

***MC-PPD Division's Hot Works Permit Program
And
Page Numbers of Forms***

Pages # 1 thru 4; Program and Procedures.

Page # 5; Attachment "A" Hot Work Permit Form and the Flow Chart for MC-PPD Division (In-house Maintenance, Job Order, and Project Groups).

Page # 6 & 7; Hot Work Permit Form and the Flow Chart are to be used by the MC-PPD In-house Division Maintenance, Job Order, and Project Groups.

Page # 8; Attachment "B" Hot Work Permit Form and Flow Chart are to be used by the CPMD Project Group, doing work in the Medical Center and Hospital Buildings.

Page # 9 & 10; Hot Work Permit Form and the Flow Chart are to be used by the CPMD Group for work in the Medical Center & Hospital Buildings (CPMD Project Group, Contractors, and Vendors).

Page # 11; Attachment "C" Hot Work Permit Form and Flow Chart are to be used for Specifically Designed Area's.

Page # 12 & 13; Hot Work Permit Form and the Flow Chart are to be used for Specifically Designated Area's Maintenance Shops and Temporary Work Areas needed for a renovation project.

Page # 14; Attachment "D" Training Outline for MC-PPD Employees.

Pages # 15 thru 17; Show the required training needs for Employees as well as Contractors/Vendors.

Hot Work Program
MC-PPD
Physical Plant Division
University of Kentucky

Purpose

The purpose of this program is to establish written procedures to prevent fires resulting from operations involving open flames or from those operations that may produce heat or sparks. These procedures have been developed and are implemented in accordance with NFPA 51B, OSHA 1910.252, OSHA 1926.352.

Introduction

The University of Kentucky, Medical Center Physical Plant Division, **MC-PPD** recognizes there is a potential for fire from hot work operations. Therefore this program is implemented to protect UK students, visitors, employees and property from fire resulting from hot work operations.

This program applies to the MC-PPD's operations and those operations of contractors working under contract to this Division.

This program does not apply to areas that are specifically designated and equipped for such operations, i.e., maintenance shop's designated welding areas. Hot work conducted outside of these controlled maintenance shop facilities should only be done when there is no other means of accomplishing the task (***Work that is being done in any areas inside and outside of MC-PPD Buildings***). (***Require a Hot Work Permit***)

Definitions

Hot Work - Hot work is defined as any temporary maintenance, renovation or construction activity using gas or electrically powered equipment, which produces flames, sparks, or heat that is sufficient to start a fire or ignite flammable/combustible materials.

Some examples of ignition sources are: open flame, torch, welders, molten slag or metal, or sparks from such work.

Permit - a HOT WORK PERMIT will be required when work requires the use of a flame, sufficient heat or sparks to generate or serve as a source of ignition.

Permit Issuer - the shop's Manager/Crew leader or their designee is responsible for all hot work operations, program compliance, and for issuing the Hot Work Permit.

Fire Watch - a person who maintains vigilance looking for the presence of fire or hazardous conditions within the hot work area before and at least **30 minutes** after the hot work has ceased. The fire watch personnel shall be **trained** in the use of an **appropriate fire extinguisher**, familiar with the facility and equipment, and know the procedure for sounding a fire alarm and calling the MC-PPD Dispatch (3-6281). A fire watch is required as precaution to protect life and property from fire.

Crew Leader - the assigned leader of a group of employees assigned to a designated job.

Crew Supervisor - the individual responsible for the work performed by more than one crew of employees.

Manager/Project Coordinator - the individual responsible for the daily operations of a shop or project. This individual will oversee the work of one or more supervisors and their respective crews.

Hot Work Operations

For the **MC-PPD** the following operations have been identified as hot work operations. These are activities that occur away from the designated workshop.

1. Repairing of copper tubing lines on a/c and refrigeration units.
2. Soldering new lines on new installation of a/c and refrigeration units.
3. Sometimes maybe doing some brazing on a/c and refrigeration units.
4. Reheat valves replacement and or installations.
5. Plumbing lines, domestic water, reheat lines, etc.

