A(I)	30	60
36	60	Class B(T)	18 36 (1)	60
36	60	Class Cl(I)	s/h(2) 30 d/h(3) 60	s/h(2) 60 d/h(3) 120
38	60	Class C 1 (H)	30 18(4)	60
48	60	Class C2(I)	s/h(2) 30 d/h(3) 60 udcb(5) 60	s/h(2) 60 d/h(3) 120 udcb(5) 120
36-48	60	Class C3(D)	s/h(2) 30 d/h(3) 60	s/h(2) 20 d/h(3) 120

(1) time interval extended if vessel spends more than 6 months but less than twelve months during the year in fresh water.
(2) s/h = single hull vessel.
(3) d/h = double hull vessel.
(4) time interval is lessened if vessel is greater than 20 years old.
(5) udcb = unmanned deck cargo barge.

Note: The letter in parenthesis next to the vessel classification is the letter of the subchapter in 46 CFR for that particular vessel.

4-3. Maintenance of Communication Systems. The maintenance of fixed and other communication systems is covered in AR 25- 1, AR 25- 11, and DA PAM 25- 1-1. Assistance with maintenance policies and procedures can be obtained by contacting HQUSACE (CEIM-P).

4-4. Maintenance of Communication Security (COMSEC) Materiel and Controlled Cryptographic Items (CCI). The maintenance of COMSEC and CC1 materiel is covered in AR 25-12, DA PAM 25- 16, and TM 11- 5810-310-23&P. Assistance with policies and procedures can be obtained by contacting HQUSACE (CEIM-P).

4-5. Maintenance of Federal Information Processing (FIP) Equipment. The maintenance of FIP equipment (formally ADPE) is covered by the Federal Acquisition Regulations (FAR), Federal Information Resources Management Regulations (FIRMR), AR 25-1, AR 25-3, DA PAM 25-4, DA PAM 25-6, and DA PAM 25-6-l. Assistance with policies and procedures can be obtained by contacting HQUSACE (CEIM-L).

4-6. Maintenance of Commercial Design Vehicles. The maintenance policies in DOD 4500.36R, ER 56-2-1and the maintenance procedures in TM 38-600 apply to commercial design nontactical vehicles. In general, these policies limit maintenance operations performed on these type vehicles to inspections, services, and replacement of minor components and assemblies. Rebuild maintenance of end items or major components is not authorized.

4-7. Maintenance of Engineer, Special Purpose (SP) Materiel Handling Equipment (MHE). Maintenance will be accomplished on Engineer, SP and MHE as prescribed in this regulation, DA PAM 738-750, applicable TMs and equipment manuals. As much maintenance as possible will be conducted during the service interval. Standard maintenance management policies set forth in the above cited regulations will be followed at all times. Waivers to any part of the regulations must be approved in writing by the division commander prior to implementation. Examples of each type are provided below:

a. Engineer Equipment

(1) Cranes

(2) Rollers/Compactors

(3) Loaders

(4) Scrapers

(5) Graders

(6) Bulldozers

b. Special Purpose Equipment (SPE)

(1) Generators

(2) Pumps

(3) Low Bed Trailers

(4) Refuse Trucks

(5) Drill Rigs

(6) Dump Trucks

c. Materiel Handling Equipment (MHE)

(1) Forklifts

(2) Warehouse Tractors

Paragraph 5-2 was superseded by ER 700-1-1, 2 October, 2000.
The balance of the document remains current.

CHAPTER 5
EQUIPMENT MANAGEMENT

5-1. Maintenance Management Indicators. To effectively measure the performance of maintenance management, each USACE activity will use maintenance indicators. Three of the most common and effective indicators are the tracking of equipment usage, equipment maintenance costs, and equipment operational rates. The importance of accurate data documentation cannot be over stressed. Commanders and managers rely on this type data to measure and improve the effectiveness of the materiel maintenance program in the Corps. Taken collectively, these indicators provide materiel maintenance managers the required tools to perform effective, efficient, and comprehensive life cycle materiel maintenance management activities. The goal of our efforts is to field, operate, maintain, and sustain the range and depth of equipment adequate to perform our missions at the lowest life cycle cost of ownership.

5-2. Equipment Usage Standards. This section explains how personal property usage standards can be used as part of an overall personal property management program. Appendix B, Table B-2, in EP 750-1-1, is the list that shows personal property requiring usage reporting in USACE and Table B-3 contains usage standards for selected categories of equipment. Equipment categories that are exempt from usage reporting in USACE, are shown in Table B-4 of the cited EP.

a. General. Please note that objective and minimum usage standards are listed in the EP. Minimum standards were established as ones that should be attainable for general purpose assignment and normal use of equipment. When individual equipment items within a category are not attaining the minimum usage, the whole category should be reviewed by the using activity, with a view toward equalizing use through rotation, asset pooling, or other management actions. Assets and/or authorizations should be reduced when indicated by the review.

b. Basis for Computation. Army usage standards are generally expressed in terms of hours, days, or times used. Chapter 9 of EP 750-1-1, shows how usage standards are computed.

c. General Use Equipment. ER 700-1-1, Chapter 3, Section IV, Equipment Usage Management, provides general USACE policy that governs personal property usage management and explains why documenting historical usage data is important. EP 750-1-1, also gives details on how this data should be collected and reported.

