

DEPARTMENT OF THE ARMY
US ARMY MEDICAL DEPARTMENT ACTIVITY
Fort Huachuca, Arizona 85613-7079

MEDDAC Memorandum
No. 420-5

17 August 2006

Facilities Management
UTILITIES MANAGEMENT PLAN

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1. HISTORY. This publishes a revision of this publication.

2. PURPOSE. To develop a utilities management plan, that assures the operational reliability of the major utility systems supporting the patient care environment in the MEDDAC. This plan will also specify reporting procedures and corrective action for any unscheduled utility outages or utility problem, which may have an adverse impact on the Medical Treatment Facility's (MTF) ability to provide safe and quality care for patients. Satisfactorily implement this plan to satisfy compliance with the Environment of Care (EOC) standards of the Accreditation Manual for Ambulatory Care Health Clinics, Joint Commission on the Accreditation of Healthcare Organizations (JCAHO), 2005/2006.

*This memorandum supersedes MEDDAC Memo 420-5, 15 Dec 03

3. APPLICABILITY. The Utilities Management Plan is applicable to all MEDDAC, DENTAC, VETCOM and ASAP Personnel.

4. REFERENCE.

4.1 MEDDAC Memo 420-1, Fire Prevention and Internal Disaster Plan.

4.2 MEDDAC Memo 420-2, Electrical Power Outage.

4.3 MEDDAC Memo 385-1, MEDDAC/DENTAC Safety Program.

4.4 MEDDAC Memo 710-3, Receipt, Storage and Handling of Medical Gases.

4.5 MEDDAC Memo 750-4, Oxygen Purity Control Program

4.6 MEDDAC Memo 380-2, Information System Security.

4.7 Comprehensive Accreditation Manual for Ambulatory Care (CAMAC), current edition.

4.9 MEDDAC Infection Control Guidelines

4.10 NFPA 99, 2002 edition.

5. IDENTIFICATION. Appendix A is a current list of telephone numbers for the key agencies mentioned in this memorandum. Appendix B is a list of departments to be notified in the event of scheduled utility outages. Appendix C contains key points to be used by unit NCO's in developing area specific SOP's and lesson plans for training subordinates in the areas addressed in this memorandum. Appendix D is the current list of indicators used for performance improvement with regard to Utilities Management. Appendix E is a work order request checklist to request minor construction and is also an inventory of the equipment and components that are maintained in the Facility Management Branch.

6. RESPONSIBILITIES

6.1 MEDDAC staff encountering a utility system malfunction will:

6.1.1 Eliminate immediate hazards to patients and/or staff and perform emergency clinical interventions (listed for each utility in paragraph 13) if necessary.

6.1.2 Minimize potential damage to government property (i.e., controlling water emanating from broken pipes or tripping circuit breakers).

6.1.3 Call the Facilities Management Branch Help Desk during normal duty hours to initiate a repair request or in the case of emergencies after duty hours, contact the Administrator on Duty (AOD) who in turn will notify the Military Police (MP) Emergency Service Order desk (See Appendix A).

6.1.4 Notify the Administrative Officer of the Day (AOD) to annotate the AOD log with information regarding the utility malfunction.

6.1.5 Notify the AOD again if service personnel have not arrived within 2 hours or if the malfunction has worsened and is deemed by the senior person in the reporting activity as having the potential of adversely affecting patient care.

6.2 The AOD after duty hours will:

6.2.1 Reset the Health Center elevators in case of a power failure (para 13.1.3).

6.2.2 Follow up with the MP Emergency Service Order Desk for service calls that are not addressed within 2 hours.

6.2.3 Immediately notify the MP Emergency Service Order Desk, the Chief, Logistics Division and the Facility Manager in case of major problems/deficiencies (listed in paragraph 8.2) or if notified by the senior person of the reporting activity that a serious condition exists. Contact the next available person on the Logistic Division on-call roster if the Chief, Logistics Division or Facility Manager cannot be reached.

6.2.4 Notify the Facility Management Branch the next duty day following an emergency service call.

6.3 Unit NCO's will:

6.3.1 Develop individual unit SOP's addressing detailed actions to be taken should a malfunction or failure affect any utility system component within their area of responsibility. These SOP's will be based on the guidelines presented in this memorandum.

6.3.2 Develop lesson plans based on the area specific SOP's for unit training purposes. Requirements for these lesson plans are contained in Appendix C.

6.4 The MEDDAC Facility Manager will assist unit NCO's in developing area SOP's and lesson plans based on this memorandum.

7. RECURRING MAINTENANCE AND TESTING. The Directorate of Public Works (DPW) is accountable for all facilities occupied by the MEDDAC. The DPW Post Maintenance Contractor is held accountable through the operating maintenance contract to ensure that these buildings are maintained properly. The MEDDAC Logistics Division provides input to the in-house MEDDAC maintenance team or the DPW to initiate all construction, major repairs and service orders and to ensure that specific concerns

about the various utility systems are addressed. The Logistics Division will direct Maintenance and testing of utility systems.

