



**DEPARTMENT OF CORRECTIONS  
MONTANA STATE PRISON  
OPERATIONAL PROCEDURE**

Procedure:	<b>MSP 2.1.1 MSP MAINTENANCE</b>
Effective Date:	March 3, 2003 <span style="float: right;">Page 1 of 7 and no Attachments</span>
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Reference(s):	DOC Policy 2.1.1
Signature:	/s/ Jim Salmonsens / Warden

**I. PURPOSE**

Outline the scheduled and necessary maintenance of the Montana state Prison (MSP) physical plant and its included systems.

**II. DEFINITIONS**

**Air Compressor** – equipment that supplies air pressure to pneumatic controls.

**Air Dryer** – equipment that removes moisture from compressed air before it is sent to a pneumatic control system.

**Air Handler** – equipment that supplies forced air into a building or other defined area.

**Back Flow Preventer** – a mechanical anti-contaminant device that allows water to flow in only one direction.

**Blow Down** – the discharge of steam and water to eliminate sludge buildup.

**Disability** – see DOC 3.3.15, Americans with Disabilities Act (ADA) Offender Accommodations, for the definition and an explanation of disability.

**Exhaust Fan** – equipment that evacuates air from a building or other defined area.

**Man Door** – a door that provides access to the interior of the boiler.

**Preventative Maintenance (PM)** – proactive maintenance of the physical plant, systems, and related equipment intended to prevent, rather than merely react to, malfunctions and other maintenance-related problems.

**III. PROCEDURE**

**A. General Requirement**

1. The MSP maintenance program organizes and schedules an orderly and systematic process to ensure that, at a minimum, all required emergent and preventative maintenance is conducted in the following areas:
  - a. heating, ventilation, and air-conditioning systems;
  - b. plumbing systems;
  - c. electrical systems;
  - d. fire and life safety systems;
  - e. security and emergency systems/equipment;

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- f. general maintenance and sanitation;
  - g. deficiencies noted during scheduled inspections and
  - h. access for inmates with disabilities and compliance with relevant standards.
2. The MSP Maintenance Services Manager will assign individual preventative maintenance responsibilities.
  3. The maintenance management team administers all maintenance at MSP and oversees day-to-day operations, scheduling, assignments, and review. They will conduct annual reviews of maintenance files to ensure that all equipment/systems are being properly maintained.
  4. maintenance line staff are divided into two general groups:
    - a. crafts which includes the following:
      - 1) electricians;
      - 2) plumbers;
      - 3) carpenters;
      - 4) painters;
      - 5) millwrights;
      - 6) HVAC – Refrigeration
      - 7) Boilermaker
    - b. maintenance supervisors which include the following:
      - 1) custodial supervisors;
      - 2) electronics technician
      - 3) general maintenance staff.
  5. The MSP Maintenance Services Manager will ensure each newly submitted work order and maintenance request is processed, checked for accuracy, and prioritized each workday. The necessary work will then be assigned to designated maintenance staff for follow up:
    - a. all maintenance inspections must be documented in logbooks and/or on forms that include the date of the inspection, the individual(s) performing the inspections, significant findings, and repairs to be made. This information will be forwarded to the Maintenance Services Manager to be maintained, and will serve as permanent records of inspections and repairs; and
    - b. equipment that affects human habitation will be a priority for frequent inspections and preventative maintenance.
  6. Sanitation inspections and procedures will be conducted in accordance with DOC Policy 4.4.2, Facility Sanitation and Pest Control.

**B. Preventative Maintenance**

1. Preventative maintenance for heating, ventilation, and air conditioning (HVAC) is as follows:
  - a. air handlers; air conditioners; supply and return fans. The inspections are as follows:
    - 1) six-week inspections: the assigned maintenance inspector(s) will change air filters;
    - 2) monthly inspections: the assigned maintenance inspector(s) will:
      - a) check for proper operation;
      - b) replace and clean intake filters; and
      - c) check and adjust drive belts.
    - 3) annual inspections: the assigned maintenance inspector(s) will:
      - a) check for proper operation;

