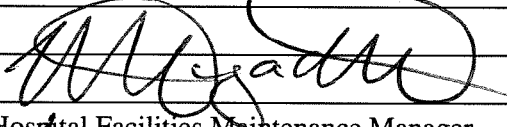
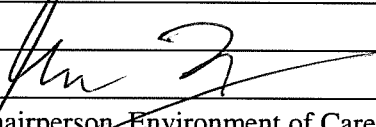
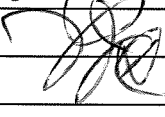
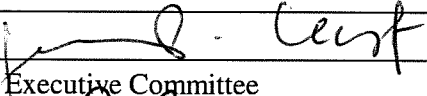
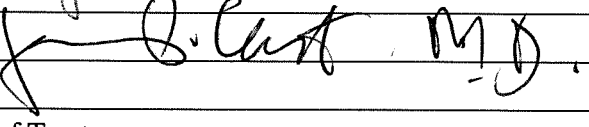



**GUAM MEMORIAL HOSPITAL AUTHORITY
TAMUNING, GUAM**

REVIEW AND APPROVAL

The signatories on this document acknowledge that they have reviewed and approved the following:

- Bylaws Submitted by _____
Department/Committee: _____
- Rules & Regulations Title: _____
- Policy & Procedure Evaluation for 2017 Utilities Management Plan

	Date	Signature
Reviewed	1-31-18	
Approved		
Title	Zaldy Tugade, Acting Hospital Facilities Maintenance Manager	
Reviewed		
Approved	1/31/18	
Title	Gordon Mizusawa, Chairperson, Environment of Care Committee	
Reviewed		
Approved	03/27/18	
Title	Peter John D. Camacho, MPH, Chairperson, Executive Management Council	
Reviewed		
Approved	4/25/18	
Title	James P. Last, M.D., Chairperson, Medical Executive Committee	
Reviewed		
Approved	4/25/18	
Title	Eloy S. Lizama, Chairperson, Board of Trustees	
Reviewed		
Approved	5/31/18	
Title		

ANNUAL EVALUATION OF THE EFFECTIVENESS OF THE UTILITY SYSTEMS MANAGEMENT PLAN/PROGRAM Calendar Year 2017

OBJECTIVES:

What are the results of the Environment of Care Committee's review and evaluations of the objectives of the utility systems management plan/program?

The objectives of the Utilities Management Program is to establish a safe, comfortable patient care and treatment environment by managing the risks associated with safe operation and the functional reliability of the hospital's utility systems to include inventory of critical operating components and systems.

The Utilities Management in a concerted effort with the Environment of Care Committee and Planning Department established 10 (ten) objectives for the calendar year. The intent of these objectives are in line with improving the overall capability of the Utilities Management Plan, these bulleted objectives listed below are followed by an assessment of the degree to which they were met.

- Electrical Power Distribution System Upgrade: Project design and Specification completed. However, no funds to support the whole project instead opted for replacement of the older 1.6 Meg Generator. Generator Procurement not done in 2017 but will proceed in 2018.

This objective has not been met.

- Vertical Transportation Elevator Modernization Project: Plan refurbishment for 2017 not done. Carried over to 2018.

This objective has not been met.

- Nurse Call/Clock and Paging System Replacement/Upgrade: This project to cover the replacement of the Nurse Call System for the whole hospital except for the OB Ward, NICU and L&D which are included in the proposed MCH "Maternal Child Healthcare" Project. Project was completed.

This objective has been met except the Clock and Paging System.

- Boiler and Steam Line Replacement: Project intent is to remove and replace the oldest boiler unit and its distribution lines in time with the acquisition of two sterilizer units for CSR. Still on hold and awaiting residual funding from DOI/CIP

This objective has not been met.

- Water Softener Upgrade Project is to refurbish and Upgrade existing Water Softener System. Completed in 2017.

This objective has been met

- Damper Upgrade. Project is to remove and replace all smoke and fire dampers found to be inoperable. All dampers assessed for replacement were replaced and subsequent inspection and testing conducted. Met the 6 years interval for inspection, testing and maintenance (ITM). New assessment and ITM this year will take place to assure completeness.