7.1 Documentation of recurring maintenance, testing, and unscheduled maintenance is maintained jointly by the DPW, the Post Maintenance Contractor and MEDDAC Facility Management Branch. The Facility Management Branch will coordinate with the DPW regarding problems or changes in medical facility maintenance requirements. Records of Recurring Maintenance and Testing are on file in Logistics.

7.2 The Contracting Officer's Representative (COR) within the DPW Contract Management Division is responsible for monitoring Post Maintenance Contractor performance on recurring maintenance and testing of Health Center's utility systems.

7.3 Logistics Division must coordinate with the DPW on matters related to Post Maintenance Contractor's work performance on the Health Center's utility systems. Points of contact at the DPW are the Chief, Contract Management Division, or the Executive Officer, DPW.

7.4 The in-house MEDDAC maintenance team performs Preventive and Recurring Maintenance throughout the various clinic buildings as part of their regular duties. The team's work is coordinated through the Facility Management Branch to ensure correction of any deficiencies.

8. UNSCHEDULED BUILDING MAINTENANCE REPAIRS.

8.1 Minor problems/deficiencies (i.e. a commode will not flush, leaking faucets, ceiling lights out, etc.) during normal duty hours (0730-1630) should be reported to the Facility Management Branch Help Desk telephonically (See Appendix A for current telephone numbers) or by e-mail @RWBAHCFACWO or in person, Room F-4.

8.1.1 Report the specific nature of the problem, a point of contact and telephone number, and the three digit room number (engineer number) located at the top of the room door frame. If the engineer number is not present, use the number located on the gray plaque located near the door. The engineer number is most useful for repairs as these are the numbers listed on the facility's blueprints.

8.1.2 After duty hours, activities will report problems/deficiencies to the AOD who in turn will contact the MP Emergency Service Order Desk (ext 3-2623). The AOD will annotate the problem in the AOD log.

8.2 Major problems/deficiencies also requiring notification of the Logistics Division/Facility Manager after duty hours include the following:

8.2.1 Complete power outage including generator failure.

8.2.2 Broken water line or water main.

8.2.3 Broken sewer main.

8.2.4 No hot water.

8.2.5 Boiler alarm.

8.2.6 Major steam failure.

8.2.7 Sewage over flow.

8.2.8 Complete failure of both elevators.

8.2.9 Oxygen system failure.

8.2.10 Any failures in the fire detection (smoke or heat detectors) or fire sprinkler systems.

8.3 During normal duty hours, the in-house maintenance team will shut off the malfunctioning utility system in affected areas at Facility Management Branch direction. The Logistics Division will be responsible for notifying staff in areas affected by utility system malfunctions. Staff should only attempt the shut off of a utility system in the case of an electrical shock to patients or other staff. After duty hours, the responding repairman will shut off any utilities as necessary and the AOD will inform the affected areas.

8.4 Documentation of problems/deficiencies: The Facility Management Branch maintains a database of utility system failures. In cases where a failure creates a major impact on the patient care environment, the Chief, Facility Management Branch, in consult with the Chief, Logistics Division, will prepare a memorandum for the MEDDAC Safety Committee. A file of these documented major utility incidents will be maintained by calendar year in the Facility Management Branch. Reported incidents will remain as open agenda items for the Safety Committee until satisfactory monitoring and evaluations have been completed.

8.5 See also paragraph 13 of this memorandum for specific instructions on the individual utilities.

9. REQUESTS FOR NEW WORK:

9.1 To request any type of new work or construction involving utility systems (adding additional electrical outlets, sinks, etc.) or others that do not pertain directly to utilities (construct new wall, install new door and frame, etc.), the requester should:

9.1.1 Submit requests in memorandum format to the Facility Management Branch containing as detailed a description of the work as possible, a point of contact and telephone number, and a detailed sketch of the work desired. Submit the form in Appendix E.

9.1.2 Use the engineer number for locations whenever possible (see paragraph 8.1.1).

9.2 The Facility Management Branch will investigate the request and check for compliance with codes and compatibility with existing facilities and functions. The Facility Management Branch will coordinate with the user if any changes are needed, prepare the request on a DA Form 4283 and submit the form to the DEH.

9.3 Then DPW will either design the project in-house or will contract out the design work. DPW will coordinate regular design reviews with the requester and the Infection Control Officer through the Facility Management Branch as appropriate. Once final design is approved, there are several options to complete construction of the project.

9.3.1 Simple jobs under 40 hours of labor can be converted into a service request for the in-house MEDDAC maintenance team to complete.

9.3.2 Small jobs over 40 hours of labor involving simple construction techniques can be performed by the Post Maintenance Contractor or can be issued directly to a contractor by the Facility Manager via government credit card.