Hot Work Permit System

A hot work permit system will be implemented in the **MC-PPD**. The procedures for the issuance of the permit can be found in the flowchart (Attachment A).

Hot Work Procedures

Prior to commencement of any work order in which a hot work operation will be undertaken, the shop Manager/Project Coordinator or his/her designee will determine if the fire suppression system will need to be taken out of service. (*If the fire suppression system is taken out of service for an extended period of days while hot work is being performed*), the approval of the University Fire Marshal's Office must be obtained in advance.

If the fire suppression system is taken out of service in part or in an area, the following steps will be taken:

1. The procedures as indicated on the Hot Work Permit (Attachment B) will be performed by the crew leader before hot work begins.
2. Have the MC-PPD Dispatch (3-6281) take out of service the fire alarm system in the affected area if possible, if the Building is taken out of service in part or in an area the Building Operational Manager is to be notified. This is to help with

- having their fire watch personnel overseeing areas where there is on work being performed.
3. The Manager/Project Coordinator or his/her designee will inspect the area before authorizing a Hot Work Permit.
 4. Post the Hot Work Permit in the work area. It will remain posted until completion of the job or the **duration** of the permit. (Which is for one day only)
 5. Conduct the hot work operation section on the Hot Work Permit Form.
 6. Upon completion of the hot work the Building will need to be called back into Service by MC-PPD Dispatcher (3-6281), then return the used Hot Work Permit to the Manager/Project Coordinator or his/her designee.
 7. The Manager/Project Coordinator or his/her designee will retain the Hot Work Permit for a period of time not to exceed one year. The MC-PPD Safety Office will then maintain permits for two years.

Contractors Responsibility: (Contracted by the MC-PPD Project Manager/Coordinator & CPMD)

Periodically the **MC-PPD** will contract work to outside firms. The Manager/Project Coordinator or his/her designee for the **MC-PPD** will require contractors to provide a hot work program, where applicable. The contractor will follow the Medical Centers Hot Work program or similar plan of his or her own that is equal to or better than the **MC-PPD's** program.

Employee Training

Initial Training

Initial training to employees in the **MC-PPD** Division is provided on hot work operations within 30 days of assignment. An outline of the training can be found in Attachment C. A roster of employees receiving the training can be found in Attachment D.

All new employees will receive training before conducting an operation falling within the category of a hot work operation. However, an employee can offer assistance and work directly under a trained employee, prior to receiving the initial training.

A part of the hot work training will be instruction in **fire protection**. In addition, all employees that have the potential to utilize a fire extinguisher will receive training upon initial hire and annually thereafter.

Refresher Training

Employees will receive refresher training in ***Hot Work on an Annual Basis***. This refresher training will cover information in the initial training and any new requirements.

Attachment A

Hot Work Permit Form for MC-PPD Division Flow Chart of Hot Work Permit Procedure for MC-PPD Division