5-3. Maintenance Costs (Parts & Labor)

a. This section explains how life cycle costing techniques can serve to indicate how effective an equipment management program is. A goal of a good program would be to provide historical

records of maintenance costs, parts and labor, associated with personal property usage. Access to this information can help us improve future equipment acquisitions and management decisions.

b. Life cycle costing attempts to identify projected personal property related expenditures, using the acquisition to retirement approach. Its focus considers maintenance costs from the time of initial equipment acquisition, until equipment is retired and disposed of. Command emphasis on the importance of keeping accurate cost documentation is necessary for success in using life cycle cost projections and historical cost data to efficiently manage our materiel maintenance program.

c. All personal property reaches a time in its service life when it becomes more of a liability than an asset. When the cost to maintain personal property reaches a pre-established level or when the property has mission crippling inoperative patterns, it is probably time to replace it.

d. USACE activities should document maintenance costs using the methods described in EP 750-1-1 for scheduled and corrective maintenance. In each case the costs for labor, parts, and those associated with maintenance contracts will be recorded.

5-4. Equipment Operational Rates. Operational rates can be a helpful indicator for maintenance management. The rates are mathematical expressions of equipment up time versus down time. Chapter 9, EP 750-1-1, lists equipment categories suggested for operational rates tracking and gives the formula for computing rates.

TABLE 5-1

EQUIPMENT REQUIRING UTILIZATION REPORTING

	Equipment Category Code	Nomenclature	Federal Supply Class
1	LE	Boat, Tow	1925
2	LE	Boat, Tug	1925
3	LG	Propelling Unit, (Outboard), 100 HP and Larger	2010
4	LH	Crane, Barge Mounted	3950
5	LH	Derrick, Crane Barge	3950
6	NB	Distributor, Water, 1000 Gal and Above, Trk Mtd, Engine Driven	3825
7	NB	Mixer, Concrete, Trailer Mounted	3895
8	NB	Mixer, Concrete, Truck Mounted	3895
9	NC	Scraper, Earthmoving, Self Propelled	3805
10	NC	Scraper, Earthmoving, self Propelled	3805
11	ND	Tractor, Full Tracked, with Backhoe/Loader	2430

12	ND	Tractor, Full Tracked, with Bulldozer, (High Speed)	2430
13	ND	Tractor, Full Tracked, with Bulldozer, (Low Seed)	2410
14	ND	Tractor, Wheeled, Industrial, with Bulldozer	2420
15	ND	Tractor, Wheeled, Industrial, with Backhoe/Loader	2420
16	ND	Tractor, Wheeled, Industrial, with Bulldozer	2420
17	NE	Grader, Road Motorized (All)	3805
18	NF	Crane, Crawler Mtd	3810
19	NF	Crane, Truck Mtd	3810
20	NF	Crane, Wheel Mtd	3810
21	NF	Crane Shovel, Crawler Mounted	3810
22	NF	Crane Shovel, Truck Mounted	3810
23	NF	Excavator, Multi-Purpose, Crawler Mounted	3805
24	NF	Excavator, Multi-Purpose, Truck Mounted	3805

25	NG	Loader, Scoop, Engine Driven, Full Tracked	3805
26	NG	Loader, Scoop, Engine Driven, Wheel Mounted	3805
27	NH	Roller, Motorized, Engine Driven	3895
28	NH	Roller, Vibratory, Self Propelled	3895
29	NJ	Drill, Machine, Truck Mounted	3820
30	NJ	Drill, Machine Truck Mounted	3820
31	NJ	Truck, Well Drill support	3820
32	NN	Truck, Concrete Mixer, CCE	3895
33	NN	Truck, Dump, CCE, 20T	3805
34	NV	Auger, Earth, Skid Mounted, Engine Driven	3820
35	NV	Auger, Earth, Truck Mounted, Engine Driven	3820
36	NV	Compactor, Motorized (HS)	3805
37	NV	Ditching Machine, Engine Driven	3805

38	NV	Hammer, Pile Driven Self Powered, (All)	3895
39	NV	Sweeper, Rotary, Self Propelled	3825
40	PA	Crane Truck, Warehouse, Electric	3810
41	PA	Crane Truck, Warehouse, Engine Driven	3950
42	PB	Truck, Forklift, Electric, Lbs., and Above	3930
43	PC	Truck, Forklift, Gasoline Engine Driven, 4000 Lbs., and Above	3930
44	PE	Tractor, Wheeled, Warehouse, Electric	3930
45	PE	Tractor, Wheeled, Warehouse, Engine Driven	3930
46	PG	Truck, Forklift-Rough Terrain	3930
47	PI	Truck, Forklift, Diesel Engine Driven	3930
48	QB	Generator Set, Skid Mounted, 15 kw and Above	6115
49	QB	Generator Set, Trailer Mounted, 15 kw and Above	6 115

50	QB	Generator Set, Truck Mounted, 15 kw and Above	6 115
51	QB	Generator Set, Wheel Mounted, 15 kw and Above	6115
52	QC	Compressor, Skid Mounted, 125 CFM, 100 psi and Above	4310
53	QC	Compressor, Trailer Mounted, 125 CFM, 100 psi and Above	4310
54	QC	Compressor, Truck Mounted, 125 CFM, 100 psi and Above	4310
55	QC	Compressor, Wheel Mounted, 125 CFM, 100 psi and Above	4310
56	QD	Pump, Centrifugal, Water, Engine Driven, Skid Mounted	4320
57	QD	Pump, Reciprocating, Water, Engine Driven, Skid Mounted	4320
58	QG	Welding Machine, Skid Mounted	3431
59	QG	Welding Machine, Trailer Mounted	3431

60	QU	Truck, Fire Fighting Equipment Engine Driven (All)	4210
61	QU	Pump, Fire Fighting Equipment Trailer Mounted	4210
62	SY	Snowblower, Self Propelled	3825
63	SY	Snowblower, Truck Mounted	3825

Table 5-2
USACE Equipment Exempt From Usage Reporting

The following equipment categories are usually exempt from meeting usage tracking standards:

a. Information Management Area Equipment. This is covered by the AR 25-series.