- b) replace and clean intake filters;
  - c) check and adjust drive belts;
  - d) lube drive motor bearings; and
  - e) wash and clean inside of unit.
- b. air compressors inspections are as follows:
- 1) quarterly inspections: the assigned maintenance inspector(s) will:
    - a) check for proper operation;
    - b) replace intake filters;
    - c) check oil sump;
    - d) lift safety release valve;
    - e) check control circuit; and
    - f) wipe compressor unit down.
  - 2) annual inspections: the assigned maintenance inspector(s) will:
    - a) replace intake filters;
    - b) check oil sump;
    - c) lift safety release valve;
    - d) check control circuit;
    - e) wipe compressor unit down;
    - f) check for proper operation; and
    - g) drain and replace crankcase oil.
- c. air dryers' inspections are as follows:
- 1) quarterly inspections: the assigned maintenance inspector(s) will:
    - a) check for proper operation;
    - b) clean condenser coils;
    - c) clean and replace oil separator and filter; and
    - d) wipe unit down.
  - 2) annual inspections: the assigned maintenance inspector(s) will:
    - a) check for proper operation;
    - b) clean condenser coils;
    - c) clean and replace oil separator and filter; and
    - d) wipe unit down.
- d. exhaust fans inspections are as follows:
- 1) quarterly inspections: the assigned maintenance inspector(s) will:
    - a) turn fans on at the control panel downstairs, then go to the roof and check for proper operation;
    - b) inspect unit; and
    - c) clean unit.
  - 2) annual inspections: the assigned maintenance inspector(s) will:
    - a) turn fans on at the control panel downstairs, then go to the roof and check for proper operation;
    - b) inspect unit; and
    - c) clean unit.
- e. boiler inspections are as follows:
- 1) daily inspections: the assigned maintenance inspector(s) will check the proper operation of the boiler;
  - 2) weekly inspections: the assigned maintenance inspector(s) will:
    - a) test fire safeties; and

- b) check for proper function of low-water cut-off, high fire, low gas pressure, and related systems.
- 3) quarterly inspections: the assigned maintenance inspector(s) will:
  - a) open for inspection;
  - b) clean mud drum;
  - c) clean steam drum; and
  - d) test fire safeties.
- 4) annual inspections: the assigned maintenance inspector(s) will:
  - a) lift safety valves in addition to procedures listed under daily, weekly, and monthly inspections; and
  - b) check for proper function of low-water cut-off, high fire, low gas pressures, and related systems.
- f. expansion and condensate return tanks inspections are as follows:
  - 1) weekly inspections: the assigned maintenance inspector(s) will check water control levels; and
  - 2) monthly inspections: the assigned maintenance inspector will:
    - a) check water control levels; and
    - b) blow down bottom.
- g. heat exchanger inspections are as follows:
  - 1) quarterly inspections: the assigned maintenance inspector(s) will:
    - a) check for leaks;
    - b) check thermometers for indication of leaking; and
    - c) de-scale if temperature lag is noted.
  - 2) annual inspections: (same as quarterly inspection procedure).
- h. Furnace inspections are as follows:
  - 1) quarterly inspections: the assigned maintenance inspector(s) will observe for proper operation; and
  - 2) annual inspections: the assigned maintenance inspector(s) will:
    - a) observe for proper operation;
    - b) replace and clean filter element;
    - c) inspect and clean burner; and
    - d) check flue for obstruction.
- 2. Preventative maintenance for plumbing is as follows:
  - a. water heaters inspections are as follows:
    - 1) daily inspections: the assigned maintenance inspector(s) will, during the heating season, check basement for leaks;
    - 2) weekly inspections: the assigned maintenance inspector(s) will check basement for leaks; and
    - 3) quarterly inspections: the assigned maintenance inspector(s) will:
      - a) observe for proper operation;
      - b) inspect for leaks;
      - c) check thermometers for indications of scaling; and
      - d) de-scale if temperature lag is evident.
  - b. wells inspections are as follows:
    - 1) weekly inspections: the assigned maintenance inspector(s) will:
      - a) check water pumps for proper operation;
      - b) grease pumps; and