HOT WORK PERMIT

UNIVERSITY OF KENTUCKY MEDICAL CENTER PHYSICAL PLANT DIVISION
SHOP

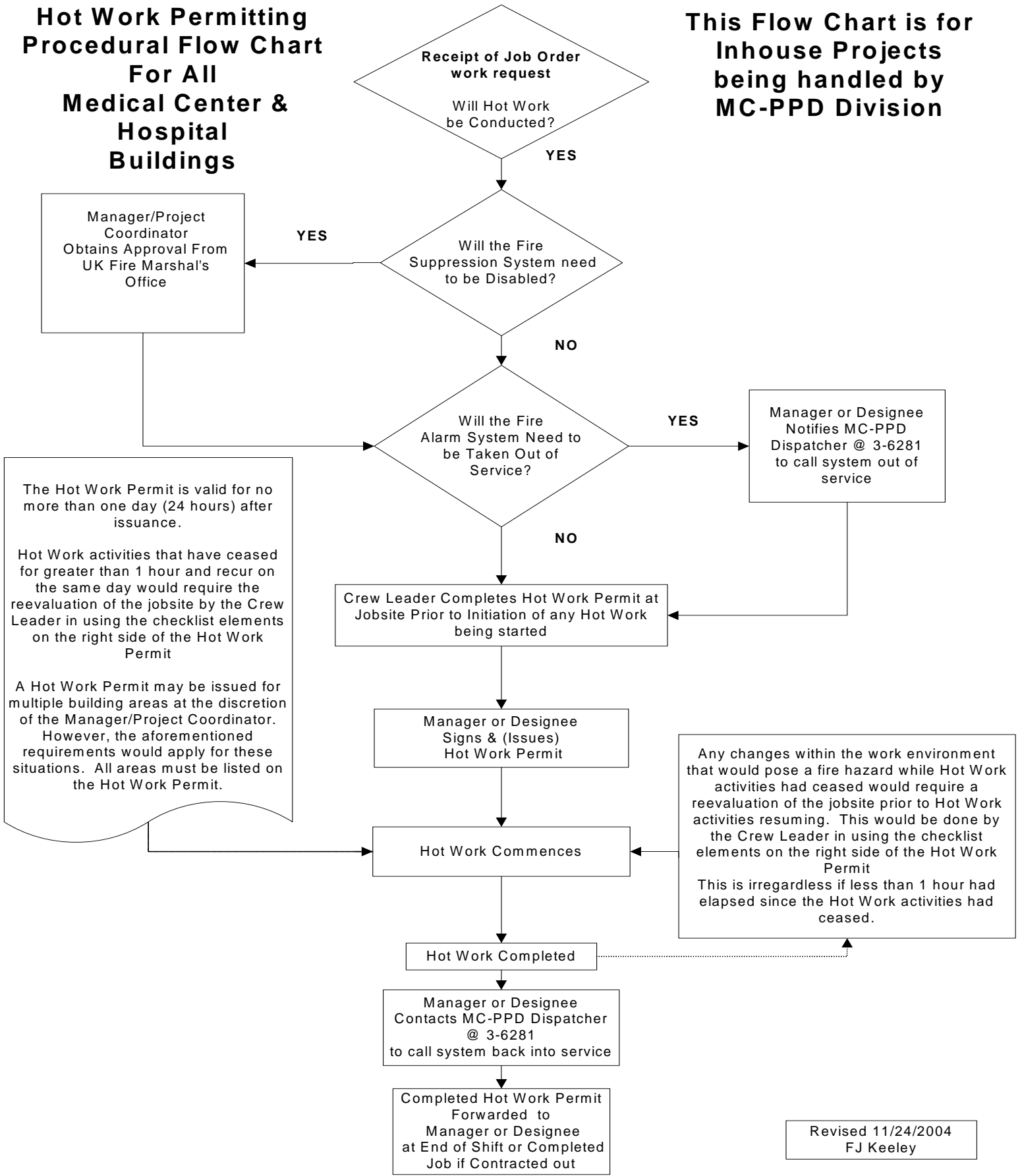
HOT WORK OPERATIONS for: (Projects/Maintenance Repairs/Vendors/Contractors) Description of Hot Work Operations / Procedures Sections