b. Government furnished equipment (GFE). Contracts will include the requirement for the collection and recording of utilitization data.

c. Defense Industrial Plant Equipment Center (DIPEC) controlled equipment. Although DIPEC controlled, equipment is exempt from usage collection and reporting, walk-through procedures will be used to evaluate the need for it.

d. Equipment used in direct support of a research, development, test, and evaluation mission (RDTE). This equipment is exempt from usage collection and reporting. Walk-through Procedures will be used to evaluate the need for it.

e. One of a kind equipment. The requirement for utilization data collection for one of a kind equipment is not required. “One of a kind,” is defined as that “one and only specific type of equipment located at a project site. This does mean equipment that is a site specific.

f. Common Tables of Allowance (CTA) equipment. Equipment authorized by CTA does not require collecting of utilization data. This means that low dollar valued items (e.g., typewriters, calculators, desks, fans, etc.) are exempt from collection of utilization data

g. Installed equipment (see glossary). Usage data collection for installed equipment such as generators, and compressors, which are part of a real property facility, is not required.

h. Emergency equipment. Equipment required to be on hand for emergencies, such as generators, compressors, wreckers, ambulances, fire trucks, etc., does not require utilization data collection. Retention for such equipment will be based on documented justification.

NOTE: ACTIVITIES ARE RESPONSIBLE FOR DOCUMENTING EQUIPMENT WHICH IS EXEMPTED FROM USAGE REPORTING. A MEMORANDUM FOR RECORD WILL BE KEPT ON FILE FOR THIS PURPOSE.

CHAPTER 6
MAINTENANCE PROGRAM

6- 1. Maintenance Operations. Maintenance operations are those actions that ensure personal property is inspected regularly, dispatched properly, operated correctly, serviced as required, and ensures that faults are diagnosed and repaired as required.

6-2. Maintenance Plan. A maintenance plan will be developed by all divisions, districts, laboratories and field operating activities. This plan will enable commanders to achieve maximum efficiency through maintenance training and maintenance operations. In developing the maintenance plan, factors for considerations are listed in EP 750-1-1, chapter 2.

6-3. Scheduled Maintenance Services. Scheduled maintenance services are the cornerstones of the preventive maintenance (PM) program. They must be scheduled and performed within the allowed time frame. These services permit the maintenance supervisors to assure the correct accomplishment of all required maintenance. Therefore, all supervisors must place emphasis on the planning and executing of scheduled services. (The single most important factor for success of the maintenance program is the active participation of the functional area supervisor.) Other factors to consider while planning maintenance services are:

a. Commanders, chiefs of logistics, maintenance officers and all supervisors are responsible for the effectiveness of the maintenance program.

b. Tool sets, special tools and test equipment must be on hand, cared for, controlled, accounted for and used properly.

c. Publications are vital for the execution of the maintenance program. They must be accessible to all personnel who perform supervise maintenance actions.

d. Time management is essential to a good maintenance program. Supervisors must ensure that maintenance time is scheduled for all required maintenance actions.

6-4. Evaluations. Evaluations of the overall maintenance program are vital to the success of the maintenance mission and will be accomplished at each activity. Only detailed evaluations can identify the changes needed to maximize maintenance efficiency. As a minimum, written annual evaluations will be conducted and maintained by the logistics office.

6-5. Reviews. Maintenance management reviews should be established by division/district logistics chiefs to evaluate, assist, and correct the maintenance programs within their activity. Such reviews identify both good and bad maintenance practices.

6-6. Inspections. Maintenance inspections provide. essential information to supervisors on their maintenance program. Inspections provide immediate feedback to supervisors at every level, and identify action at the lowest possible level. Inspections can range from informal spot-checks by the first line supervisor to formal inspections conducted by maintenance inspection teams. No matter what type of inspection is conducted, supervisors must monitor the results and take corrective action as necessary.

6-7. Repair Parts Management. Repair parts are essential to the success of any maintenance operation. Commanders will establish accurate accountability for all parts and show an audit trail from the time of requisition until they are used. Excess parts will be identified and turned in as soon as possible. GSA, DOD and other Federal agencies will be utilized to the maximum extent possible in the acquisition of parts and supplies. Only after these sources have been exhausted/determined unfeasible will local procurement be used. Requesting, receiving, stocking, issuing and the security of repair parts will be accomplished in accordance with AR 710- 2, DA PAM 710-2-1, and ER 700-1-1.

6-8. Safety. All personnel are responsible for safe operations. Anyone seeing an unsafe act will take the required actions to stop it. All work will be performed in accordance with the USACE Safety and Health Requirements Manual, EM 385-1-1.

6-9. Environmental Compliance. Public law 94-580 (Solid Waste Disposal Act), as amended, mandates compliance with environmental procedures and explains why they are essential. Every effort will be made to maximize compliance in USACE.

6-10. Security. Tools, repair parts, lubricants and maintenance facilities will be secured appropriately. Supervisors will ensure strict security procedures are followed in accordance with the AR 190 series publications.

