Title: Preventive Maintenance Program
Department: Engineering Services
Effective Date: February 28, 2019

PURPOSE

Preventative Maintenance (PM) is the systematic care and servicing of buildings and equipment for the purpose of maintaining them in satisfactory operating condition by providing for systematic inspection, detection, and correction of failures either before they occur or before they develop into major defects. This SOP clarifies and documents the CSUN PPM PM program.

RESPONSIBILITY

PPM Engineering Services, except as noted herein, is responsible for the development and implementation of this entire program for all state-owned buildings and facilities and selected auxiliary buildings and facilities.

Definitions:
Assets – A Menu heading in AZZIER that allows access to the "Equipment" and "Locations" sub menus.

Computerized Maintenance Management System (CMMS) – Any software system that assists with the development and tracking of Maintenance. CSUN PPM uses a product called AZZIER for this purpose.

Equipment – AZZIER database table that contains a real listing of equipment and the form used to enter and update equipment records in AZZIER.

Group I Equipment – Equipment and appurtenances permanently (in most cases) attached to a building or facility. In general, any equipment that arrived with an original building and is not considered part of a specialty lab or process.

Group II Equipment – Anything that is not Group I Equipment, that is it is not permanently a part of any building or facility (regardless of how long the equipment has been in place).

Locations – AZZIER database table that contains all possible equipment locations.

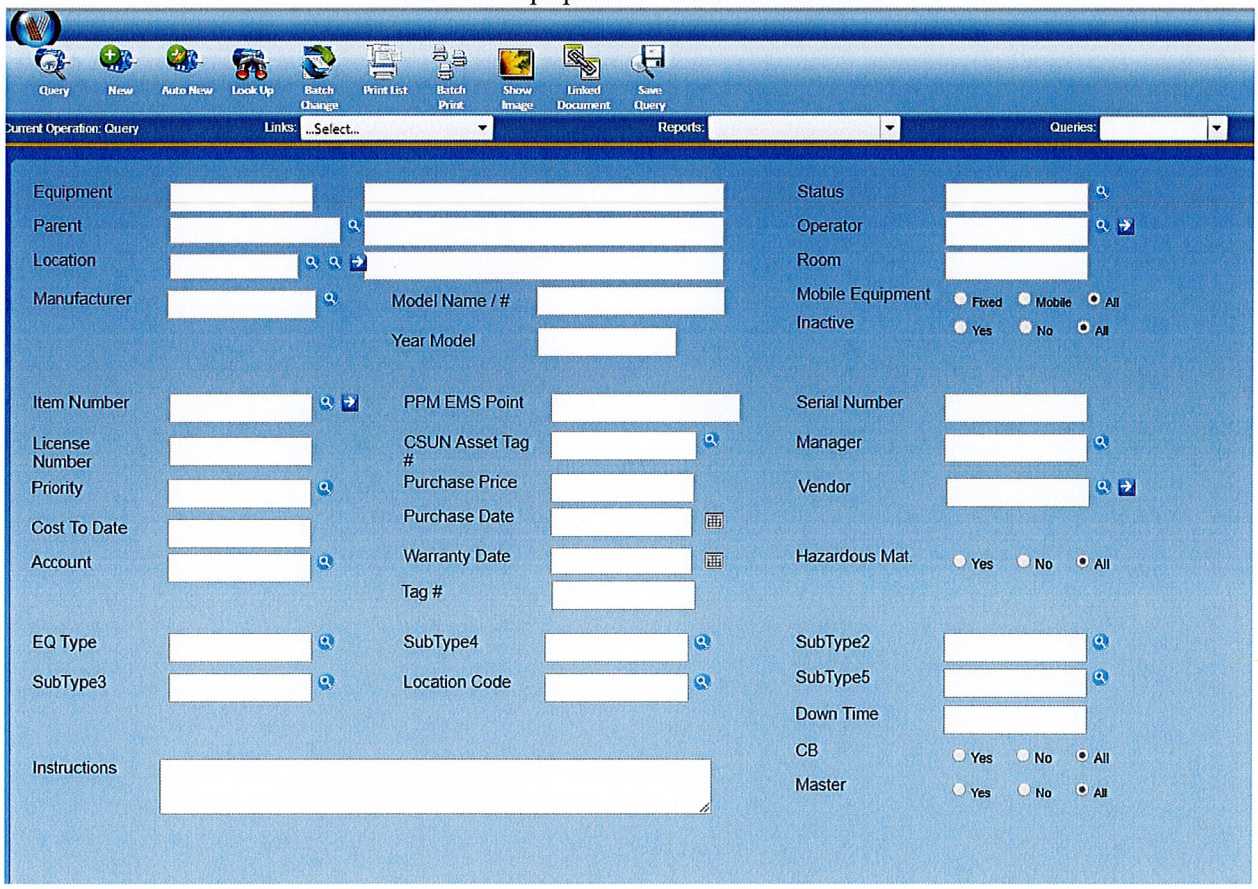
PMs – AZZIER database table that contains the Work Order creation information needed to initiate a Preventive Maintenance Work Order.

