

JAMES E. VAN ZANDT VA MEDICAL CENTER  
ALTOONA, PENNSYLVANIA

MEDICAL CENTER MEMORANDUM (MCM) 10F-23  
MARCH 2010

**TEMPERATURE AND HUMIDITY MONITORING SYSTEM**

1. **PURPOSE:** To provide guidance pertaining to the control of a safe temperature and sanitary environment for all food, medications, blood and other chemicals and equipment, as well as monitoring temperature and humidity levels in designated areas.

2. **POLICY:**

a. Temperatures shall be monitored on all refrigerators, contrast warmers and freezers containing patient food, blood, medications, specimens, chemicals and other appropriate materials, to minimize the risk of spoilage of products and ensure the quality of the items contained within. Areas containing sterile supplies will be monitored for temperature and humidity to assure the sterility of the supply is maintained. Computer rooms and telephone rooms will be monitored for temperature and humidity to ensure computer components do not fail.

b. Wherever possible, monitoring will be accomplished electronically using the Temp Trak system, which is centrally alarmed and monitored. Where electronic monitoring is in place, manual monitoring and recording of temperatures may be discontinued; however, specific procedures must be documented in service contingency plans to reinstitute manual monitoring in the event the electronic system is inoperable or unavailable for any reason.

c. Specific temperatures and ranges are outlined in a service specific policy as per Attachment A.

3. **RESPONSIBILITIES:**

a. The **Chief, Facilities Service** is responsible for the overall management of the temperature and humidity monitoring system and for the documentation in the electronic monitoring log of all activities accomplished by Facilities Service staff.

b. **Chief, Fiscal Service & Chief, Health Administration Service (HAS)** are responsible for the monitoring of the Temp Trak alarms and making notifications and following the process outlined in Attachment B.

c. All **service chiefs, or designees**, are responsible to:

(1) Identify equipment that requires monitoring.

(2) Coordinate with Facilities Service staff to ensure that the Temp Trak system is programmed with the appropriate temperature range for the individual device or area.

## 2. MCM 10F-23, TEMPERATURE AND HUMIDITY MONITORING SYSTEM

(3) Respond immediately when notified that an alarm has been triggered for equipment or area over which they have responsibility.

(4) Take necessary corrective action, insure the results of that action are recorded in the electronic monitoring log and the alarm is cleared.

(5) Provide training to appropriate staff.

(6) Designate point of contact to be notified during non-duty hours.

(7) Notify Facilities Service when equipment is not operating correctly.

d. **Services** are responsible for taking corrective action, and insuring the actions are recorded in the Temp Trak log.

e. **Heating, Ventilation, and Air Conditioning (HVAC) mechanics** are responsible for setting the acceptable range of all monitoring devices according to guidelines established as listed in Attachment A and as coordinated with service chief; checking the system daily 8:00 a.m. to 4:30 p.m.; and making appropriate repairs when necessary.

f. **Information Resource Management (IRM) staff** is responsible for maintenance of computer equipment (including server) for Temp Trak System.

g. **Administrative Officers of the Day (AODs)** and **telephone operators** will be responsible for monitoring the Temp Trak temperature and humidity system, and notification of unit users during normal duty hours, VA Police after normal duty hours to investigate probable cause of Temp Trak alarm; and they will inform the Community Based Outpatient Clinics (CBOCs) by contacting the person on the contact list. AODs annotate log after normal duty hours. (Attachment B)

h. **VA Police** will be responsible for investigating probable causes of after hour's alarms and contacting designated staff for equipment causing the alert or Heating, Ventilation and Air Conditioning (HVAC) mechanic if no cause is found. (Attachment B)

i. **Medication Use/Nutrition Committee** is responsible to review the following data: temperatures, humidity levels, times of alerts, and corrective action taken.

## 4. DEFINITIONS:

a. **Temp Trak** - a wireless temperature and humidity monitoring system that consists of battery powered wireless sensors with communication and memory storage. The sensors record data and transmit it through repeaters which in turn transmit the information to the database. All temperatures, alerts, time and corrective actions are automatically recorded into the system. Alerts are set to notify the user by showing an audio/visual alert when the user logs on to the system. The audio alert is only possible when the personal computer has sound capabilities.

### 3. MCM 10F-23, TEMPERATURE AND HUMIDITY MONITORING SYSTEM

#### 5. PROCEDURES:

a. Attachment B outlines the procedures to be followed in the event that an electronic alarm from the Temp Trak system is activated. In the event that immediate action cannot be taken to correct the problem with the equipment, the service will:

(1) Take appropriate action to minimize loss in the event of an equipment failure by transferring items to a working unit.

(2) Determine if any items were damaged or destroyed.

b. In the event that the Temp Trak system fails, services will keep handwritten logs of refrigeration temperatures to be maintained until the system is restored, just as was done prior to installation of Temp Trak.

c. If temperature or humidity is out of range, the system will alarm using a tiered system until the alarm is cleared. All alarms will annunciate at Telephone Operator/Administrative Officer of the Day (AOD) as to which piece of equipment or area is out of range, the current temperature and/or humidity, as well as the time the temperature or humidity fell out of range

(1) As outlined in Attachment B, during normal business hours, services should insure the corrective action is annotated in the log and the alert is cleared. In the event that the investigation does not reveal a cause for out of range temperature or humidity, Facilities Service should be notified by calling extension 7238 and entering an electronic work order to Facilities Service.