FOR THE COMMANDER

4 Appendices
(See Table of Contents)

OTIS WILLIAMS
Colonel, Corps of Engineers
Chief of Staff

APPENDIX A

REFERENCES
(required)

	The Army Master Data File (AMDF)
	The Master Cross Reference List (MCRL)
AR 25-1	The Army Information Resources Management Program
AR 25-3	Life Cycle Management of Information Systems
AR 25-11	Record Communications and Privacy Communications Systems
AR 25-12	Communications Security Equipment
AR 25-13	The Department of the Army Equipment Authorization and Usage Program
AR 25-400-2	The Modem Army Record Keeping System
AR 58-1	Management, Acquisition and Use of Administrative Use Motor Vehicles
AR 190-13	The Army Physical Security Program
AR 380-5	Department of the Army Information Security Program
AR 385-10	Army Safety Program
AR 385-40	Accident Reporting and Records
AR 385-55	Prevention of Motor Vehicle Accidents
AR 420-83	Maintenance and Services (M&S), Equipment and Facilities Engineering Shops
AR 600-55	Motor Vehicle Driver and Equipment Operator Selection, Training, Testing and Licensing
AR 700-68	Storage and Handling of Compressed Gases and Gas Cylinders
AR 700-138	Army Logistics Readiness and Sustainability
AR 710-2	Supply Policy Below the Wholesale Level
AR 735-5	Policies and Procedures for Property Accountability
AR 750-43	Army Test, Measurement and Diagnostic Equipment Program
AR 570-7	Equipment Management: Equipment Survey Program
AR 700-9	Policies of the Army Logistics System
AR 700-131	Loan of Army Materiel
AR 740-3	Care of Supplies in Storage
AR 750-2	Army Materiel Maintenance, Wholesale Operations
AR 750-10	Modification of Materiel and Issuing Safety-of-Use Messages and Commercial Vehicle Safety
ER 25-1-2	Life Cycle Management of Automated Information System (AIS)

REFERENCES
(related)

Public Law 99-272	
CFR Title 41	Code of Federal Regulations
CFR Title 44	Code of Federal Regulations
CFR Title 46	Code of Federal Regulations
CTA 50-900	Clothing and Individual Equipment
CTA 50-909	Field and Garrison Furnishings and Equipment
CTA 50-970	Expendables/Durable Items (Except: Medical, Class V, Repair Parts and Heraldic Items)
DOD 4500.36	Management, Acquisition and Use of Motor Vehicles
DA PAM 25-1-1	Installation Information Services
DA PAM 25-4	Information Systems Technical Documentation
DA PAM 25-6	Configuration Management for Automated Information Systems
DA PAM 25-6-1	Army Acquisition Planning for Information Systems
DA PAM 25-16	Security Procedures for Secure Telephone Unit, Third Generation
DA PAM 710-2-1	Using Unit Supply System
DA PAM 710-2-2	Supply Support Activity System Manual System
DA PAM 738-750	Functional Users Manual for the Army Maintenance Management System
DA PAM 750-l	Leader's Unit Level Maintenance Handbook
EM 385-1-1	Safety and Health Requirements Manual
EP 750-1-1	Procedural Pamphlet for Materiel Maintenance Policies
ER 56-2-l	Administrative Vehicle Management
ER 700-1-1	USACE Supply Policies and procedures
ER 1125-2-301	Plant Replacement and Improvement Program
ER 1130-2-500	Partners and Support (Work Management Policies)
TB 43-0002(series)	Maintenance Expenditure Limits
TB 43-0142	Safety Inspection and Testing of Lifting Devices
TB 43-0144	Painting of Watercraft
TB 43-0151	Inspection and Test of Air and Other Gas Compressors
TB 43-180	Calibrations and Repair Requirements for the Maintenance of Army Materiel
TB 55-1900-201-45/l	Guide to Army Watercraft Survey Inspections, Repair Procedures and Repair Specifications
TB 55-1900-205-24	Watercraft Information and Reporting System (WIRS), Data Collection for Configuration Control
TM 38-600	Administrative Use Vehicle Management

TM 11-5810-310-23&P	Unit and Direct Support Maintenance Manual (including repair parts and special tools) for STU 3/LCT
TM 9-243	Use and Care of Hand Tools
TM 9-2610-200-24	Repair of Pneumatic Tires and Inner Tubes
TM 9-2610-201-14	Standards, Inspection and Classification of Tires

APPENDIX B
GLOSSARY

Section 1: Abbreviations

ABS	American Bureau of Shipping
AFAR	Army Federal Acquisition Regulation
AOAP	Army Oil Analysis Program
BITE	Built-In Test Equipment
CC1	Controlled Cryptographic Items
CFR	Codes of Federal Regulations
COMSEC	Communication Security
DA PAM	Department of the Army Pamphlet
DFAR	Defense Federal Acquisition Regulation
DOL	Directorate Of Logistics
ECOD	Estimated Cost Of Damages
EIR	Equipment Improvement Recommendation
FAR	Federal Acquisition Regulation
FIRMR	Federal Information Resources Management Regulation
FIPR	Federal Information Processing Resources
FWT	Fair Wear and Tear
GSA	General Services Administration
GOCO	Government Owned-Contractor Operated
IAW	In Accordance With
MEL	Maintenance Expenditure Limit
MHE	Materiel Handling Equipment
MSC	Major Subordinate Command
MWO	Modification Work Order
OAP	Oil Analysis Program
OCCM	On-Condition Cyclic Maintenance
OCOC	On-Condition Oil Change
OSHA	Occupational Safety and Health Administration
PM	Preventive Maintenance
QDR	Quality Deficiency Report
PMCS	Preventive Maintenance Checks and Services
SP	Special Purpose
TAMMS	The Army Maintenance Management System
TB	Technical Bulletin
TI	Technical Inspection

CONSOLIDATED GLOSSARY

Section 2: Terms

Assembly. A combination of components/modules and parts used as a portion of, and intended for, further installation in an equipment end item (for example, engine, transmission, electronic component).

Available Days. The days equipment is on hand in an organization and fully able to do its assigned mission.

Built in Test Equipment. Any identifiable, removable device which is part of equipment or components under test that is used for the express purpose of testing.

Calibration. Comparison of an instrument (measurement standard or item of test, measurement, and diagnostic equipment) of unverified accuracy with an instrument of known or greater accuracy to detect and correct any discrepancy in the accuracy of the unverified instrument.