9.3.3 More complicated jobs costing between \$2,500 and \$300,000 can be performed by a local contractor through a small purchase contract or by the post Job Order Contract (JOC) contractor. The JOC contractor can hire its own subcontractors to perform different sub-installations.

9.3.4 Larger projects or those dealing with specialized systems (i.e., medical gases) can be performed by specialty contractors.

9.4 The Facility Management Branch is responsible for controlling the funding of all contracted design and construction. Funding sources and thresholds are as follows:

9.4.1 Those below \$25,000 can be paid from MEDDAC Minor Construction or MEDCOM maintenance and repair funds. The Chief, Facility Management Branch will consult with the Chief, Logistics Division, the Budget Officer, the Safety Manager and the Infection Control Officer about projects that may have to be delayed due to a lack of funds.

9.4.2 \$25,000 - \$199,999 must be funded from the Great Planes Regional Medical Center at Brooke Army Medical Center, Fort Sam Houston, TX via a MEDCOM form 234-R.

9.4.3 \$200,000 and up must seek funding from U.S. Army Medical Command, Fort Sam Houston, TX via a MEDCOM Form 234-R.

9.5 Delays are possible in lower priority work requests due to the proper planning time required to complete a project.

10. REPLACEMENT OF MAJOR UTILITY COMPONENTS

10.1 Based upon maintenance history and age of equipment, the in-house MEDDAC maintenance team makes recommendations to the Facility Management Branch on the need to program for the rebuilding or replacement of major utility system components. The Chief, Facility Management Branch will incorporate these recommendations into the five-year project plan and submit DA Form 4283's to the DPW based on this plan.

10.2 The Health Center's Safety Committee will forward any concerns to the Logistics Division about the reliability or condition of any utility system. These concerns should normally be related to documented incidents of utility system malfunctions, hazards or failures.

11. SCHEDULED OUTAGES. Advance notification to the Health Center's activities of planned utility outages is essential in minimizing risk and disruption to the delivery of patient care. The Facility Management Branch issues Letters of Instruction (LOI's) for all planned utility outages. Logistics Division will coordinate with those listed in Appendix B at a minimum for all planned outages.

12. UTILITY OPERATOR TRAINING. The post maintenance contractor is responsible for the training and supervision of their maintenance workforce. The Facility Management Branch will forward any training opportunities on Health Center equipment that it receives to the in-house MEDDAC maintenance team. The contractor is required by contract to hire only journeymen level trades personnel.

13. INDIVIDUAL UTILITIES FAILURE PLANS: This paragraph contains emergency procedures for each individual utility. If a complete loss of any utility will have a deleterious effect on patients, such patients will be transferred as soon as medically feasible to an accepting medical treatment facility.

13.1 Emergency Power and Generators: If electrical power is interrupted in the primary power feed to the Main Health Center Building 45001 through a failure in the installation's electrical grid, an automatic switch transfers the clinic to a second primary feed. If both primary electrical feeds fail, the 440 KW (Kilowatt) and 750 KW generators will activate. Normally, the time from the loss of the first primary circuit through switchover to the second feed to activation of the generator is only a few seconds. The emergency power system is designed so the 750 KW generator will handle the Health Center's entire electrical load if the 440 KW generator should fail.

13.1.1 If power goes out momentarily, reset any medical equipment that may have been affected by the outage. Check to ensure that all medical equipment currently being used for patient care is now operating on emergency power. If not, transfer the equipment to an emergency power receptacle, which is identified by a red receptacle. Many areas of the Health Center have all outlets and lights on emergency circuits; for specifics, see Appendix A, MEDDAC Memo 420-2 Electrical Power Outage.

13.1.2 If the electrical outage occurs during normal duty hours, immediately contact the Help Desk who will inform the in-house electrician. After duty hours, call the AOD and they will notify the MP Emergency Service Order Desk. The AOD should also notify the on-call Medical Maintenance technician (roster maintained in the AOD), and the Chief, Logistics Division/Facility Manager.

13.1.3 The AOD will perform the following steps to ensure the elevators are still in working order. Using the stairwell nearest the elevators, proceed to the ground floor. It will be apparent if the elevators are not operational, as they will both be stopped on the ground floor with the doors open. If the doors are open, press a button on the inside panel to send an elevator to another floor and exit the elevator. If there is no response, use KEY E-108 (on the AOD key ring and in the Facilities Management Branch key box) to enter the elevator control room (B-22). Recycle each elevator by pulling each of the two large handles to the "OFF" position and then pushing them back to "ON". Do this to each switch, one at a time. Afterwards, try again to send an elevator to another floor. If they still do not respond, turn both elevator levers to "OFF" and place the "Elevator Out of Order" signs found in room B-22 inside each elevator. Notify the MP Emergency Service Order Desk. Logistics Division personnel will perform these procedures during normal duty hours.

