UNIVERSITY OF TOLEDO
FACILITIES AND CONSTRUCTION

<table>
<thead>
<tr>
<th>Section:</th>
<th>Administrative</th>
<th>Procedure Number:</th>
<th>ADM-29</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject:</td>
<td>Loss of Centrifugal Chillers, Absorbers and Reciprocating Machines</td>
<td>Effective Date:</td>
<td>August, 1990</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Revised Date:</td>
<td>October 2016</td>
</tr>
<tr>
<td>Facilities Officer:</td>
<td>Reviewed Date:</td>
<td>December 2016</td>
<td></td>
</tr>
</tbody>
</table>

**Standard Operating Procedure**

Specific procedures will be implemented when a loss of centrifugal chillers, absorbers, reciprocating machines or other essential air cooling equipment fails.

**Purpose**

To provide a systematic approach to restoring proper environmental conditions by outlining specific procedures which are designed to enhance communication and the safety and protection of all occupants affected by a loss of such equipment.

**Procedure**

The Central Control operator on duty will notify the following personnel to authorize rental equipment:

- Director of Energy Management

If all mechanical refrigerant equipment is down in the Hospital, 2-500 ton, water-cooled centrifugal chillers may be rented and placed beside the Southeast airway (intake for VU-1). The high pressure flex piping may be tied in to the condenser pump and to the tower.

The chilled water may be tied in to the supply and return chilled water by closing chilled water supply and return valves on any of the machines, unbolting the supply and return inlet and outlet, turning the assembly to accept the flexible high pressure hose.

The electric can be picked up from the chiller disconnects located for each machine.

**DOWLING HALL**

Rental of 260 ton machines may be placed in the loading dock. The chilled and condenser water may be tied by unbolting the piping as it enters the machine in Dowling Hall, turning the flanges to accept the high pressure flex piping from the rental machine. Electric may be either tied in at the chiller disconnect or the substation.

**RUPPERT HEALTH CENTER**

The 260 ton rental unit may be placed on the East side of the building just South of Pediatrics. The piping may enter the building by dropping through the grates, utilizing the door. The chilled water condenser piping may be tied in by closing the valves to the machines, removing the flanged piping, turning the piping to accept the high pressure piping. The electric may either come from the equipment MCC on the substation which is located adjacent to the chiller room.
KOBACKER CENTER

As these are two (2) reciprocating machines, independent of each other, a compressor or compressors may be purchased within 24 hours through the local Trane Co. They would call Cleveland, Detroit, MI, and Louisville, KY.

If both units are out, a portable air cooled unit may be set on the North side of the building. The chilled water lines run to the air-cooled condenser through the airway, down the duct to the mechanical room and tie-in to the chilled water loop. Electric may be tied in at MCC in the mechanical room.

GLENDALE MEDICAL CENTER

The AHU and cooling are in the same unit. If a compressor fails, another one may be installed by Air Quality or a contractor.

Cooling equipment located in areas not mentioned above will be repaired on site and no rental equipment will be installed.

RENTAL OF UNITS

If all mechanical refrigeration machines in the building are out of service and the down time is extended, cooling equipment may be rented from the following:

- Nu Temp, Inc.
  3348 South Pulaski
  Chicago, Illinois  60623
  (800)-323-3977

- Entech, Inc.
  3404 Garden Brook Drive
  Dallas, Texas  75234
  (214)-241-8128

CONTRACTORS

- Dimech Services, Inc.
  5505 Enterprise Blvd., Toledo, OH
  24/7 Service Line:  419-727-0111

- Helm Associates
  501 West Sophia Street
  Maumee, Ohio 43537
  Phone: 419-893-4369

- Carrier Corp Building Sys
  37695 Schoolcraft Road
  Livonia, MI  48150
  Phone: 734-522-5000