



## Utilities and Maintenance Building System Outage Procedure

October 21, 2019

Rev. 5

### **Purpose:**

This procedure covers the operation of building systems under the auspices of the University of Notre Dame Utilities & Maintenance Department. Building system outages are typically required for the purposes of construction, renovation, isolation, maintenance, replacement or repairs to existing systems, sub systems or component parts thereof. Systems included under this document include but are not limited to:

<u>Service</u>	<u>Comments</u>
Air Handling and Exhaust Systems	
Steam	70 or 10 psig
Condensate	
Heating Hot Water	120 degrees F Supply
Domestic Cold Water (both Hard and Soft)	
Domestic Hot Water	Supply and return
Chilled Water	Supply and return
Compressed Air	Centrally or locally produced
Electricity	Primary (4,160V) or (12,470V)
Electricity	Secondary (480/277/240/208/120V)
Natural Gas	
Vacuum Systems (Locally produced)	
Laboratory Gas	
Sewers (Storm and Sanitary)	

### **Procedure:**

1. All building system outages that will result in an interruption of normal system service shall be **reviewed, approved, and implemented with the full knowledge and involvement of the appropriate Utilities & Maintenance Department personnel.** Exceptions to this include the following:
  - a. Isolation valves, switches or other such devices that isolate a point of service device that will result in only the loss of service of the specific piece of equipment, fixture or other device, which in and of itself will not create any additional loss of service and for which the parties affected by said device have been duly informed of the impending outage, its duration and effects. Examples of such situations would include but not be limited to;
    - i. Plumbing Fixtures (sinks, toilets, showers, drinking fountains, etc.)
    - ii. Redundant devices such as pumps, fans or other equipment that are being appropriately backed-up by operational duplicate devices (note notification of an appropriate Utilities & Maintenance supervisor (systems, controls or distribution) is required prior to performing any work)
    - iii. Individual VAV boxes, air terminals, reheat valves, coils, radiators, fan coils, unit heaters or other HVAC devices controlling a single space.

- iv. Lighting and Power circuits serving a single space or device including discrete electrical devices such as occupancy sensors, light fixtures, light switches and receptacles.
    - b. Irrigation water services, which may be operated by the Landscape Service Department or their designees.
    - c. Fire protection water services, which may be operated by the Fire Department or their designees
  2. All operations that will result in a service outage affecting an entire system, significant portion thereof or impacting the normal operation of a facility shall be scheduled in advance and shall include a 48 hour notice to facility users and key service providers using the Utilities & Maintenance Department Scheduled Outage Notification Procedure.
  3. The appropriate **Maintenance, Building Controls and/or Distribution Group Supervisors shall be contacted for approval prior proper notifications and operations** that affect the delivery of services to facilities. In particular all actions affecting building HVAC operations must occur with the prior knowledge and approval of the Building Controls Group.
  4. All isolation operations shall comply with proper Lock-Tag-Try procedures of the University and as stipulated by OSHA regulations. No system may be restarted or returned to service without the knowledge, approval or involvement of the appropriate Utilities & Maintenance Department personnel.
  5. Valves associated with this procedure also include drains, vents, bypasses and any other auxiliary devices associated with the various systems. Switches associated with this procedure shall also include circuit breakers, knife switches, safety switches, disconnects, motor circuit protectors, and toggle switches.
  6. When work activities conclude a review of all affected valves, switches and other such devices shall be undertaken either by visual inspection or by operation in such a manner to determine that these devices have been left in the proper position for the respective system to operate normally.
  7. Should there be a system failure or emergency situation necessary actions shall be taken to control the situation without the need to explicitly follow the requirements of this procedure. Subsequent to the event the system configuration and this procedure shall be followed.

### **Implementation:**

In an effort to clearly define responsibilities for coordination of building system outages the following implementation procedures are intended to provide clarity and certainty to the process. The following University groups are most likely involved in this process and typically qualify as “University Representatives” (for the parties performing work).

- Utilities Department (Building Controls, Distribution Supervisor and other Utilities Administrators)
- Maintenance Department (Maintenance Supervisors and Administrators)
- Planning Design & Construction Department (Project Managers and Construction Administrators)

University Representatives shall be the responsible parties for evaluating the necessity and impact of an outage as well as leading the coordination efforts for the outage. It will be their responsibility to follow this and the steps outlined below. This includes assuming this responsibility when a contractor or trade shop is working under their direction on a specific project.

If a case exists whereby a trade shop is seeking an outage and there is not a specific University Representative involved the Maintenance Supervisor responsible for overseeing that facility shall assume this role.

Should groups other than Maintenance, Utilities or the Planning Design & Construction Departments seek to perform work of any kind that would require a building system outage a designee to serve as University

Representative shall be appointed to serve this role by an Administrator in any of the three aforementioned groups.

A University Representative shall be responsible for contacting a Utilities or Maintenance Supervisor who is a knowledgeable and authorized person(s) within the Utilities & Maintenance Department. Utilities & Maintenance Supervisors for this purpose include the following positions:

- Building Controls Supervisor
- Maintenance Supervisor
- Distribution Supervisor

Should any of the above persons be unavailable as a backup another Utilities & Maintenance Administrative staff member with knowledge of the system or systems in question may be contacted.

**Procedure:**

Building system outages shall be handled in five (5) steps

1. Evaluate the potential outage in consideration of procedure section item 1 to determine if the outage qualifies for one of the exceptions described therein. If it does qualify then no outage notification is required, if not proceed to step 2.
2. The University representative for the party performing the work shall contact a Utilities & Maintenance Supervisor to discuss the outage, its impacts, preferred scheduling, outage duration and contingency plans to minimize disruption and protect the building system. Work may not proceed without the express approval of the Utilities Supervisor for the outage and its associated details.
3. The University representative shall prepare the appropriate notifications and submit to the appropriate Utilities & Maintenance Supervisor for final approval and publication. Standard template notification language can be obtained through the Utilities & Maintenance Department.
4. The University representative for an outage shall ensure that the building manager or representatives to be affected by a scheduled outage have been contacted directly and are aware of the impending outage. To as reasonable a degree as possible, outage scheduling that will impact the use of a building shall be coordinated with the building manager or representatives in an attempt to minimize impacts. Excessive costs or delays in addressing critical items should not be cause to modify or delay scheduling outage work.
5. Other than cases of emergency or imminent failure, outage notifications using the Utilities & Maintenance Department Outage Notification procedure shall be issued 48 hours (2 business days) prior to the scheduled outage to all persons identified by the Utilities & Maintenance Outage Notification Procedure and the building managers and representatives of the buildings to be affected.

The following is a sample of what a typical Outage Notification email might look like:

On **[Insert Day and Date here]** there will be a **[insert type of outage here]** outage for the buildings listed below beginning at **[list outage start time]**. It is anticipated that the needed repairs will be completed by **[list outage completion time]**, on the same day. **[Describe service to be affected]** in the buildings may vary more than normal during this outage. This outage is taking place to facilitate **[describe necessary repairs]**. **[Describe any other services that may be affected]**.

**The following buildings will be affected by this outage:**

**[List all buildings or portions thereof that will be affected]**

**Building Managers have been notified.**

Should you have any questions or concerns regarding this outage, please feel free to contact:

[Name – Department – Phone number]

Thank You

The University Representative should tailor a specific outage email to the given outage. Assistance can be provided in crafting an appropriate notification by speaking with an Authorized Utilities & Maintenance Department person.