13.2 Electrical circuits: If an electrical outlet malfunctions in any way (including the tripping of Ground Fault Interrupt (GFI) outlets), make note of the outlet number on the cover plate if possible and notify the Help Desk during normal duty hours or the AOD after duty hours. Do not reset any GFI outlet unless directed to do so by the responding maintenance personnel. In the event of an electrical circuit problem, MEDDAC staff will implement the following emergency clinical interventions for patients:

13.2.1 Discontinue use of malfunctioning outlets and check the circuit breaker box.

13.2.2 If a breaker is in the off position, mark it with a piece of tape labeled "DO NOT TURN ON" so that the electrician can find the problem circuit. Do not attempt to restore power, as a tripped breaker may indicate a significant problem.

13.2.3 If the patient is endangered by electrical shock, flip the appropriate circuit breaker to the off position.

13.3 Water, Sewage and Natural Gas

13.3.1 Domestic Water

13.3.1.1 During normal operations, water is provided to the Health Center by pumping water from deep wells located throughout Ft. Huachuca. Initial back-up sources for water to support the MEDDAC are the storage tanks located on the installation. In the event that the water pumps become inoperable, water will be gravity fed from Huachuca and Garden Canyons.

13.3.1.2 In the event that a localized water main break disrupts water supply to the Health Center, temporary water lines utilizing fire hoses can supply some low-pressure water to the Health Center for domestic water use or tanker trucks can be utilized. If the local water supply becomes contaminated, DPW will supply the Health Center with water from potable tanker trucks until the problem is rectified.

13.3.1.3 Any water leaks (i.e., faucets, commodes, etc.) will be reported to the Help Desk during normal duty hours. They will contact the in-house plumber to fix the problem. Attempt to control the water with a suitable container if the leak is minor. If any floor surface becomes wet and presents a safety hazard, call Housekeeping (3-4745/5554) and secure the area from traffic until the problem is fixed.

13.3.1.4 After duty hours, notify the AOD only if a major problem exists (major water leaks, lack of hot water, etc.). Faucet leaks and running commodes that do not cause water to pool on the floor should be noted and turned into the Help Desk the following duty day.

13.3.1.5 In the event that the potable water supply system is interrupted, immediately notify the Help Desk or the AOD after duty hours. During any unscheduled water outage, Facility Management or the AOD will notify Preventive Medicine (3-3536) and Infection Control (3-9011 or Beeper # 533-3500). Scheduled water outages will be coordinated with the DPW through the Facility Management Branch (See Appendix B).

13.3.1.6 The emergency clinical intervention for patients consists of relocating patients if a major break causes extensive flooding.

13.3.2 Domestic Hot Water: Domestic hot water is that water supplied to sinks and appliances (as opposed to that used by the building heating system). If an area experiences a lack of domestic hot water, do the following:

13.3.2.1 Immediately call the Help Desk during normal duty hours or the AOD after duty hours. Any domestic hot water problems should be considered an emergency.

13.3.2.2 Notify staff and patients in the area not to use the domestic hot water until repaired if it presents a danger (i.e., contamination is present or the water is overheated).

13.3.2.3 Emergency clinical interventions for patients consist of immediately redirecting sprays of hot water away and relocating patients as soon as possible from the affected area.

13.3.3 Sewage: Sewage problems such as clogged drains or a broken sewer line may affect the use of large areas of the Health Center's water system and should therefore be considered an emergency. Sewer system problems should be handled as follows:

13.3.3.1 Notify the Help Desk during normal duty hours or the AOD after duty hours.

13.3.3.2 Sewer smell can easily be confused with natural gas and therefore the Fort Huachuca Fire Department should be notified as well.

13.3.3.3 Because sewage leaks may constitute a health hazard, Facilities Management will also notify Preventive Medicine. The AOD should use the alert roster to notify Preventive Medicine and the Chief, Logistics Division.

13.3.3.4 The emergency clinical intervention for patients consists of removing patients from the affected area as soon as possible if the Infection Control Officer determines that patient health is jeopardized.

13.3.4 Natural Gas: The only natural gas line in the Health Center supplies the mechanical room. Gas is used in the boilers to generate hot water for the ventilation system and domestic hot water, and steam for cooling and sterilization. If the natural gas system is interrupted, all these systems will be disabled. DPW will ensure that the Health Center receives natural gas supply before any other facility in the event of an area outage. Treat all natural gas problems as emergencies. If you notice or suspect any gas leaks (i.e. gas smell, hissing sound near mechanical room equipment, etc.) perform the following:

13.3.4.1 Evacuate immediately and secure the area.

13.3.4.2 Call the Help Desk immediately during normal duty hours. Facilities Management will contact the DPW, the Fire Department, Preventive Medicine and the MEDDAC Safety Officer.

13.3.4.3 Since a possible natural gas leak requires immediate reaction, the activity noticing the problem should immediately contact the MP Emergency Service Order Desk after duty hours as well as the Fire Department. The AOD will then be notified to use the alert roster to notify the remaining individuals in paragraph (13.3.4.2) above as well as the Chief, Logistics Division and Facility Manager.

