


**UNIVERSITY OF TOLEDO
FACILITIES AND CONSTRUCTION**

Section:	Administrative	Procedure Number:	ADM-03
Subject:	Loss of Steam Pressure	Effective Date:	January 1980
		Revised Date:	December 2019
Facilities Officer:		Reviewed Date:	December 2019

Standard Operating Procedure

In the event of a total or partial loss of steam pressure (below 90 p.s.i) immediate steps will be taken to notify personnel and to minimize the time needed to restore steam pressure service to the disrupted areas.

Purpose

To provide a systematic approach to restoring steam pressure by outlining specific procedures which are designed to enhance communication and the safety and protection of all occupants affected by a loss or reduction of steam pressure service. A loss of steam pressure that significantly impacts the clinical operations may necessitate calling a code Copper (EP-08-014 and appendices).

Procedure

1. Any person experiencing either a loss or reduction in steam pressure should notify Central Control at extension 383-5353 or 383-4298.
2. The Central Control Operator on duty shall immediately verify, through the building automation system, the current available steam pressure.
3. The Central Control Operator on duty shall notify additional maintenance staff on duty and the Campus Police Dispatcher to make them aware of the situation and request that the maintenance staff visits to investigate for problems.
4. The investigating personnel shall review the existing conditions where the loss of steam was reported and inform Central Control of any unusual conditions.
5. The Central Control Operator on duty shall evaluate the problem and inform the responding on-duty personnel to make any needed repairs, if possible. If immediate repairs cannot be made, the Central Control Operator on duty shall implement the following notification protocol:

	OFFICE PHONE	CELL PHONE
Mike Nowicki, Manager, Mechanical Maintenance & Joint Commission Compliance	419-383-4913	419-367-1602

6. In the event there is a shutdown resulting in the total loss of steam within the institution, the Central Control Operator shall notify the Campus Police Dispatcher, extension 2600 (stat), and report the nature of the emergency; who will in turn notify the following individuals, in the order listed below:
 - a) Telephone Operator
 - b) Director of Safety & Health
 - c) Appropriate Building Coordinators (House Supervisor) refer to (S-08-027)
 - d) Managers of effected area.
 - e) Hospital Administrator on call
7. The Central Control Operator upon further direction from a Maintenance Manager will begin the call-in procedure for additional facilities personnel in consecutive rotation, as outlined in the on-call list located within Central Control.
8. The Central Control Operator on duty may have to periodically relate the status of the steam outage to the Building Coordinators, in preparation for announcements to be made over the P.A. system by the Telephone Operator.
9. The Director, Facilities Maintenance, and Director of Energy Management and responding supervisory staff, shall evaluate the severity of the problem and the appropriate action in restoring normal steam generation service.

The main criterion for determining the course of action will be the time table for restoration of the normal steam generation service and an evaluation of the capability to maintain an adequate heat within the buildings and sterile processing capacity.

The actual need for equipment and action required will have to be based on the extent of damage incurred to the steam generation system.
10. The Director, Energy Management along with Manager, Mechanical Maintenance will implement the plan of action and estimate time required to restore normal steam producing capability.
11. If deemed necessary to meet the code copper emergency, as determined by Hospital Administration and the Director, Facilities Maintenance, in conjunction with the Senior UT Campus Police Officer on duty, House supervisor and representative from Safety and Health. An incident command structure shall be established per procedure EP-08-14.
12. Once a steam emergency has been declared, the Director, Facilities Maintenance, or designate, shall then inform the Telephone Operator to inform the following: Refer to building coordinators per procedure EP-08-14.
13. Building Coordinators, or their designee, shall activate secondary control centers in the lobby of each respective building. It shall be the responsibility of the Building Coordinators to inform the occupants of their respective building of the emergency. The Building Coordinators shall be responsible for implementing the emergency plans as set forth from the Central Control Center.
14. Should it be deemed necessary to secure auxiliary steam generation equipment and water treatment, the following procedures will be implemented and must be approved by the AVP of Facilities & Construction and the Director, Facilities Maintenance.
 - A. Call a mechanical contractor to install the following piping in the airway west of the Facility Support Building.

- 1) Two (2) eight inch (8") steam lines with valves on either top or bottom steam line and a shut off valve going to the Power House (if needed).
 - 2) One (1) six inch (6") tie in to pumped condensate line with a shut off valve going to the Power House.
- B. Tie in two (2) two and one half inch (2 1/2") water lines above ground from the fire hydrant located on the northwest side of the Facilities Support Building to the temporary boiler.
- C. The mechanical contractor should be made available to the in fuel, compressed air, water, blow down lines, and electricity to the portable steam generating equipment when it arrives. Electrical power may be supplied at the main sub-station in the Health Science Building. Mechanical contractors include:

1.	Dunbar Mechanical 2806 Reynolds Rd. Toledo, OH 24/7 Service line: 419-537-1900	
2.	Dimech Services, Inc. 5505 Enterprise Blvd., Toledo, OH 24/7 Service Line: 419-727-0111	

Rental of steam generating equipment, may be 30,000 lb/hr., 250 p.s.i., 36000 lb/hr., 250 p.s.i., if available. It will require two (2) portable steam generators and associated water treatment.

If 60,000 lb./hr. at 250 p.s.i. is available, it will only require one (1).

The steam valves to buildings other than the Hospital, Dowling Hall and Kobacker Center should be closed at this time. Other facilities may be reopened as deemed necessary once system is stabilized.

Rental of steam generators may be from the following:

1. Indeck Power Equipment Company
 1111 S. Willis Avenue
 Wheeling, IL 60090
 24/7 Service Line: (800) 446-3325
2. Ivan Ware & Son, Inc.
 4005 Produce Road
 Louisville, KY 40232
 Phone: 888-907-9273

The steam generators will require propane for ignition. Number 2 fuel oil and an air compressor for atomizing fuel.

Propane: Six (6)-100 lb. cylinders

1. Surburban Propane
 9859 County Rd. 313
 Findley, OH
 Daytime Phone: 419-422-4373
 After Hours: 800-782-8722

Number 2 Fuel Oil: Tanker truck-to be dropped, 4,000, 6,000 or 10,000 gallons.

1. **Brahier Oil**
2450 Hill Avenue
Toledo, OH
Phone: 419-531-2218 (Jim) (24 hours notice)

Air Compressors: Size-600 c.f.m. at 100 lb. p.s.i.

1. **Howard T. Moriarity Company**
143 Broadway
Toledo, OH
24/7 Service Line: 419-243-5544 or 419-243-3111