Component/Module. A combination of parts mounted together in manufacture, which may be tested, replaced as a unit, or repaired (for example, starter, generator, fuel pump, and printed circuit boards). The term module is normally associated with equipment.

Contract Maintenance. Any material maintenance operation performed under contract by commercial organizations (including the original manufacture of material).

Controlled Exchange. Removal of serviceable parts, components and assemblies from unserviceable, but economically repairable equipment and their immediate reuse in restoring a like item of equipment to a mission capable condition.

Deferred Maintenance. Authorized delay of maintenance/repair of uncorrected faults.

Deficiency. A fault/shorting or problem that causes equipment to malfunction. A defect is a deficiency when it:

a. Makes an item inoperable.

b. Makes the equipment unsafe or endangers the operator or crew.

c. Will damage the equipment if operation is continued.
d. Makes equipment so inaccurate, it cannot do its mission.

Fully Mission Capable. Systems and equipment that are safe and have all mission-essential subsystems installed and operating as designed by applicable regulations. The terms ready/available and full mission capable refer to the same status: equipment is on hand and able to perform its missions.

Interservice Maintenance Support. Maintenance operations performed on a recurring or nonrecurring basis by the organic maintenance capability of one military service or element thereof in support of another military service or element thereof.

Maintainability. A characteristic of design and installation which inherently provides for the time to be retained in or restored to a specified condition within a given period of time, when maintenance is performed by prescribed procedures and resources.

Maintenance Canability. Availability of those resources, facilities, tools, TMDE, drawings, technical publications, trained maintenance personnel, engineering and management support, and repair parts required to perform maintenance operations.

Maintenance Coordinator. An individual responsible for the maintenance of specific items of equipment, and also may be responsible for issuing equipment for utilization purposes.

Maintenance Manager. An individual responsible for the conduct of maintenance at a particular location. Responsible for scheduled and unscheduled maintenance actions. Supervises maintenance coordinators in the execution of their duties.

Maintenance Officer. An individual responsible for the maintenance management program within a specified activity (i.e., division, district, laboratory, etc.).

Maintenance Operations. That function of material maintenance which encompasses the management and physical performance of those actions and tasks involved in servicing, repairing, inspecting, testing, overhauling, modifying, calibrating, etc., and the provision of technical assistance to equipment users.

Material Maintenance. The function of sustaining material in an operational status, restoring it to a serviceable condition, or updating and upgrading its functional usefulness through modification or other modification.

Non-Operational. An item of equipment having faults that affect operation or may cause further damage to the equipment or endanger the safety of the operator or passengers.

Oil Analysis. A test or series of tests that provide an indication of equipment component and oil condition by applying methods of quantitative measurement of wear metals and detection of contaminants in an oil sample.

On-Condition Oil Change. An oil change directed by an oil analysis laboratory as a result of findings relative to the condition of the oil and its lubricating capability.

Part. An item which can not normally be disassembled or repaired or is of such design that disassembly is impractical.

Personal Property. Property of any kind except real property and records of the Federal Government.

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.

Preventive Maintenance Checks and Services. The care, servicing, inspection, detection, and correction of minor faults before these faults cause serious damage, failure or injury.

Rebuild. To restore an item to a standard as nearly as possible to original or new condition in appearance, performance, and life expectancy.

Repair. The restoration or replacement of parts and/or units to maintain efficient operating conditions.

Scheduled Maintenance. Any type of maintenance that is performed as the result of a planning action.

Shortcoming A fault that requires maintenance or supply action on a piece of equipment but does not render it not mission capable.

System. A combination of equipment end items, assemblies, major components, components, and parts assembled as a single functional unit to perform a task or mission.

Test, Measurement, and Diagnostic Equipment. Any system or device capable of being used to evaluate the operational condition of a system or equipment to identify and/or isolate any actual or potential malfunction.

Unscheduled Maintenance. Unexpected maintenance which is required because of either equipment or component failure.

Watercraft. Coastal, harbor, and inland waterway craft; landing craft; amphibians; lighters; barges; ocean going vessels (self- propelled or towed, tugged, or pushed).

Work Day. Normal duty shift as defined by local commander.

APPENDIX C

MATERIEL MAINTENANCE MANAGEMENT BUSINESS PROCESS

1. Determine Equipment Requirement.

a. New
(1) Require justification
(2) Obtain authorization
(3) Obtain funding

b. Replacement
(1) Verify replacement criteria
(2) Obtain funding

2. Determine Acquisition Alternatives

a. Defense Reutilization and Marketing Offices (DRMO)
b. Borrow
c. Rent
d. Lease
e. Purchase

3. Acquisition of Equipment

a. Lateral transfer from another USACE activity
b. Government first source of supply (utilize Defense Supply Center Columbus as a prime source of construction, material handling equipment and repair parts support when it is advantageous)
c. Commercial vendor
d. Prepare requisition document

4. Maintenance Management Program in Place

a. Maintenance Officer appointed to lead maintenance effort giving focus and direction to the Materiel Maintenance program.
b. Policy and procedures in place
c. Appoint maintenance managers
d. Appoint maintenance coordinators

e. Develop comprehensive maintenance plan
f. Equipment management procedures in place
(1) Maintain equipment utilization data
(2) Document maintenance cost (parts & labor)
(3) Maintain equipment availability data (operational rates)
g. Safe use of cranes, crane shovels, draglines and similar equipment near electric power lines.
h. Safety inspection and testing of lifting devices, (TB 43-0142)
i. Inspection and test of air and other gas compressors (TB 43-0 151)
j. Equipment enrolled in Army Test Measurement and Diagnostic Equipment (TMDE) (AR 750-43, TB 750-25, TB 43-180) (FREE)
k. Equipment components enrolled in Army Oil Analysis Program (AOAP), DA PAM 738-750, ER 750-1-1, EP 750-1-1) (FREE)
l. Government Owned Contractor Operated (GOCO) equipment requiring maintenance actions will be maintained in accordance with ER 750-1-1 & EP 750-1-1.