13.3.4.4 As there are no natural gas lines near patient care areas, emergency clinical intervention for patients consists of relocation or evacuation of patients from areas adversely affected by a loss of heat or cooling, steam, hot water or the threat of explosion and/or fire.

13.4 Heating, Ventilation and Air Conditioning (Chillers, Boilers, Air Handlers, etc.):

13.4.1 General:

13.4.1.1 The Health Center's Heating, Ventilation and Air Conditioning (HVAC) systems help provide a clean, comfortable environment in which to work and care for patients. The heating system utilizes heated water passing through coils. Fans force the air past heated coils to warm the air. The cooling system utilizes the same principle except that chilled water is passed through the coils. The heated and cooled air are filtered and distributed throughout the Health Center by separate duct systems. A cool air and heated air duct meet at a mixing box utilizing dampers to regulate the amount of cool and heated air entering an area. The local thermostat is connected to the mixing box and controls the area temperature by adjusting the dampers. This type of system is called a constant volume system.

13.4.1.2 Two air handlers are connected to emergency power. These are #1 which services the OR suite and #8 which serves the Internal Medicine Department and METS Division. The AHU #1 & 8 are on Emergency Power that transfers automatically. The balance of the building AHU's are on emergency power but need to be manually transferred in the main boiler room at transfers with #4 to Emergency Power.

13.4.2 Outages and malfunctions: All the Health Center's air handlers will shut off and special HVAC system dampers located in ducts that pass through fire barriers will close when the fire alarm activates to limit the spread of smoke and fire. After each fire drill, the in-house maintenance team will reset the fire dampers. All of the building's air handlers will reset automatically. During a momentary power interruption, the fire dampers and air handlers might shut down. If a power "blip" occurs during normal duty hours, the Facility Management Branch will instruct the in-house maintenance team to reset the dampers. If a shutdown occurs after duty hours, the fire department should be notified, but the resetting of the fire dampers should be left for the in-house maintenance team the following day.

13.4.3 If your area's temperature becomes uncomfortable, do the following:

13.4.3.1 If the temperature has not reached the desired level after 15 minutes, contact the Help Desk during normal duty hours. Call the AOD after duty hours.

13.5 Steam: Steam is supplied from the boilers to the absorption chillers, to Central Sterile Supply and the Operating Rooms for sterilizers. Any steam problems should be considered an emergency as the hot vapors can cause severe burns. In the event of a steam leak in your area you must:

13.5.1 Secure the area and keep personnel and patients away until help arrives.

13.5.2 Contact the Help Desk immediately during normal duty hours or the AOD after duty hours.

13.5.3 Never approach the area near steam leak yourself.

13.5.4 The emergency clinical intervention for patients in the event of a local steam leak is to protect the patient from the vapors and remove the patient from the affected area immediately.

13.6 Elevators: Both elevators are supplied with emergency power from the emergency generators. The elevators will travel to the bottom floor, open their doors, and will cease to function during a fire alarm. Power interruptions may also affect elevator function. Emergency procedures are as follows:

13.6.1 If a power surge or blip is noticed, Facility Management (during normal duty hours) will attempt to operate each elevator to ensure they have not stopped between floors, trapping persons inside. The AOD will do this after duty hours.

13.6.2 Persons trapped inside a non-functioning elevator can use the emergency phone located in each car. This automatically notifies AOD on a dedicated line.

13.6.3 If notified that persons are trapped inside, tell them to remain calm and that help is on the way. AOD will immediately notify the Logistics Division during normal duty hours.

13.6.4 After duty hours AOD should perform the procedures listed in paragraph 13.1.3.

13.6.5 If the elevators fail to respond after the steps in paragraph 13.1.3 are implemented, the person implementing the steps will contact the Fire Department to rescue trapped individuals and the Chief, Logistics Division and FM Branch to apprise them of the situation. This procedure is the emergency clinical intervention in case a patient is trapped in a non-functioning elevator.

13.7 Communications:

13.7.1 Telephone Systems:

13.7.1.1 The Health Center has an SL100 Northern Telecom Switch with the ability to handle up to 900 lines. Currently there are approximately 636 lines in use. The phone systems are connected to emergency power and there is an 8-hour back up battery in case the emergency generator fails. Should there be an extended loss of power to the system, the Health Center has 12 cellular phones available. These can be charged from a normal 110v outlet or a vehicle lighter socket. The Emergency Operations Center (EOC) will locate these phones and distribute them as needed during an emergency situation. Should telephone service be lost to local area (i.e., Fort Huachuca and Sierra Vista) the Health Center would revert to radios for limited communications. Logistics Division and the in-house MEDDAC maintenance team have 9 two-way radios that utilize 2 installation radio frequencies. In addition, the Health Center has a "ham" radio antenna installed, and local volunteers have offered to provide communications during disaster operations in the Emergency Operations Center.