Procedures – AZZIER database table that contains a listing of Tasks, Labor and Material available for association with a Preventive Maintenance record.

PROCEDURES

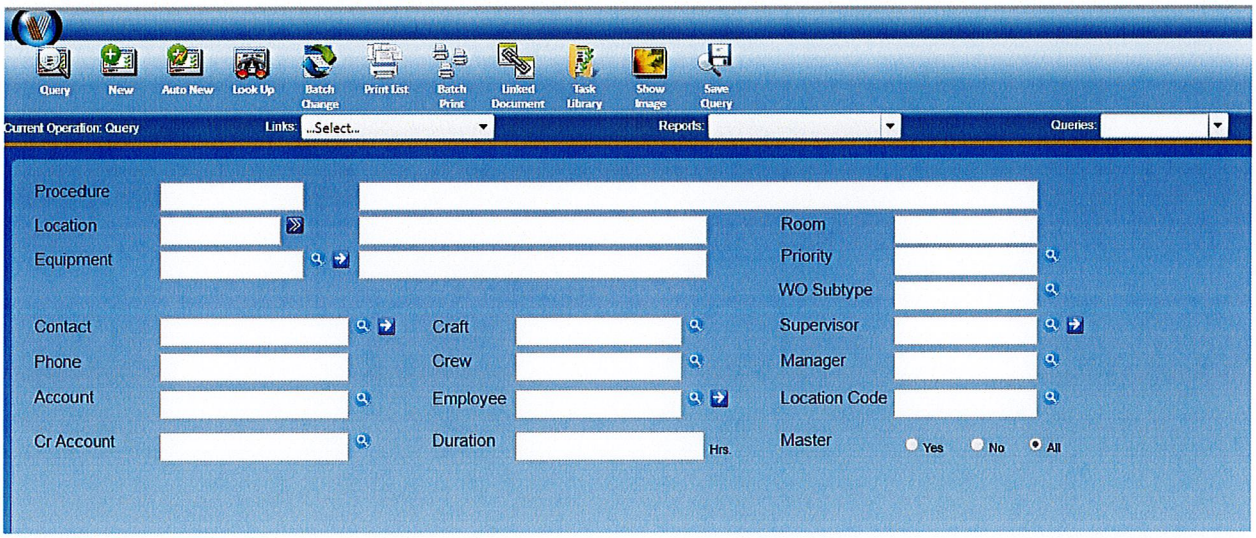
As needed, Engineering Services personnel will identify and verify the details of new and/or existing real equipment in buildings or other areas of the CSUN campus. They will enter all relevant information on identified equipment into the following tables of AZZIER.