Work Order Request # _____

<p>Date _____ Building: _____</p> <p>Location: _____</p> <p>Work to be done: _____</p> <p>Special precautions: _____</p> <hr/> <p>Name of person(s) doing Hot Work: _____</p> <p>The location where this work is to be done has been examined, necessary precautions taken, and permission is granted for this work.</p> <p>Distance of spark generation: _____ ft.</p> <p>Duration of fire watch after completion: _____ minutes if longer then Stated Procedures.</p> <p>Permit expires: _____</p> <p>Signed: _____ (Manager/Crew leader or designee)</p> <p style="text-align: center;"><u>Final Check</u></p> <p>Work area and all adjacent areas to which sparks and heat might have spread (including floors above and below and on opposite side of wall(s)), were inspected as indicated above after the work was completed and were found Fire Safe. Also the Fire System Called back into Service by MC-PPD Dispatcher @ (3-6281).</p> <p>Signed: _____ (Fire Watch Individual)</p>	<p style="text-align: center;"><u>Precautions</u></p> <ul style="list-style-type: none"><input type="checkbox"/> MC-PPD Dispatcher @ (3-6281) notified, if Fire Detection System is to be taken out of service<input type="checkbox"/> Sprinklers in service<input type="checkbox"/> Equipment being used in good repair <p style="text-align: center;"><u>Area where sparks might be generated as indicated</u></p> <ul style="list-style-type: none"><input type="checkbox"/> Floors swept clean of combustibles<input type="checkbox"/> Combustible horizontal surfaces wet down, covered with damp sand, metal or other shields<input type="checkbox"/> All wall and floor openings covered<input type="checkbox"/> Covers suspended beneath work to collect sparks <p style="text-align: center;"><u>Work on Walls or Ceilings</u></p> <ul style="list-style-type: none"><input type="checkbox"/> Construction noncombustible and without combustible covering<input type="checkbox"/> Combustibles moved away from area to opposite side of wall<input type="checkbox"/> Adjacent area evaluated for possible heat conduction <p style="text-align: center;"><u>Work on Enclosed Equipment</u> (Tanks, ducts, dust collectors, etc.)</p> <ul style="list-style-type: none"><input type="checkbox"/> Evaluated as a Confined Space<input type="checkbox"/> Equipment cleaned of all combustibles <p style="text-align: center;"><u>Fire Watch</u></p> <ul style="list-style-type: none"><input type="checkbox"/> To be provided during and after operation as determined by Manager/Crew leader or Designee (30 minutes after operation)<input type="checkbox"/> Supplied with extinguisher and/or small hose<input type="checkbox"/> Trained in use of equipment and in sounding of fire alarm
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Hot Work Permitting Procedural Flow Chart For All Medical Center & Hospital Buildings

This Flow Chart is for
Inhouse Projects
being handled by
MC-PPD Division



Revised 11/24/2004
FJ Keeley

Attachment B

Hot Work Permit Form for CPMD Flow Chart of Hot Work Permit Procedure for CPMD

HOT WORK PERMIT

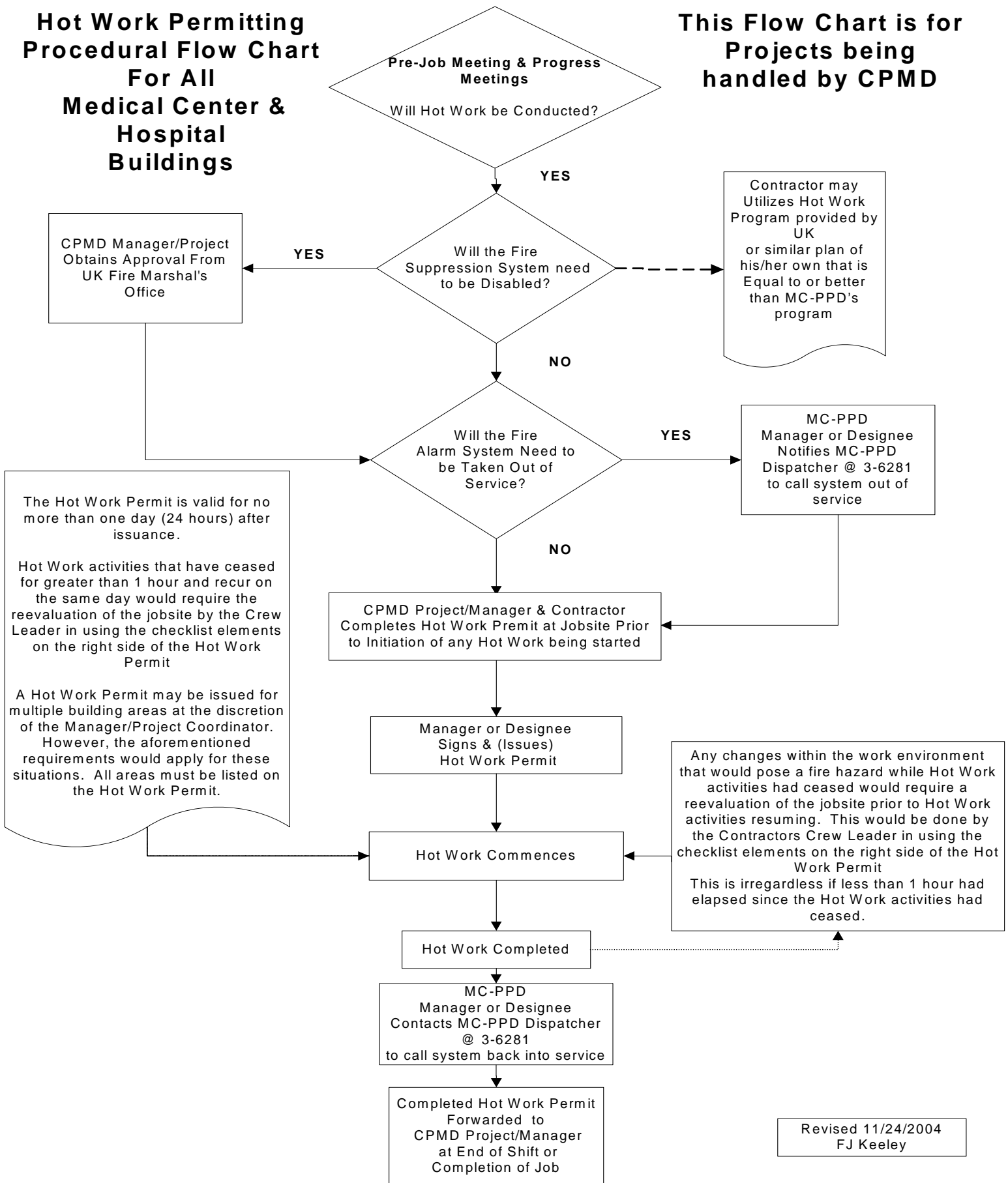
UNIVERSITY OF KENTUCKY MEDICAL CENTER PHYSICAL PLANT DIVISION
CPMD Project # _____