13.7.1.2 The Health Center has four dedicated trunk lines leading from the building's main switch room switch directly to U.S. West in Sierra Vista. These lines are completely independent of the rest of the installation. During normal operations they assure that the Health Center's Health Care providers can make outside calls without competing with the rest of Fort Huachuca for access. They can also provide for disaster recovery. Should the post switch or cable be severed or disabled, the Health Center would continue telephone capability using the dedicated trunk lines. Should the Health Center's trunk lines be disabled, use of the post cable system would still be possible. The two sets of lines run through completely separate routes and the likelihood of both being cut at the same time is considered extremely remote.

13.7.1.3 Each telephone has a "restoration" priority assigned by the installation when it is issued. The AOD and the EOC have the highest priorities possible. The remainder of the Health Center's telephones would be restored in priority order.

13.7.1.4 Problems in the operation of telephones should be directed to the Information Management Help Desk. Issues concerning training, or usage of telephones should be directed to the Information Management Division (IMD) at 3-2674. After duty hours, leave a message. In case of an emergency, contact the AOD.

13.7.2 Paging (Beeper) Systems:

13.7.2.1 The Health Center's Motorola paging system base station is located in the ground floor Room A-25. Call 3-3500 and the system will ask you to enter the pager number of the person you are trying to contact, either digital or verbal. You will then be asked to "speak now". At this time give your message and telephone number. The system can only accept one call at a time so keep messages short.

13.7.2.2 Pagers are centrally controlled by IMD. Contact IMD for assistance in ordering.

13.7.2.3 For service or technical assistance, call IMD at 3-2674 during normal business hours. After normal business hours, refer to the AOD instructions.

13.7.3 Public Address: Call 533-9288 to access the Public Address System and speak your message in a normal telephone voice. Do not precede your message with "Attention in the Health Center". IMD maintains the Public Address System. The Health Center's Public Address System is to be used for official or emergency announcements only. Due to the conversion of the first floor patient wing to administrative offices, the Nurse Call system on that floor has been permanently disconnected. For service or technical assistance, contact the Help Desk during normal business hours. After normal business hours, refer to AOD instructions.

13.7.4 Composite Health Care System (CHCS): Each unit in the Health Center has a technical expert who is responsible for training and assistance in the use of this computer system. If the problem is beyond the expertise of the area's technical expert, contact IMD.

13.7.5 Other Computer Systems:

13.7.5.1 Details on the acquisition, maintenance and security of information systems are contained in MEDDAC Memo 380-2. Contact IMD for additional assistance.

13.7.5.2 For all other computer systems, a user should contact his or her area technical expert for assistance. If the problem is not resolved, the area technical expert should call the IMD help desk. After duty hours, notify the AOD.

13.7.6 To obtain copier repair call the number on the front of your machine and report the problem, for fax machines and printers contact the Information Management Help Desk for repairs

13.8 Fire Alarm, Smoke and Heat Detector Systems: Refer to MEDDAC Memo 420-1.

13.9 Fire Sprinklers: Refer to MEDDAC Memo 420-1.

13.10 Portable Non-Medical Government Equipment: Portable non-medical government-owned equipment (ice machines, microwaves, typewriters, etc.) is essential in completing the medical mission of this MEDDAC. These items must be in good operating order because they utilize the electrical distribution system and could adversely impact patient care through short circuits or an electrical fire. Although such items are tested in accordance with the Periodic Maintenance and Testing Schedules, users should still perform the following preventive checks and services:

13.10.1 Ensure the electrical cord is in good condition.

13.10.2 Ensure equipment is kept away from all liquids.

13.10.3 Ensure equipment is on a stable surface.

13.10.4 If equipment malfunctions in any way, contact the Logistics Division Property Management Branch during normal duty hours and they will coordinate repairs to the item. After duty hours contact the AOD.

13.11 Electrical Outlet Testing: Proper working condition of the electrical outlets is essential to maintaining patient and staff safety. An improperly functioning outlet can cause an interruption to electrical service or worse, injuries through electrocution or fire. Electrical outlets are maintained and tested by the in-house MEDDAC maintenance team in accordance with the Periodic Maintenance and Testing Schedules. However, users should take the following precautions:

13.11.1 Do not use extension cords at any time.

13.11.2 Surge suppressors, available from IMD (3-2674), can be used on items such as computer systems that must be protected from power surges. However, be sure to read the electrical information plate on each piece of equipment to determine the amperage rating. This should be a number followed by an "A", listing the amount of power that the item requires. Do not plug more than 20 amps of equipment into any one circuit. Medical Maintenance (3-3712) can answer any questions regarding equipment.