5. Receive Equipment

a. In process equipment (service)
b. Assign equipment to maintenance coordinator
c. Add publications to library

6. Determine Maintenance Requirements

a. Preventive Maintenance Checks and Services (PMCS) Daily
b. Preventive Maintenance (PM) schedule services
c. Predictive maintenance schedule service
d. Test required

7. Schedule Preventive Maintenance Services

a. Schedule services on DD Form 314
b. Army Oil Analysis Program DD Form 314
c. Schedule other test as required on DD Form 314

8. Place Equipment in Service

a. Prepare equipment record folder
b. Prepare operational records
c. Prepare maintenance records

d. Prepare equipment record jacket, for historical records

9. Dispatch and Record Equipment Utilization

a. Maintain organizational control record for equipment (DA Form 2401)
b. Monthly submission of ENG Form 3662 to record utilization
c. Document fuel and oil consumption
d. Provide equipment utilization report (for management use)

10. Perform Schedule Maintenance Services

a. Document scheduled maintenance service (PM) on DD Form 314
b. Schedule next service on DD Form 314
c. Document test results on DD Form 314
d. Schedule next test

11. Repair Management

a. Determine from previous utilization if repair, overhaul, or replacement is justified
b. One time repair in excess of 30% of acquisition cost requires approval from the chief of logistics
c. Consider overhaul or rebuild if in the best interest of USACE
d. Document equipment repair cost, parts and labor (ENG Form 2409)
e. Document equipment non-operational days on DD Form 314
f. Place all historical records in record jacket

12. Disposal

a. Identify equipment eligible for disposal
b. Determine if equipment is to be replaced or is excess to district needs
c. Circulate serviceable equipment excess to district needs
d. Prepare documentation for disposal
e. Remove equipment from property book

APPENDIX D

OIL ANALYSIS REQUIREMENTS LIST

1. All items listed in DA PAM 738-750/EP 750-1-1 for the Army Oil Analysis Program (AOAP).

2. Wheeled Vehicles, All wheeled vehicles powered by a diesel engine having an engine oil capacity of five gallons or greater. All automatic transmission of that vehicle. Hydraulic systems of the vehicle with a capacity of five gallons or greater, excluding brakes (i.e., dump truck hydraulics, lift ramps, etc.).

3. Watercraft All watercraft that the main engine(s) is diesel and has an engine oil capacity of five gallons or greater. All additional diesel engines with oil capacities of five gallons or greater (i.e., cranes, winches, generators, etc.). All hydraulic systems with a capacity of five gallons or greater. Other items determined necessary by local policy.

4. Construction All equipment with diesel engines having an engine oil capacity of five gallons or greater. All automatic transmissions of the end item. All additional engines with engine oil capacities of five gallons or greater. All hydraulic systems with a capacity of five gallons or greater, excluding brakes.

5. Special Purpose Equipment. All items with diesel engines having an engine oil capacity of five gallons or greater. All automatic transmissions. All hydraulic systems with a capacity of five gallons or greater, excluding brakes.

6. Materiel Handling Equipment. All equipment with diesel engines having an engine oil capacity of five gallons or greater. All automatic transmissions. All hydraulic systems with a capacity of five gallons or greater, excluding brakes.

Appendix E

Management Control Evaluation Checklist for the Materiel Maintenance Program

E-1. Function. The function of this checklist is to provide guidelines for assessing key management controls of personal property maintenance activities within the USACE.

E-2. Purpose. The purpose of this checklist is to assist USACE management with evaluating and helping their Districts/ Activities/ Projects to comply with and adhere to the key management controls listed below. The checklist is not intended to cover all controls, but merely serve as a guide that points toward proper equipment maintenance and management procedures.

E-3. Instructions. Answers must be based on the actual testing of key management controls (i.e., document analysis, direct observation, sampling, simulation, and [or] others). Answers that indicate deficiencies must be explained and the corrective action indicated in the supporting documentation. These management controls must be evaluated at least once every five years and then certified on DA Form 11-2-R (Management Control Evaluation Certification Statement [see AR 11-2]). Note: All negative answers to test questions indicate a weakness

Assessable Division/District/Activity/Laboratory: The Chief of the Logistics Office that provides support to the USACE Districts/Projects will designate the specific manager responsible for using this checklist. The responsible principal and mandatory schedule for using this checklist will be reviewed and approved by the Division/Activity/Laboratory/District Commander.

E-4. Management Control Evaluation Questions.

E-4-A. Maintenance Plan

EVENT CYCLE 1: Determine if all applicable Maintenance plans are on hand and current.

Risk: Consistency in accomplishment of assigned missions will be in jeopardy if a comprehensive maintenance plan is not developed and followed.

Control Objective: To ensure that an effective maintenance plan is written, kept current, and is always on hand and followed.

Control technique: Review and analyze maintenance plans for adequacy.

TEST QUESTION:

1. Does the activity have a maintenance plan on hand?

Response: YES_ NO _ N/A
Remarks:

2. Is the maintenance plan current?

Response: YES_ NO_ N/A
Remarks:

3. Are all personnel familiar with the contents of the maintenance plan?

Response: YES_ NO_ N/A Remarks:

4. Are there established procedures for reviewing and updating the maintenance plan?

Response: YES_ NO_ N/A
Remarks:

EVENT CYCLE 2: Determine if all applicable maintenance polices and procedures are in place for efficiency and proper use of resources.

RISK: Consistency in accomplishment of mission will be degraded if questionable activity policies and procedures are not develop and practiced.