"Assets - Equipment" table in AZZIER



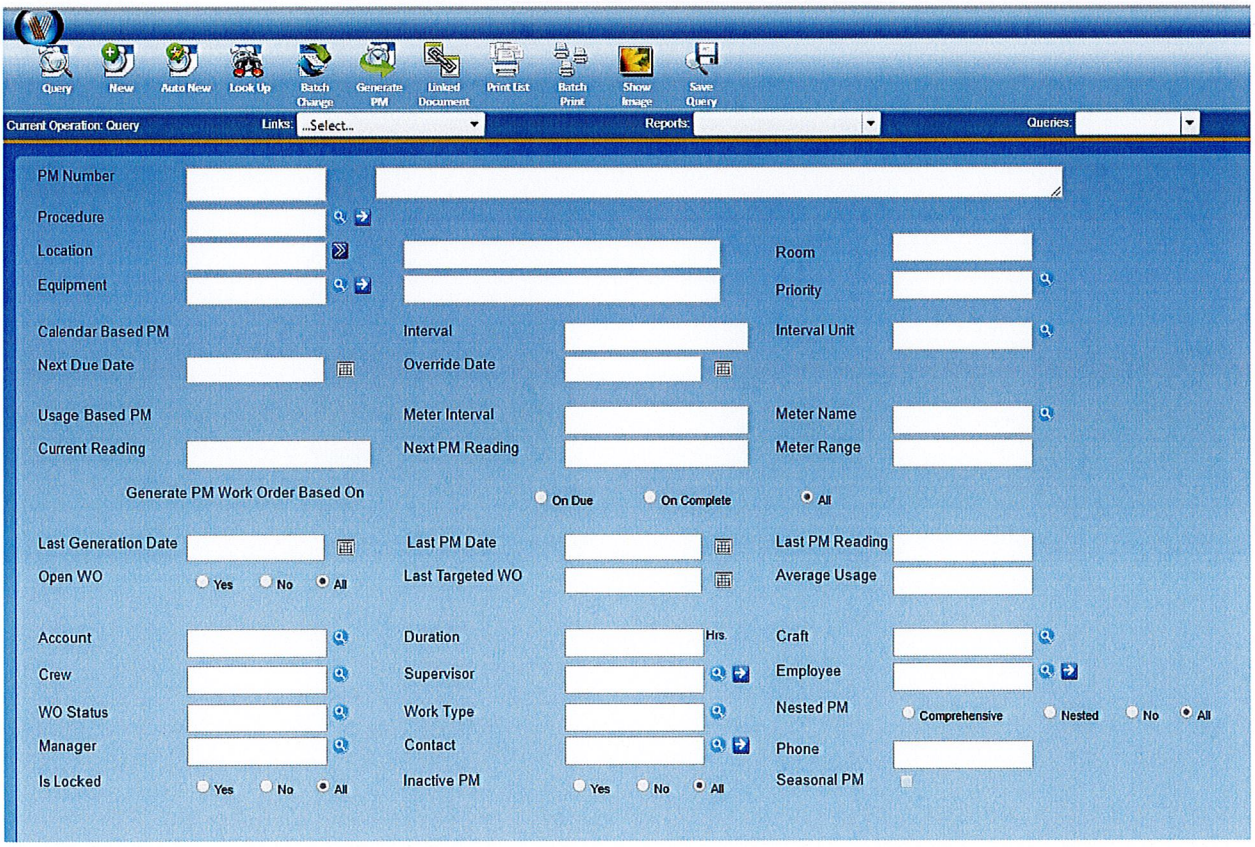
Fields typically filled out or populated include Equipment, Description, Status, Location, Location Description, Room, "Mobile Equipment" check, "Inactive" check, PPM EMS Point, Priority, and EQ Type (i.e. Group 1).

"Maintenance – Procedures" table in AZZIER



Fields typically filled out or populated include Procedure, Request, Craft, and Crew. The PM Table also contains a listing of Tasks and Materials associated with the procedure.

"Maintenance – PMs" table in AZZIER

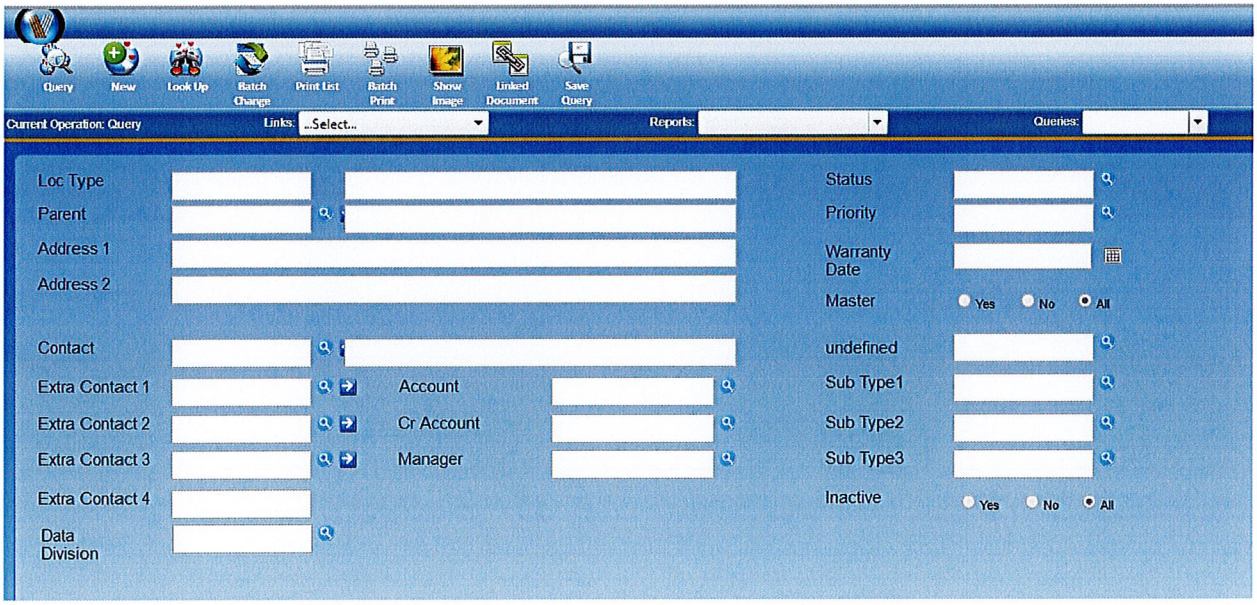


Fields typically filled out or populated include PM Number, PM Work Request, Procedure, Location, Location Description, Room, Equipment, Description, Interval, Interval Unit, Next Due Date, Last Generation Date, Last PM Date, "Open WO" check, Last Targeted WO,