13.12 Medical Gas Systems: Refer to MEDDAC Memo 750-4.

13.13 Infection Control: Infection control from a utility management standpoint involves primarily the proper changing of HVAC filters, user cleaning of ice machines and personal protection techniques for maintenance personnel when coming in contact with patients or items which may carry bloodborne pathogens.

13.13.1 Air filters will be changed as prescribed by the Recurring Maintenance and Testing Schedule and the Project Work Statement controlling the installation maintenance contract. Filters will be changed sooner than scheduled when visual inspections indicate unusual conditions of clogging or contamination, or as indicated by an increase in nosocomial infections that involve airflow and filtration problems.

13.13.2 Ice machines will be thoroughly cleaned in accordance with the MEDDAC Infection Control Guidelines #4.7 (Ice Machines, Ice Scoops and Refrigerators), using the appropriate chemicals depending on the usage of the ice machine. The machines will be cleaned more frequently when visual inspections indicate.

13.13.3 Maintenance personnel, other than the in-house MEDDAC maintenance team, must check in with Facility Management personnel before working in any area in MEDDAC buildings. All maintenance personnel will receive guidance regarding special precautions when the work is assigned. No maintenance personnel should enter an occupied exam room/area until clearance has been obtained from the nurse in charge. Maintenance personnel will at all times observe isolation policies which may be in effect in any clinical area where work is required. Any questions, which may arise in connection with proper isolation procedures or personal protection equipment will be directed to the nurse in charge.

13.13.4 The Infection Control Officer will be consulted and the policy for contracted work in a Medical Treatment Facility reviewed before and during the planning of any construction/renovation project in order to ensure adequate measures are taken and infection control concerns are addressed.

14. UTILITY FAILURE TRAINING: All unit NCO's will receive training in the aforementioned failure procedures on a quarterly basis as part of the regular safety training by the Safety Officer. These unit NCO's will in turn develop unit SOP's based on this memorandum and will train subordinate personnel in these procedures during initial orientation and on an annual basis thereafter. Appendix C contains key points that must be used for developing an area specific SOP and training plan.

15. PERFORMANCE IMPROVEMENT: Listed at appendix D are the current key indicators tracked to measure performance improvement for utilities management. These indicators are processed as often as indicated and measured against the desired thresholds to observe trends. Target thresholds will be raised or indicators will be replaced by other measurements when it is deemed that the indicator measures consistently above the current threshold.

16. ANNUAL PROGRAM REVIEW: This plan and the current performance indicators will be reviewed annually by the Facility Management Branch and submitted to the Safety Committee for approval.

The proponent of this publication is the Chief, Logistics Division. Users are invited to send comments and suggested improvements on DA Form 2028 directly to USA MEDDAC, Logistics Division, ATTN: MCXJ-LO, Fort Huachuca, AZ 85613-7079.

FOR THE COMMANDER:

OFFICIAL:

GREGORY A. SWANSON
LTC, MS
Deputy Commander for
Administration

Robert D. Lake
Information Management Officer

Distribution: A

APPENDIX A
KEY TELEPHONE NUMBERS

Chief, Logistics Division	3-3649
Facilities Management Branch	3-9028
Beeper	417-6461
Facilities Help Desk	3-2000
After Hours Emergency Work Order	3-2623
Housekeeping	3-4745
Transportation	3-5554
Military Police Emergency Service Order Desk	3-2623/1534
Information Management Help Desk	3-2674
AOD Pager	533-3500-312
AOD	533-2963

APPENDIX B
COORDINATION OF UTILITIES

1. Facilities Management Branch will coordinate with the departments in Sections A and B before scheduling any Health Center-wide utility outages (see paragraph 13 for the listing of utilities). Facility Management will not dictate the time of the outage to the departments, but will determine the most convenient time for all departments affected. Localized outages will be coordinated with the affected departments only. Utility outages between 1700 and 0600 will not be coordinated with the departments in Section B as these areas are closed during these hours. Though generator tests are scheduled during designated training times for the OR, this department as well as the Weekend/Holiday Access Clinic, and Radiology, will be reminded by Facilities Management prior to a test as short electrical "blips" can cause equipment problems.

a. Weekend/Holiday Access Clinic; OR; CSS; Radiology; Laboratory; Clinical Engineering; Endoscopy; Adult Care Clinic; Pharmacy; Internal Medicine; Health Center Command

b. Resource Management; Personnel; Patient Administration; HERC; TRICARE; METS; Logistics; IMD

2. Scheduling is most important with the AOD, Radiology, the Laboratory, and Medical Records as these departments are open 1st and 2nd shifts. The WHAC Clinic is also open weekends. Scheduling with the OR is especially critical as surgeries occur throughout 1st shift. OIC's and NCOIC's of these departments must ensure that personnel on the affected shift are made fully aware of a scheduled outage so patient safety is maintained.