(2) After normal business hours, VA Police will investigate the probable cause of the alert and, if needed, the AOD will notify appropriate area personnel or Nursing Officer of the Day (NOD), persons from the contact list, and HVAC mechanics in accordance with Facilities Service Policy #19, Call-Back Procedures for Equipment, Utilities, and Alarm Systems. AOD annotates log.

d. Acceptable ranges are set in Temp Trak system in accordance with Attachment A, Guidelines for Temperature and Humidity Ranges and per above utilizing the service chiefs to assure each refrigerator is set based on what it contains (i.e. meds vs. contract vs. food). Temperature and humidity readings are taken and adjusted in the monitoring system every 30 minutes. Should a medical refrigerator be out of acceptable range, viability of the contents will be determined on an item-by-item basis.

e. At any time when logged onto <http://vhaalttmptrk/intelli-ware> various reports can be downloaded. Each service will be able to print their own reports showing temperatures, humidity levels, and times of alerts, corrective action taken, and person who took action. This data is also to be reviewed by the Medical Use Committee.

4. MCM 10F-23, TEMPERATURE AND HUMIDITY MONITORING SYSTEM

6. **REFERENCES:** Facilities Service Policy #19, Call-Back Procedures for Equipment, Utilities, and Alarm Systems; MCM 11L-05, Procedure for Blood Bank Temperature Malfunction; Guidelines for Environmental Infection Control in Healthcare Facilities; and recommendations of Center for Disease Control (CDC), and the Healthcare Infection control Practices Advisory Committee (HICPAC), Morbidity and Mortality Weekly Report (MMWR), Vol. 52, No. RR 10;1, 6161C3. June 2003; Veterans Administrative Handbook 7176 for Supply Processing and Decontamination (SPD).

7. **RESCISSION:** MCM 10F-23, Temperature and Humidity Monitoring System, dated October 2008

8. **REISSUE DATE:** Three years from date of MCM.

9. **FOLLOW-UP RESPONSIBILITY:** Chief, Facilities Service

/s/  
TONY L. BENNETT, FACHE  
Director

Attachment A: Guidelines for Temperature and Humidity Ranges

Attachment B: Flow chart

Distribution: I

## 5. MCM 10F-23, TEMPERATURE AND HUMIDITY MONITORING SYSTEM

Attachment A

### Guidelines for Temperature and Humidity Ranges

<b>Type of Unit/Room</b>	<b>Temperature Range</b>	<b>Humidity Range</b>	<b>Alarm Triggers</b>	<b>Guideline Reference</b>
Refrigerated Food Storage	33-41 degrees F.	N/A	When out of range for temperature	Veterans Health Administration (VHA) Handbook 1109.04, Food Service Management Program, Paragraph 16. Storage
Freezer Food Storage	At or below 0 degrees F.	N/A	When out of range for temperature	VHA Handbook 1109.04, Food Service Management Program, Paragraph 16. Storage
Shelf Stable Foods	50-70 degrees F.	50-60%	When out of range for temperature or humidity	VHA Handbook 1109.04, Food Service Management Program, Paragraph 16. Storage
Sterile and non sterile supply storage	65-72 degrees F.	35-75%	When out of range for temperature or humidity	Supply Processing and Decontamination (SPD) VA DIRECTIVE 7176
Refrigerated Medication	36-46 degrees F.	N/A	When out of range for temperature	<a href="http://www.aginova.com/sstoragemonitoring.php">http://www.aginova.com/sstoragemonitoring.php</a>

6. MCM 10F-23, TEMPERATURE AND HUMIDITY MONITORING SYSTEM

<p>Laboratory Specimens</p> <p>Separated serum/plasma should remain at room temperature for no longer than eight hours. If assays will not be completed within eight hours, serum/plasma should be refrigerated unless otherwise directed</p>	<p>2-8 degrees C 35 – 46 degrees F.</p>	<p>N/A</p>	<p>When out of range for temperature</p>	<p>Clinical and Laboratory Standards Institute (formerly National Committee for Clinical and Laboratory Standards NCCLS), H18-A3, Volume 24, No 38, “Procedures for the handling and Processing of Blood Specimens; Approved Guideline-Third Edition”</p>
<p>Laboratory Reagent Refrigerator</p>	<p>2-8 degrees C 35 – 46 degrees F.</p>	<p>N/A</p>	<p>When out of range for temperature</p>	<p>Manufacturer’s recommendation</p>
<p>Laboratory Reagent Freezer</p>	<p>-15 to -30 degrees C</p>	<p>N/A</p>	<p>When out of range for temperature</p>	<p>Manufacturer’s recommendation</p>
<p>Laboratory Incubator</p>	<p>37 degrees C</p>	<p>N/A</p>	<p>When out of range for temperature</p>	<p>Clinical and Laboratory Standards Institute (formerly NCCLS)</p>
<p>Computer &amp; Telephone Rooms</p>	<p>64-75 degrees F</p>	<p>30-50%</p>	<p>When out of range for temperature or humidity</p>	<p>VHA HVAC Design Manual</p>
<p>Surgical Suites</p>	<p>70-75 degrees F</p>	<p>30-50%</p>	<p>When out of range for temperature or humidity</p>	<p>VHA HVAC Design Manual</p>

## Attachment B