Duration, Craft, Crew, Work Type, "Nested PM" checkbox, "Is Locked" checkbox, and "Inactive" checkbox. The PM Tab also contains a listing of Tasks and Materials suggested to complete the PM.

As needed, PPM personnel will also update and maintain the "Assets – Locations" table in AZZIER.

"Assets - Locations" table in AZZIER



Preventive Maintenance Work Orders will generate as their date and frequency indicate in AZZIER. They will then be handled, worked on and completed (as with any other Work Order) by the responsible Engineering Services Trade Shop as identified on the Work Order.

Intervals for the generation of Preventive Maintenance Work Orders for new, modified, relocated, refurbished or newly identified Group I Equipment will be set and handled as identified in PPM SOP 18-2004 Preventive Maintenance Intervals.

Preventive Maintenance Program reviews will be conducted in accordance with PPM SOP 18-2004 Preventive Maintenance Intervals.

REFERENCES

Executive Order 847 – Facilities Maintenance

PPM SOP 18-2004 Preventive Maintenance Intervals

NASA Standardized Facilities Preventive Maintenance Work Task Guide - https://www.hq.nasa.gov/office/codej/codejx/Assets/Docs/Standardized%20FacPreventiveMaintWorkTaskGuideJun01.pdf.

APPROVED _____ 02-23-19

Jason R. Wang, Senior Director — Date

APPENDIX

APPENDIX A
PM EQUIPMENT AND SUGGESTED MAINTENANCE INTERVALS

- **Air Compressors** – Semi Annually +. Centrifugal, Rotary Screw, and Reciprocating Piston Air Compressors.
- **Alarm Systems** – Quarterly.
- **Backflow Preventers** – Annually.
- **Circuit Breakers and Switchgear** – Every 3 years +. Circuit Breakers: Low Voltage (600 Volts and below) – Air and Molded Case. Medium Voltage (601 to 69,000 Volts) – SF6, Oil Filled, Air, and Vacuum. High Voltage (above 69,000 Volts) –SF6 and Oil Filled. Switchgear: Low Voltage and Medium Voltage.
- **Cranes, Elevators and Lifts –** Monthly **+.** Cranes and Hoists, Lift Platforms, Elevators, Escalators, Slings.
- **Electrical Power Low Voltage Distribution** – Annually +. 240/120 Volt Electrical Panel, 600 Volt Electrical Panel, 240/120 Volt Disconnect Switch, 600 Volt Disconnect Switch, 600 Volt Motor Control Center.
- **Electric Power Distribution Relays/Meters** – Annually +. Solid-state; Protective Relays, Metering, and Event Recording. Electromechanical; Protective Relays. Analog; Metering and Event Recording.
- **Electrical Transformers** – Annually +. Facility Transformers (Dry Type and Oil Filled), Distribution Transformers (Dry Type, Silicone and Mineral Oil Filled), Power Transformers (Oil Filled).
- **Emergency Exits** – Annually.
- **Filters** – Annually. Water Cooler, Process Water Filter, and Air-Cooled Equipment/Air Compressors.
- **Fire Detection/Protection** – Annually. Fire Detection Systems (control panels, smoke and heat detectors), Fire Protection – Water Systems, Wet and Dry Chemical.
- **Fire Extinguishers** – Monthly +.
- **Interior Area Emergency Lighting** – Annually.
- **Overhead Doors** – Annually.
- **High Voltage Electric Power Distribution Switches** – Annually. Medium Voltage (601 to 69,000 Volts) – air knife switch, disconnect air switch, load-break SF6, load-break oil, load-brake vacuum.
- **HVAC** – Quarterly +. Direct Exchange Air Conditioning (A/C) Units (Room A/C Units, Heat Pump Units, Split-System Condenser Units), Package A/C Units, Air Handling Units and Fan Coil Units, Fans, Variable Air Volume (VAV) Terminals, Heaters, Chillers (Centrifugal, Reciprocating, Rotary Screw, and Absorption).
- **Lighting –** Monthly.
- **Motors** – Annually +.
- **Pumps** – Semi Annually +.
- **Valves** – Annually. Fire Control Valves, Isolation Valves, and Control Valves.