APPENDIX C
REQUIREMENTS FOR AREA SPECIFIC SOP'S AND TRAINING PROGRAMS

1. Area NCO's in their utility management SOP's and lesson plans must address the following areas using the general guidelines contained within this memorandum:

a. Critical functions that must be performed immediately in the event of a utility system malfunction to protect the safety of patients and staff. This is to include specific shutoff procedures for both the electrical and medical gas systems in the NCO's area of responsibility should a malfunction in either of these two systems originate in or impact the area. Failures of these systems constitute the greatest threat to patient safety and individual zone controls are usually located nearby (as opposed to being centralized in a mechanical room).

b. Secondary functions that should be performed to limit damage to the facility or equipment.

c. Whom to contact regarding utility malfunctions during normal duty hours and after duty hours (see Appendix A).

d. What information to provide when initiating a utility malfunction call.

e. General information regarding all eight critical utility systems: Electrical; Domestic Water; Natural Gas; Heating, Ventilation and Air Conditioning; Steam; Elevators; Communications; Portable Non-Medical Government Equipment

Such information should consist of an overview of each utility system and potential impacts on the NCO's area of responsibility should a malfunction or failures occur. Shutoff procedures for the systems other than electrical or medical gas will not be addressed as these controls (with the exception of portable equipment) are located in secured mechanical rooms and require expert knowledge to operate.

2. The Facility Management Branch will be available to unit NCO's to assist in the preparation of area specific SOP's and lesson plans.

APPENDIX D
UTILITIES MANAGEMENT PLAN PERFORMANCE INDICATORS

1. Number of in-house service orders created per month. Sudden large increases in this number may detect systemic problems. We monitored the number of in-house service orders created per month and set our threshold to 277 work orders per quarter +/-10%. If the quarterly amount exceeds the threshold then further evaluation would be necessary to see how many resulted in our utility systems.
2. Annual Electrical Outlet Testing. Testing will be maintained at 100%.
3. Quarterly smoke detector testing. Testing will be maintained at 100%. We changed our scheduling to more units per quarter, per zone to meet standards. The results will be monitored for effectiveness.
4. Staff knowledge of utility failure procedures. This factor will be tested by monthly random surveys. This factor will initially be set at 70% correct responses. Two stages of testing will be set. This will test the effectiveness of staff knowledge. The questions will come directly off the forms for the EOC rounds.
5. SOC deficiencies opened and closed each quarter. This factor will indicate how many life safety issues have been identified and resolved through EOC rounds.
6. Utility Failures for critical components: Monitor the number of utility failures per quarter, and the cause of the failure. This will show if the same problem is recurring.

The initial set of performance indicators that will be monitored will be numbers 1, 3, 4.

APPENDIX E
WORK ORDER REQUEST CHECKLIST

This form is to be used when requesting minor construction work. The form is for new work only (i.e., install new electrical outlets, relocate door, etc.). It is strongly recommended that a sketch of the requested work accompany this form.

Service Orders for minor repairs (leaking faucets, heating/cooling problems) should be called into the Facility Management Branch. If you are unsure of the nature of the request, contact the Facility Management Branch to discuss it.

1. Electrical

a. Additional Outlets:

110 Volt ___/___/___ ___ Volt ___/___/___ Rm # ___
Norm Emer GFCI Norm Emer GFCI

110 Volt ___/___/___ ___ Volt ___/___/___ Rm # ___
Norm Emer GFCI Norm Emer GFCI

110 Volt ___/___/___ ___ Volt ___/___/___ Rm # ___
Norm Emer GFCI Norm Emer GFCI

110 Volt ___/___/___ ___ Volt ___/___/___ Rm # ___
Norm Emer GFCI Norm Emer GFCI

"Norm" denotes normal power outlets, "Emer" denotes outlets that must be on the Emergency Power Grid and "GFCI" indicates outlets in wet areas or within 6 feet of a sink. Place the number of each outlet type in the appropriate space. Note these outlets on the sketch.

b. Additional Lights or Electric Circuits: _____

2. Ventilation:

Will the requested work affect ventilation? For example, will a requested wall separate supply and return air ducts?

Explain. _____

Will there be a requirement for a minimum number of air exchanges in a room?

3. Plumbing:

Will the requested work affect any plumbing system such as hot and cold water lines, waste or vent lines, or steam lines? Does the request affect a wall that might contain these systems?

4. Carpentry:

Will the request require the relocation, demolition or construction of any walls? Will there be changes to the flooring (i.e., repairs to old tiles or requests for carpeting)?_____

5. Fire Protection:

Will the requested work create a room requiring special fire protection such as a storage space for files/paper or hazardous or flammable liquids?_____

6. Special Requirements:

Explain any unique requirements not explained above._____

7. Reason Work is Necessary:

Explain what this work will accomplish._____

8. Impacts if Work is Not Accomplished:

Site any regulatory violations or findings (i.e, OSHA, JCAHO, Safety, Fire), or adverse conditions affecting patients or staff that will continue or worsen if the work is not completed._____

9. POC Name and Phone Number:_____