This objective has been met.

- FAS (Fire Alarm System) Upgrade. Project is to refurbish /Upgrade existing system. Assessment completed in last quarter of 2017.

This objective has not been met.

- Energy/Lighting Conservation Project: Intent to gain 100% facility wide LED. 4 foot Lamp on corridors and 24 hours offices/areas including administration, and patient room lights completed. Overall facility wide we are 25% LED. Replacement continues forward to next year 2018.

This objective has been met.

- AutoClave Refurbishment. Project is to remove and replace components of the existing Autoclave to refurbish and commission it like new. Completed in 2017.

This objective has been met.

- Shredder Replacement. Remove and replace old shredder to render bio-waste less recognizable prior to its final disposition. Procurement did not prosper in 2017 and now carried over to 2018

This objective has not been met.

The objectives for the utility systems management plan/program for the upcoming year include:

Eleven (11) objectives have been lined up for the 2018 calendar year. Details of these bulleted objectives are as follows:

- Electrical Power Distribution System Upgrade: Procurement of a new 1.6 generator to replace the older 1.6 generator.
- Vertical Transportation Elevator Modernization Project: Upgrade of #1 and #2 (public elevators).
- Boiler and Steam Line Replacement: Remove and replace the oldest boiler unit and its distribution lines.
- FAS (Fire Alarm System) Upgrade. Refurbish /Upgrade existing system. (Existing system has reached its 10 years old useful life expectancy.)
- Energy/Lighting Conservation Project: Lamp replacement is continuous replacement of old lamps to LED lamps for year 2017.
- Shredder Replacement. Remove and replace old shredder to render bio-waste less recognizable prior to its final disposition.
- Underground Water Storage System Control Remove and replace control system and upgrade mechanical and electrical system.
- Vacuum System Controls Remove and replace manual control with automated control system.
- LOX (Liquid Oxygen) Tank Removal and replacement/repair.
- Reinsulation of Chilled water lines. Removal of old and ineffective insulations.
- Fresh Air and Ventilation System Project Repair/Replacement of all fresh air intakes and Ventilation System.
- Public Address (PA) and Clocking System Upgrade/ Repair/ Replacement of Responder Type Paging and clocking System. PA front end is presently out of commissioned in December 2017.
- Pharmacy HVAC (Heat , Ventilation and Air Conditioning System) Upgrade and re-engineering (Design and construction) to effectuate and conform to upcoming USP 800.

SCOPE:

What are the results of the Environment of Care Committee's review and evaluation of the scope of the utility systems management plan/program?

- Detailed monitoring for frequency of indoor air quality testing, pressure differential, temperature and humidity needs is carried through continuously forward.
-

The scope of the utility systems management plan/program for the upcoming year include: (Has something changed? i.e., added new services/responsibilities, physician practices)

- There are 11 (eleven) objectives set for 2018 five of which are carry overs.

Please list any items under consideration for addition to the plan/program at this time:

The following bulleted items are under consideration for addition to the Utilities Management Plan:

- As built drawings are revised constantly as needed to reflect actual site conditions. This will be carried through continuously.
- Utility system revamp or change out those equipment/s that are beyond or have passed its useful life due to obsolescence and discontinuation of support.
- Procurement to replace MP2 software.

PERFORMANCE:

Are Utility System Failure/User Error Reports maintained and reported to Environment of Care Committee at least quarterly? Please explain:

Yes. Monthly Utility Management Reports are submitted to the Environment of Care Committee. These reports reflect failure trends, operator errors, component failures, parameter failures and impact to patient care services, biological indicator testing, indoor air quality and medical infectious waste processing.

Have there been any user errors/accidents over the course of the past year? Please explain and include actions taken to prevent recurrence:

The majority of errors were directly related to clogged sinks and water closets caused by stuffing excessive or foreign objects into drainage systems. In most all cases, these failures are reported immediately and technicians respond rather quickly to correct the situation thereby eliminating potential Infection Control issues. End Users are reminded to dispose of foreign objects in proper disposal bins or containers. There were no serious errors or accidents throughout the course of the year.