HOT WORK OPERATIONS for: (CPMD Renovation Projects/Involving/Contractors) Description of Hot Work Operations / Procedures Sections

<p>Date _____ Building: _____</p> <p>Location: _____</p> <p>Work to be done: _____</p> <p>Special precautions: _____</p>	
<p>Name of person(s) doing Hot Work: _____</p> <p>The location where this work is to be done has been examined, necessary precautions taken, and permission is granted for this work.</p> <p>Distance of spark generation: _____ ft.</p> <p>Duration of fire watch after completion: _____ minutes if longer then Stated Procedures.</p> <p>Permit expires: _____</p> <p>Signed: _____ (Manager/Crew leader or designee)</p>	<p style="text-align: center;"><u>Precautions</u></p> <ul style="list-style-type: none"><input type="checkbox"/> MC-PPD Dispatcher @ (3-6281) notified, if Fire Detection System is to be taken out of service<input type="checkbox"/> Sprinklers in service<input type="checkbox"/> Equipment being used in good repair <p style="text-align: center;"><u>Area where sparks might be generated as indicated</u></p> <ul style="list-style-type: none"><input type="checkbox"/> Floors swept clean of combustibles<input type="checkbox"/> Combustible horizontal surfaces wet down, covered with damp sand, metal or other shields<input type="checkbox"/> All wall and floor openings covered<input type="checkbox"/> Covers suspended beneath work to collect sparks <p style="text-align: center;"><u>Work on Walls or Ceilings</u></p> <ul style="list-style-type: none"><input type="checkbox"/> Construction noncombustible and without combustible covering<input type="checkbox"/> Combustibles moved away from area to opposite side of wall<input type="checkbox"/> Adjacent area evaluated for possible heat conduction
<p style="text-align: center;"><u>Final Check</u></p> <p>Work area and all adjacent areas to which sparks and heat might have spread (including floors above and below and on opposite side of wall(s)), were inspected as indicated above after the work was completed and were found Fire Safe. Also the Fire System Called back into Service by MC-PPD Dispatcher @ (3-6281).</p> <p>Signed: _____ (Fire Watch Individual)</p>	<p style="text-align: center;"><u>Work on Enclosed Equipment</u> (Tanks, ducts, dust collectors, etc.)</p> <ul style="list-style-type: none"><input type="checkbox"/> Evaluated as a Confined Space<input type="checkbox"/> Equipment cleaned of all combustibles <p style="text-align: center;"><u>Fire Watch</u></p> <ul style="list-style-type: none"><input type="checkbox"/> To be provided during and after operation as determined by Manager/Crew leader or Designee (30 minutes after operation)<input type="checkbox"/> Supplied with extinguisher and/or small hose<input type="checkbox"/> Trained in use of equipment and in sounding of fire alarm