CONTROL OBJECTIVE: To ensure that office and activity standing operating procedures are effective.

CONTROL TECHNIQUE: Review and analyze office and activity maintenance policy and Procedures for adequacy and provide

periodic inspections for the review of records by supervisory personnel.

TEST QUESTION:

1. Has the appropriate Division Chief appointed Maintenance Managers and Coordinators?

Response: YES _ NO _ NA
Remarks:

2. Is an appointed and qualified Maintenance Officer performing the equipment maintenance management

Response: YES_ NO_ NA
Remarks:

3. Does the Maintenance Officer report directly to the Chief of Logistics?

Response: YES _ NO _ NA
Remarks:

4. Are the Maintenance Officer's functions clearly stated in the local mission statement?

Response: YES _ NO _ NA
Remarks:

5. Does the Maintenance Manager maintain a consolidated list of equipment he/she is responsible

Response: YES_ NO_ _NA
Remarks:

6. Is the equipment listed accounted for on the current Property Book?

Response: YES _ NO _ NA
Remarks:

7. Has comprehensive equipment training and a licensing program been established, maintained and executed in accordance with AR 600-55 and EM 385-1-1?

Response: YES_ NO_ NA
Remarks:

EVENT CYCLE 3: Determine if the maintenance management Business Process guidelines are being followed IAW ER 750-1-1.

RISK: Scheduled maintenance and services may not be performed or documented properly.

CONTROL OBJECTIVE: To ensure all maintenance for personal property is scheduled (manual or automated) and performed to prevent degradation of equipment and mission accomplishment.

CONTROL TECHNIQUE: Review and analyze the maintenance operation business process to find out if equipment maintenance and services are

TEST QUESTION:

1. Are maintenance services scheduled in accordance with the manufacture recommendations?

Response: YES _ NO _ NA
Remarks:

2. Are services annotated and scheduled at least one month or one service in advance?

3. Are scheduled services preformed on time or within the prescribed variance?

Response: YES _ NO _ NA
Remarks:

4. Is there a scheduled Maintenance Form (manual or automated) kept on all applicable equipment?

Response: YES _ NO_ NA
Remarks:

5. Are deferred maintenance actions corrected during scheduled services?

Response: YES _ NO _ NA
Remarks:

6. Are Inter-service support agreements current and on hand for required activities?

Response: YES _ NO _ NA
Remarks:

7. Has equipment under warranty been identified and maintained in accordance with the warranty

Response: YES_ NO _ NA
Remarks:

8. Does the activity participate in the oil analysis program for selected equipment and equipment listed in Table 4-2 thur 4-7 of DA PAM 738-750 and EP

Response: YES_ NO _ NA
Remarks:

9. Does the activity participate in the Test Measurement and Diagnostic Program (TMDE) for special tools and test equipment?

Response: YES _ NO _ NA
Remarks:

10. Is re-refined oil being used in accordance with Executive Order 12873 dated 20 Oct 93 and the Resource Conservation and Recovery Act?

Response: YES _ NO _ NA
Remarks:

11. Are retread tires used to the maximum extent possible as required by Public Law 99-272 and applicable OSHA regulations?

Response: YES _ NO_ NA
Remarks:

12. Is the economic reparability of unserviceable personal property determined before actions are taken to restore the property to a serviceable condition?

Response: YES _ NO _ NA
Remarks:

13. Are "History Jackets" files maintained for equipment on-hand, assigned or attached?

Response: YES _ NO _ NA
Remarks:

14. Has Controlled Exchange Authority been approved in writing when criteria in ER 750-1-1 have been met?

Response: YES _ NO _ NA
Remarks:

15. Are controls adequate enough to ensure that maintenance can be completed on equipment prior to mission requirements? (I.e., major services during peak work season)

Response: YES_ NO_ NA
Remarks:

16. Is there a quality assurance program in effect for "completed or in-process maintenance?" (Including contracted and GSA services)? YES_NO_ NA_ Remarks:

E-4-B. Watercraft-Oriented Maintenance Policies.

EVENT CYCLE 4: Determine if watercraft equipment is systematically scheduled for services and cycle maintenance.

RISK: Consistency in comprehensive maintenance for floating equipment, boats/vessels may be performed and over looked by maintenance managers/supervisor

CONTROL OBJECTIVE: To ensure that authorized maintenance is performed, and official maintenance forms are used (manual or automated) for documentation in accordance with ER/EP 750-1-1.

CONTROL TECHNIQUE: Review and analyze maintenance policy and procedures for adequacy and provide periodic inspection for review of records by supervisory personnel.

TEST QUESTION:

1. Does the vessel master maintain required maintenance records for watercraft?

Response: YES_ NO_ NA
Remarks:

2. Does required watercraft undergo On-Condition Cycle maintenance in accordance with the intervals established in Table 4-1 in ER 750-1-1?

Response: YES_ NO_ NA
Remarks:

E-4-C. Equipment Management.

1. Are usage reports maintained on personal property that is listed in Table 1-4, in EP 750-1-1?

Response: YES _ NO _ NA
Remarks:

2. Is documentation on file for personal properties that are usually exempt from meeting minimum usage tracking standards?

Response: YES _ NO _ NA
Remarks:

3. Is DA Form 2401 (Control Record for Equipment), ENG Form 3662, or an automated form filled out and maintained by the activity IAW current guidance? (EP

Response: YES _ NO _ NA
Remarks:

4. Is the Equipment Record Folder complete and properly maintained when equipment is used?

Response: YES _ NO _ NA
Remarks:

5. Does equipment on extended utilization (dispatch) cycle have a valid requirement for the extension?

Response: YES NO _ NA
Remarks:

6. Does the utilization (dispatch) cycle terminate when the equipment becomes none operational?

Response: YES _ NO _ NA
Remarks:

7. Is equipment continually operated when services are overdue?

E-4-D. Maintenance Program

EVENT CYCLE 5: Determine if the Maintenance Officer has established a maintenance program to include operators who follow the maintenance business process.