What problems or opportunities for improvement have been identified? Have actions been taken, documented and evaluated for effectiveness? Please explain:

Focused to improve the overall use of Failure Reports and Work Orders by End Users, and Interim Life Safety Measures (ILSM) / Infection Control and Risk Assessment (ICRA) Program implementation and adherence as it relates to Utilities Management. Refresher training covering the area of ILSM's is an ongoing measure and informational circulars are generated to staff at all levels and contractors. Areas of focus remains on failure and action plans covering air conditioning; elevators; water softener; water; LP Gas; diesel fuel; steam boiler liquid oxygen; nitrous oxide; medical air; medical vacuum; fire alarm; autoclave and isolation systems and carried through 2018. Generator repairs for the MRI unit has been dismal as none would provide. It is recommended that this unit be taken out on the monitoring list. Scheduled services by off island providers has been slow due to procurement processes and issues. To address other short falls it is recommended that other maintenance contracts are to be outsourced same as in previous past years. ***These are the Fire Alarm System (FAS), Fire Suppression System (FSS), Chemical Treatment Program, Kitchen equipment, chiller and condenser maintenance, medical air and vacuum system and Sterilizer System maintenance. Retainage of off island generator, Air quality, trace gas inspection, verifier and service and repair providers.***

What are the results of performance improvement projects selected for the year? How did these projects affect patient care delivery?

Completion of the Nurse Call System, Refurbishment of the Autoclave and Water Softeners, progress in the LED lighting upgrade reduced the relative failure. Projects slated for 2018 should further reduce failures. The performance improvement initiative remains the same which is carried through forward to 2018.

The matrix below reflects Performance Improvement monitoring activities and indicators detailing them into specific categories.

UTILITIES MANAGEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Volume of Regulated Waste	18,834	17,101	17,006	17,630	19,091	16,244	17,531	16,487	15,839	19,550	20,850	22,890
No. of Emergency Generator Testing Completed	24	24	30	24	24	30	24	22	25	20	20	25
No. of Emergency Generator Testing Scheduled	24	24	30	24	24	30	24	24	30	24	24	30
No. of Elevator Failures	3	3	11	5	5	7	9	4	7	11	10	5
No. of Utility Failures	51	86	78	138	146	75	83	69	62	141	76	101
No. of Utility Failures Due to Operator Errors	4	0	0	2	0	0	0	0	0	0	0	0
No. of Utility Failures that Impacted Patient Care	0	0	0	0	0	0	0	0	0	0	0	0
No. of Utilities with PM Completed	569	652	543	544	577	781	573	697	854	776	996	985
No. of Utilities Scheduled for PM	574	678	560	564	753	787	579	1016	1149	813	1006	1006
No. of Completed Sterilizer Testing	67	71	84	79	75	77	77	79	76	70	66	76
No. of Sterilizer Testing Scheduled	67	71	84	79	75	77	77	79	76	70	66	76

a. Volume of Regulated Waste

Monitoring activities reflect a steady stream of medical infectious waste generated. This year monthly average is slightly less than last year. 2017 (18,219 lbs.) < 2016 (18,873lbs)

b. No. of Emergency Generator Testing Scheduled/Completed

Testing average to same as last year at 94 %. This year it is expected that this will translate to 100% reliability due to service providers due late last year is now scheduled to come in mid of this first quarter to conduct their ITM.

c. No. of Elevator Failures

Elevator failures averaged 6.7 per month higher than the goal. This will improve if the modernization of units #1 and #2 will be implemented hopefully early this year.

d. No. of Utility failures

Though there was 1,106 utility failures this year none impacted patient care.

e. Utility Failures due to operator errors

Low number at 6 (six) eliminating potential Infection Control issues or patient impact.

f. Utility failures that impacted patient care

No failures directly impacting patient care.

g. No. of Utilities with Preventive Maintenance Scheduled/Completed

92% ration garnered this year meets and exceeded expectation.

h. Biological Growth Testing on Sterilizers Scheduled/Completed

All Biological Integrator tests conducted reflected negative results throughout the course of the year.

Has the facility selected processes for monitoring that need the most attention? Please explain.