Hot Work Permitting Procedural Flow Chart For All Medical Center & Hospital Buildings

This Flow Chart is for
Projects being
handled by CPMD



Revised 11/24/2004
FJ Keeley

Attachment C

Hot Work Permit Form for MC-PPD Specifically Designated Areas Flow Chart of Hot Work Permit Procedure for MC- PPD Division

HOT WORK PERMIT

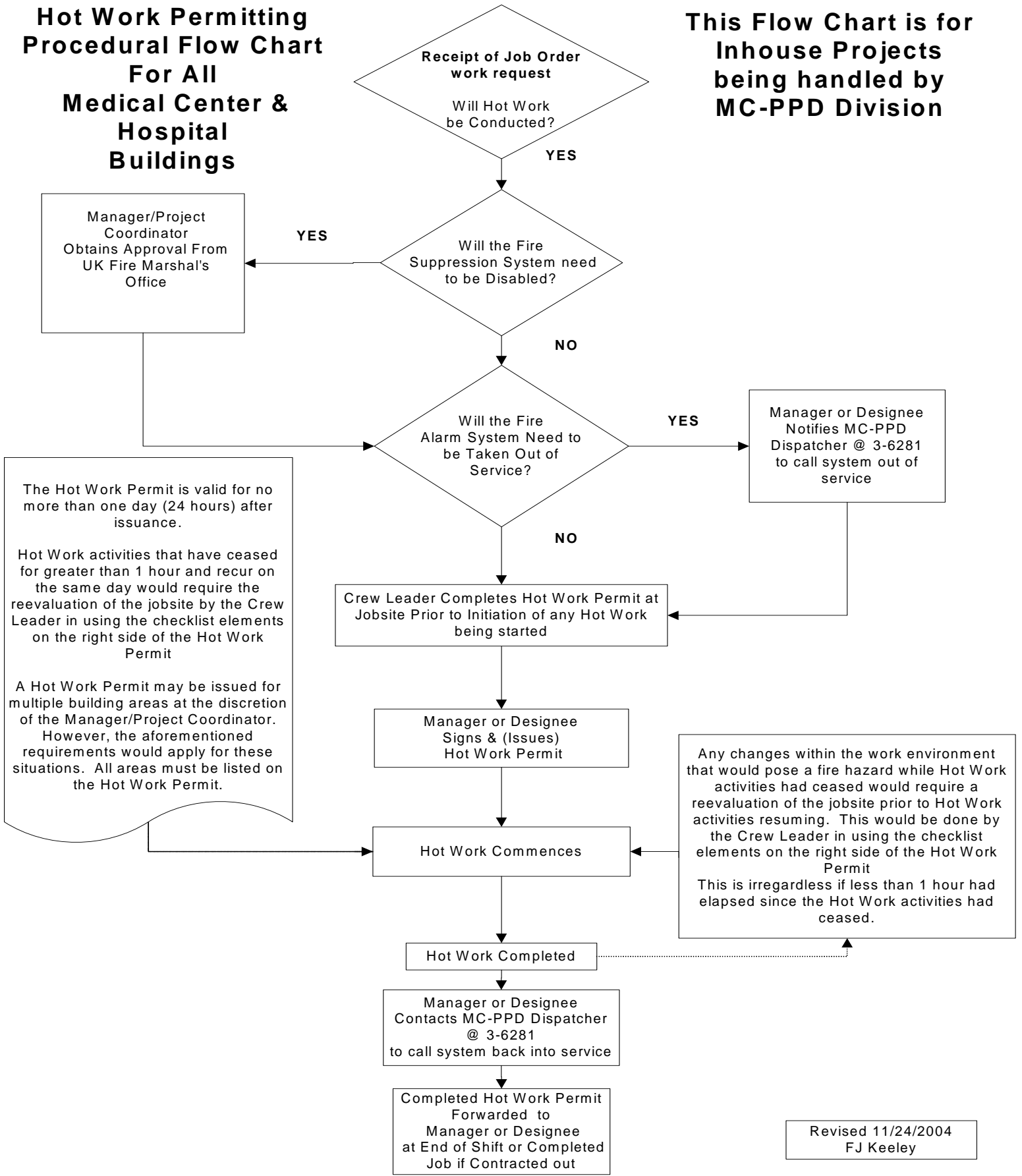
UNIVERSITY OF KENTUCKY MEDICAL CENTER PHYSICAL PLANT DIVISION
Specifically Designed Areas
_____SHOP