RISK: Consistency in a maintenance program business process is not developed nor followed.

CONTROL OBJECTIVE: To ensure that deficiencies and work requests for maintenance is documented, and processed through the maintenance

CONTROL TECHNIQUE: Inspect, review, analyzes and interview equipment operators and maintenance personnel to determine if proper equipment maintenance is being

TEST QUESTION:

1. Is Equipment Maintenance Checks and Services performed prior to use?

Response: YES _ NO _ NA
Remarks

2. Does the operator report equipment shortcomings and deficiencies to the Maintenance Coordinator that cannot be corrected immediately?

Response: YES _ NO _ NA
Remarks

3. Are operators/users knowledgeable on maintenance and operating characteristics of their assigned

Response: YES _ NO _ NA
Remarks

4. Are controls in place to ensure that work order request numbers are recorded/tracked when received?

Response: YES_ NO_ NA
Remarks:

5. Have work orders been prepared in accordance with the maintenance plan?

Response: YES _ NO_ NA
Remarks:

6 Are controls adequate to ensure that sufficient repair parts are on hand, or on order for each official work request?

Response: YES_ NO _ NA
Remarks:

7. Are controls adequate to ensure that appropriate tools and test equipment are on hand?

Response: YES_ NO_ NA
Remarks:

8. Are procedures in place to ensure that the standard man-hour rates for the task to be performed are used for determining labor costs?

Response: YES_ NO_ NA
Remarks:

9. Are both direct and indirect labor costs included in the total for labor?

Response: YES_ NO__NA
Remarks:

10. Are procedures in place to ensure that all parts, labor and materials are capture and charged to the appropriate work order?

Response: YES_ NO__NA
Remarks:

11. Are quality control procedures in place to ensure that all repairs are properly completed and deferred work promptly annotated?

Response: YES_ NO _ NA
Remarks:

12. Are procedures in place to ensure that repair parts consumption data are reported to the appropriate Maintenance Coordinator?

Response: YES_ NO_ NA
Remarks:

13. Are required publications on-hand or on order within the activity?

Response: YES _ NO _ NA
Remarks:

14. Are repair parts located in a single area readily accessible to maintenance personnel and properly secured? (AR 190-13)

Response: YES _ NO _ NA
Remarks:

15. Is repair part history reviewed periodically for identification of equipment maintenance trends and the adjustment of stocked quantities? (DA PAM 710-2-1, AR 7102)

Response: YES _ NO _ NA
Remarks:

16. Is an Equipment Repair Cost Record (Manual or Automated) maintained on each specific item of equipment for its life or until the equipment is disposed of, or transferred? (EP 750-1-1)

Response: YES _ NO _ NA
Remarks:

17. Are historical records maintained for each item of equipment?

Response: YES _ NO _ NA
Remarks:

18. Does the Maintenance Officer conduct annual written reviews IAW EP 750-1-1, and follow up to ensure proper corrective action is taken? (EP 750-1-1)

E-4-E. Safety

EVENT CYCLE 6: Determine if safety requirements for personnel property are enforced.

RISK: Consistency in comprehensive maintenance plan is not developed and unchecked safety violations will cause injury to personnel or damage property.

CONTROL OBJECTIVE: To ensure that management identifies safety violations, direct corrective action and record results.

CONTROL TECHNIQUE: Review and analyze safety and health programs, documents, signs, and communicate the result to employees.

TEST QUESTION:

1. Are all low and high-pressure air compressors inspected and tested both mechanically and hyrostatically IAW TB 430151 and EM 385-1-1 as required?

Response: YES _ NO _ NA
Remarks:

2. Are air compressors marked and the results of all inspections recorded IAW EP 750-1-1 and TB

Response: YES _ NO _ NA
Remarks:

3. Is battery handling, storage and charging accomplished IAW EM 385-1-1?

Response: YES_ NO _ NA
Remarks:

4. Have the requirements for safety inspections and testing of lifting devices been performed, to include, marking lifting devices, documenting the results, and scheduling the next periodic inspection? (TB 43-0142, ER 385-1-1)

Response: YES _ NO _ NA
Remarks:

5. Is hazardous material/waste stored and disposed of IAW applicable regulations? (AR 200-1, AR 420-27)

Response: YES _ NO _ NA
Remarks:

6. Are compressed gas cylinders marked and stored IAW applicable regulations and guidelines? (AR 700-68 and EM 385-1-1)

Response: YES _ NO _ NA
Remarks:

7. Are equipment operators retested or retrained periodically for proficiency on special equipment IAW AR 600-55, EM 385-1-1, TB 600-1/TB 600

Response: YES _ NO _ NA
Remarks:

8. Is personnel protection equipment being issued and utilized? I.e., safety shoes, hard hats, safety glasses, respirators, etc, (ER 750-1-1, EM 385-1-1)

Response: YES_ NO_ NA
Remarks:

I attest that the above listed internal controls provide reasonable assurance that USACE maintenance program and equipment are adequately safeguarded. I am satisfied that if the above controls are fully operational, the internal controls for maintenance of personal property throughout USACE are adequate.

Assistant Chief of Staff for Logistics, HQUSACE

I have reviewed the maintenance controls of personal property within my organization and have supplemented the prescribed internal control checklist as listed below. The controls prescribed in this checklist, as amended, are in place and operational for my organization (except for the

weaknesses described in the attached plan, which includes schedules for correcting the weaknesses).

Operating Manager (Signature)