EMERGENCY LOSS MEDICAL PIPED GASES

General

Duke Hospital, CHC, Eye Center, Duke Clinic, and North Pavilion have redundant source supplies in either tanks or electrical equipment as indicated below;

Duke Hospital, CHC, Eye Center

1. Medical Vacuum Pumps 2
3. Medical Air Compressors 3
4. Nitrous Oxide 1500 gallon bulk tank w/ cylinder reserve
5. Oxygen 9000 gallon bulk tank 1500 gallon reserve

Emergency Source Connection

An emergency oxygen cross over line exists between the oxygen manifold room at Duke Hospital and the Clinic building. Upon loss of oxygen pressure in either building, the cross over valve will open allowing oxygen to flow to the needed building. This valve is also alarmed back to the BAS room notifying them of its activation.

This valve is not on emergency power, which means the valve will remain in its current position upon loss of power. A manual bypass valve can be open or closed in an emergency if needed.

6. Nitrogen 900 gallon bulk tank w/ cylinder reserve

North Pavilion

1. Medical Air 2
2. W.A.G.D. (Evac Pumps) 2 back up pumps. Connected to medical vacuum system.
3. Medical Vacuum pumps 2
4. Nitrous Oxide 20 Cylinder Bank (10 in use & 10 in reserve)
5. Oxygen 3000 gal w/bulk reserve

Emergency Source Connection

6. Nitrogen 20 cylinder bank (10 in use & 10 in reserve)
EMERGENCY LOSS MEDICAL PIPED GASES

Duke Clinic

1. Medical Air Compressors 2 (plus 2 manual transfer back-up compressors)
2. W.A.G.D. (Evac. Pumps) N/A
3. Medical Vacuum Pumps 3
   Emergency source connection at loading dock
   An emergency oxygen cross over line exists between the oxygen manifold room at Duke Hospital and the Clinic building. Upon loss of oxygen pressure in either building, the cross over valve will open allowing oxygen to flow to the needed building. This valve is also alarmed back to the BAS room notifying them of its activation.

This valve is not on emergency power, which means the valve will remain in its current position upon loss of power. A manual bypass valve can be open or closed in an emergency if needed.

5. Nitrogen N/A

Alarms

All systems are installed, tested and monitored in accordance with NFPA 99.

Building Automation Systems (BAS) room monitors all alarms.

Notification

A. Upon loss of any medical gas, the maintenance staff will notify BAS, Respiratory Care (pager #970-6698, cell phone: 599-7336), the Foreman, and the Asst. Director responsible for the facility immediately.

B. After hours, initiate plumbing shop callback.

C. The Asst. Director will notify:
   1. The appropriate University/Medical Center/Hospital Operations Administrator. (OA pager # 970-8001)
   2. For Hospital failures, notify Materials Management Administration to provide portable systems if necessary.
EMERGENCY LOSS MEDICAL PIPED GASES

Action
The Foreman will dispatch crews to the affected area to begin assessment of the problem. The Foreman will also keep Respiratory Care advised as to the status of the outage and expected length of downtime once this information is established.

Resolution of Loss
When repairs have been completed, the following notification process will take place:

A. The maintenance staff will notify
   1. BAS
   2. Respiratory Care (pager #970-6698, cell phone: 599-7336)
   3. Foreman
   4. Asst. Director responsible for the facility.
   5. 3232 Operator

B. The Asst. Director will notify:
   1. The appropriate University/Medical Center/Hospital Operations Administrator. (OA pager #970-8001)
   2. For Hospital failures, notify Materials Management Administration. (Stat Room 681-4196)
EMERGENCY LOSS MEDICAL PIPED GASES

Closing and Opening of Medical Gas Valves in a Fire, Unscheduled Breach of Lines, or Other Emergency

1. The primary responsibility for shutting off medical gas (es) in a true emergency/fire situation, when medical gases could contribute to the spread of a fire, is the Charge Nurse. On Intensive Care Units, the Charge Nurse must consult with the Respiratory Therapist, when available, to assure appropriate patient support after the medical gases are shut off.

   Exception: Anesthesia personnel have primary responsibility for making the determination as to cutting off medical gases in an emergency in operating rooms. All O.R. staff can close the valves as the direction of anesthesia personnel in the room in question.

2. E&O personnel will respond to all fire alarms on inpatient units as quickly as possible to support the Nursing decision and response.

3. The location of medical gas shut-off valves will be added to revised evacuation route signs for posting on all nursing units.

4. All affected personnel will receive appropriate notification and education once this policy is approved.

5. Signs to be posted on all valves:

ZONE VALVES
Authorized Personnel Only
OPERATE ONLY IN
CASE OF EMERGENCY

- Provide temporary Medical Gas to patients as required.
- Read & know the areas being cut off. (See tag on valves)
- Turn valve 90° (Until handle stops)
- Notify Respiratory Care Services, Emergency Pager #970-6698