Regulatory Monitors:

These tests are sole responsibility of the Operating Room staff to include inventory replenishment.

Indoor Air Quality Testing to include positive and negative air movement relationships will continue to be monitored to ensure compliance with CDC, OSHA and AIA guidelines.

Chemo waste generation and disposition is resolved.

Performance Monitors:

The number of elevator failures and elevator entrapments will continue to be monitored in an effort to identify opportunities to improve and minimize failure rates.

Fire Alarm/Fire Suppression System ITM will be pursued vigorously in conjunction with the intent or program for its upgrade and repair as it reached its useful life expectancy.

Any revisions in the utility systems management plan/program performance improvement indicators/measures for the upcoming year?

Proposed to drop under testing of generators, the MRI unit as it provides only for the MRI building which is separate from the main facility.

PLAN/PROGRAM EFFECTIVENESS:

Identify the utility systems management plan's/program's strengths and weaknesses (What has been accomplished, what opportunities for improvement were identified?):

Strengths identified under the Utilities Management Plan lie primarily with completing objectives as scheduled. However, weakness as in late payments to service providers has led to discontinuation of services at the time that they are supposed to be provided.

Weakness.

Our utilities are old, aging and therefore fragile.

Restricted by financial resources coupled with limited human resources hinders provisions of timely services and replacement of needed components. On the personnel note FM personnel are aging and leadership has been dismal. Though new personnel was acquired succession needs to be in place to provide continuity.

Strength

Though the organization, in most cases, manages to overcome financial restraints through support of federally funded projects and recent bond proceeds,

Facilities Maintenance Department (FM) must receive support from Leadership to increase or fill all its & identified vacancies of seven (7) Full Time Employees.

FM has implemented coverage of at least 2 personnel 24/7 during holidays, weekends, before and after normal working hours of 8 am to 5 pm. Leadership should revisit the recall and standby policies to

effectuate a more stable program to respond to trouble calls as FM Department seems to loose moral compared to how other departments are compensated for standby calls.

Personnel cross training is in effect which is an affirmative note as personnel readily accepts their assigned task..

What are the goals for the utility systems management plan/program for the upcoming year?

Focus will remain the same to improve effectiveness of the program design as outlined for 2018 and upcoming year and implementation can be measured on a number of dimensions:

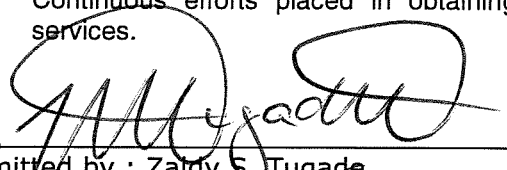
- Continued performance improvement monitoring activities
- Achievement of objectives outlined for the upcoming year
- Development and implementation of procedures and controls to minimize risks
- Identification of risks as they relate to utilities
- Continuous cross training development and staff education programs
- Adherence to the implementation and completion of the 11 (eleven) objectives.

What resources have been allocated toward these goals?


- Continued financially benefit from the Hospital Preparedness Program (HPP) Cooperative Agreement federally administered by the US Department of Health and Human Services (HHS) / Assistant Secretary for Preparedness and Response (ASPR) to partially fund ongoing improvement efforts to support the Utilities Management Program/Plan.
- Receipt of other funding, such as federal Compact Impact Funding from the U.S. Department of the Interior (DOI); and local General Obligation Bond (GOB) proceeds. These funding sources enable the organization to improve, replace or maintain its critical infrastructure and key resources that positively impact the overall operations of the Utility Management Program.

The following performance improvement activities are recommended for consideration by the organization as a priority for improvement and will be forwarded to the Environment of Care Committee, Performance Improvement Committee and to Leadership.

- Continue updating of as built plans.
- Risk assessment to ensure labeling controls for emergency shutdown
- Continuous efforts placed in obtaining and reinstating emergency repair and maintenance services.


Submitted by : Zaldy S. Tugade
Acting Facilities Maintenance Manager

Date: 01/23/2018


Approved by : Gordon M. Mizusawa
Chairperson, Environment of Care Committee

Date: 01/31/2018