	SYSTEM PROCEDURE Preventive Maintenance	
	REVISION: 05	PROCEDURE NO.: 6

1. PURPOSE

- 1.1 The purpose of this procedure is to provide for a system and instructions, and to assign responsibilities for the maintenance of Key Process Equipment.

2. SCOPE

- 2.1 This procedure applies to process machines and equipment.
- 2.2 This procedure concerns the Plant Engineering Department.


3. PROCEDURAL REQUIREMENTS and RESPONSIBILITIES

3.1 Key process equipment

- 3.1.1 Plant Engineering is responsible for identifying key process equipment to be included in a formal, planned preventive maintenance program.
- 3.1.2 The following criteria shall be used for determining key process equipment:
 1. Importance and / or uniqueness of equipment in the production chain.
 2. Complexity of the machinery where a reasonable benefit will result from formal preventive maintenance.
 3. Value of the machine as a capital purchase.
 4. Where the machine performance is critical to product conformance.
 5. Where no reasonable redundancy or backup production method exists.
- 3.1.3 Plant Engineering will review and update at least every calendar year the identified key process equipment.
- 3.1.4 The President and the Plant Engineer have the responsibility to determine the necessary resources for the implementation of the PM program.
- 3.1.5 The qualification of the new equipment for the key process equipment will be defined within 90 days from the day it is commissioned for use.

3.2 Maintenance plan and schedule

- 3.2.1 The preventive maintenance program is scheduled and tracked on a CMMS program from "eMaint". The program contains the list of key process equipment, PM scheduled activities, as well as reactive work orders, repair, and PM records.
- 3.2.2 For each identified key process equipment, the CMMS program will establish the scope and frequency of routine maintenance activities and inspections. Equipment manufacture's recommendations along with experience with the equipment will be used to plan the preventive maintenance scheduled activities.
- 3.2.3 All key process equipment and machines included in the ISO PM program are inspected and serviced at prescribed intervals according to "Scheduled Activities" for the PM.

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3.2.4 Scheduled preventive maintenance activities and reactive work orders for key process equipment will be recorded and retained in the CMMS as either a “Closed WO” or “Closed PM”.

3.3 Equipment performance monitoring


3.3.1 In order to identify equipment problems at an early stage and prevent breakdowns, process equipment operators are instructed to report any abnormal functioning to their immediate supervisor or to the department manager. Supervisors or managers, or their designees are to report them to the maintenance depart via the eMaint CMMS work request system.

4. ASSOCIATED DOCUMENTS




- 4.1.1. “eMaint” CMMS for ISO PM Program (digital data) Cloud-based system.
- 4.1.2. Prior “ISO PM Program” in the Plant Engineering folder (Engr-1). The implementation of the eMaint CMMS system was effective March 31, 2024 and all previous PM records are available on the “ISO PM Program” on the Plant Engineering folder.

5. REVISION HISTORY

REVISION LEVEL	DATE OF REVISION	SECTIONS	DESCRIPTION OF CHANGE
00	04/27/09	All	Initial release
01	4/17/13	3.2.3 3.3.1	Add option for log entries. Change reporting from maintenance to supervisor/manager
02	5/29/14	2.2 3.1.1 3.3.1	Change to Plant Engineering Dept. Remove old 3.1.1. Add report to maintenance staff.
03	6/12/2017	All	Rewrite of procedure to reflect current practices.
04	1/29/18		Was Procedure 6.3
05	5/15/2024	3.1.4, 3.1.5, 3.2, 3.3, & 4	Rewrite of procedures to reflect current practice

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6. AUTHORIZATION

POSITION	HELD BY	AUTHORIZATION SIGNATURE OR INITIALS
Prepared By: Plant Engineering Manager	Andy Hagen	
Senior Management Representative: Chief Financial Officer	Paul Wickland	 <small>Paul Wickland (Apr 1, 2025 11:19 CDT)</small>
Management Representative:	Samir Patel	 <small>Samir Patel (Apr 1, 2025 11:43 CDT)</small>