- c) check automatic pump controls.
    - 2) the assigned maintenance inspector will chlorinate or decontaminate as needed.
  - c. back flow preventers, the assigned maintenance inspector(s) will test back flow devices annually;
  - d. sewage lagoons, the assigned maintenance inspector(s) will check for normal operation and check aerators daily.
3. Electrical preventative maintenance is as follows:
  - a. the assigned maintenance inspector(s) will conduct random inspections of all electrical systems, and check for normal operation;
  - b. annually: the assigned maintenance inspector(s) will check the following items/areas on all distribution lines:
    - 1) conductors;
    - 2) insulators;
    - 3) cutout switches;
    - 4) condition of power poles; and
    - 5) guy wires.
4. Gate operations preventative maintenance is as follows:
  - a. monthly inspections: the assigned maintenance inspector(s) will check for proper operation;
  - b. quarterly inspections: the assigned maintenance inspector(s) will:
    - 1) check for proper operation;
    - 2) check chain tension;
    - 3) check chain sprockets;
    - 4) check drive motors;
    - 5) check overhead tracks and rollers, and lube them as needed; and
    - 6) check gearbox oil levels.
5. Buildings; Offices; Housing Units: In addition to requiring all staff to conduct daily inspections of their assigned work areas/offices, and report all needed general maintenance, the following scheduled inspections of these areas will be conducted by assigned staff:
  - a. weekly inspections: the assigned inspector(s) will inspect inmate living areas including:
    - 1) doors, windows, walls, floors, grilles, and other surfaces and barriers;
    - 2) lights;
    - 3) plumbing (for leaks, malfunctions, missing pipe insulation, and other problems); and
    - 4) removing obstructions in required accessible routes and clear floor space and other barriers to inmates with disabilities.
  - b. monthly inspections: the assigned inspector(s), in addition to inmate living areas, will inspect all other areas and buildings, including:
    - 1) doors, (including force required to open door if door is used independently by inmates), windows, walls, floors, grilles, and other surfaces and barriers;
    - 2) lights; and
    - 3) plumbing (for leaks, malfunctions, and other problems).
    - 4) ensuring that each classroom or other common area used by inmates has at least one accessible table or workstation of each type provided.
  - c. annual inspections: the assigned inspector(s) will inspect all walkways used by inmates to ensure that there are no changes in level greater than ¼”.
6. Walk-in Coolers:

- a. daily inspections: assigned staff will conduct daily inspections of walk-in coolers, log their temperatures, and check for any problems, submitting a maintenance work order for any necessary repairs or adjustments;
  - b. weekly inspections: the maintenance management team must verify that daily inspections are being conducted by assigned staff; and
  - c. quarterly inspections: the maintenance refrigeration technician will:
    - 1) check the defrost cycle.
    - 2) clean condenser coils.
    - 3) clean evaporator coils.
    - 4) check door seals.
7. Exhaust Hoods:
- a. monthly inspections: food service staff will inspect and clean the exhaust hood; and
  - b. annual inspections: assigned maintenance staff will:
    - 1) inspect and clean the ductwork;
    - 2) inspect and clean the fans, motors, and motor housings; and
    - 3) inspect and clean exhaust hoods.

### C. Security and Life Safety Equipment/Systems:

1. Fire detection panel(s):
  - a. monthly inspections: the assigned maintenance inspector will:
    - 1) check fire detection panels throughout the MSP;
    - 2) clean dirty detector heads; and
    - 3) the equipment vendor will provide technical work on the system.
  - b. annual inspections: maintenance staff will inspect all fire detection panels.
2. Locks:
  - a. daily inspections: all staff will inspect locks as they use them, check for any problems, submitting a maintenance work order to Lock Shop staff for any necessary repairs or replacements; and
  - b. semi-annual Inspections: the assigned inspectors will:
    - 1) inspect door lock device in housing sections;
    - 2) inspect and adjust door position switches;
    - 3) check operation of deadlock function; and
    - 4) audit all locking devices.
3. Emergency Power Generators: emergency power generators will be tested according to manufacturer recommendations.
  - a. semi-weekly inspections twice each week during the heating season, assigned maintenance inspectors will:
    - 1) test fire all emergency power generators;
    - 2) check coolant, oil, and fuel levels;
    - 3) check batteries; and
    - 4) check block heaters.
  - b. weekly inspections: during the non-heating season, assigned maintenance inspectors will:
    - 1) test fire all emergency power generators;
    - 2) check coolant, oil, and fuel levels;

- 3) check batteries; and
  - 4) check block heaters.
4. Perimeter Security Fence Protection System (FPS):
    - a. daily inspections: assigned maintenance staff will conduct an automated status check of the system each day. Discrepancies will be noted on a printout. A maintenance work order must be submitted for any necessary repairs; and
    - b. semi-annual inspections:
      - 1) assigned maintenance staff will check the following to ensure proper operation:
        - a) FPS sensitivity;
        - b) FPS rap count;
        - c) taut-wire systems will be checked for proper tension; and
        - d) microwave system will be checked for proper operation.

#### **D. Vender Inspections**

1. In addition to internal inspections, the following will be inspected by outside agencies or vendors as required, due to technical expertise requirements, liability considerations, or possible conflict of interest.
  - a. boilers;
  - b. elevators;
  - c. fire suppression systems;
  - d. fire detection equipment;
  - e. fire safety inspections; and
  - f. food service.

#### **IV. CLOSING**

Questions concerning this operational procedure will be directed to the Maintenance Services Manager.

#### **V. ATTACHMENTS (none)**