FOR WELDING, CUTTING AND BRAZING WITH PORTABLE GAS OR ARC EQUIPMENT

<p>Date _____ Building: _____</p> <p>Location: _____</p> <p>Work to be done: _____</p> <p>Special precautions: _____</p> <p>Name of person(s) doing Hot Work: _____</p> <p>The location where this work is to be done has been examined, necessary precautions taken, and permission is granted for this work.</p> <p>Distance of spark generation: _____ ft.</p> <p>Duration of fire watch after completion: _____ minutes if longer then Stated Procedures.</p> <p>Permit expires: _____</p> <p>Signed: _____ (Manager/Crew leader or designee)</p> <p style="text-align: center;"><u>Final Check</u></p> <p>Work area and all adjacent areas to which sparks and heat might have spread (including floors above and below and on opposite side of wall(s)), were inspected as indicated above after the work was completed and were found fire safe. Also the Fire System Called back into Service by MC-PPD Dispatcher @ (3-6281).</p> <p>Signed: _____ (Fire Watch Individual)</p>	<p style="text-align: center;"><u>Precautions</u></p> <ul style="list-style-type: none"><input type="checkbox"/> Sprinklers in service<input type="checkbox"/> Cutting and welding equipment in good repair<input type="checkbox"/> MC-PPD Dispatcher @ (3-6281) notified, if applicable <p style="text-align: center;"><u>Within 35 ft of work area or greater if sparks exceed distance</u></p> <ul style="list-style-type: none"><input type="checkbox"/> Floors swept clean of combustibles<input type="checkbox"/> Combustible horizontal surfaces wet down, covered with damp sand, metal or other shields<input type="checkbox"/> All wall and floor openings covered<input type="checkbox"/> Covers suspended beneath work to collect sparks <p style="text-align: center;"><u>Work on Walls or Ceilings</u></p> <ul style="list-style-type: none"><input type="checkbox"/> Construction noncombustible and without combustible covering<input type="checkbox"/> Combustibles moved away from area to opposite side of wall<input type="checkbox"/> Adjacent area evaluated for possible heat conduction <p style="text-align: center;"><u>Work on Enclosed Equipment</u> (Tanks, ducts, dust collectors, etc.)</p> <ul style="list-style-type: none"><input type="checkbox"/> Evaluated as a Confined Space<input type="checkbox"/> Equipment cleaned of all combustibles <p style="text-align: center;"><u>Fire Watch</u></p> <ul style="list-style-type: none"><input type="checkbox"/> To be provided during and 30 minutes after operation<input type="checkbox"/> Supplied with extinguisher and/or small hose<input type="checkbox"/> Trained in use of equipment and in sounding of fire alarm
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Hot Work Permitting Procedural Flow Chart For All Medical Center & Hospital Buildings

This Flow Chart is for
Inhouse Projects
being handled by
MC-PPD Division



Attachment D

Training Outline For MC-PPD Employees

MC-PPD Employees
Required Training Outline for HOT WORK PERMIT

- Fire Extinguisher Training
- Fire Watch Procedures and Sounding Fire Alarm
- Annual Refresher with any new, revised updated procedures

Attachment E

Training Roster For MC-PPD Employees

