MEDICAL CENTER REQUIREMENTS
ERIE VAMC

PART 1 GENERAL

1.0 GENERAL INTENTION: This section pertains to station policy for construction projects performed at the Veterans Affairs Medical Center, Butler, Pennsylvania. Safety and health concerns are taken seriously at this facility. Both our staff and yours are expected to strictly adhere to the regulations and requirements. This is exceedingly important, since we must be primarily concerned for the safety of our patients. In this regard, OSHA Standards may protect worker safety and health, but they have minimal benefit for protecting the safety and health of our patients, due primarily to their differing medical conditions. Review this information as orientation with your personnel performing work on site. **Where the requirements as outlined in this and section 010000 are differing, the more stringent shall apply.**

2.0 REQUIREMENTS

A. Security:

1. Secure all construction areas, especially mechanical and electrical rooms against entry of unauthorized individuals including patients.
2. Notify the Contracting Officer Representative (COR) for permission to work after hours and weekends. Standard work hours for the medical center are Monday – Friday, 8:00 a.m. to 4:30 p.m.
3. The ten (10) holidays observed by the Federal Government are:

- New Year's Day
- Martin Luther King's Birthday
- Presidents Day
- Memorial Day
- Independence Day
- Labor Day
- Columbus Day
- Veterans Day
- Thanksgiving Day
- Christmas

And any other day specifically declared by the President of the United States to be a national holiday.

B Key Security:

1. Only a limited number of keys will be issued to the contractor.
2. If the Contractor loses a key, all areas that are keyed to that key will be rekeyed at the Contractor's expense at a charge of $50 per key and $50 per change, and all new keys required to be issued will be completed at the Contractor's expense.
3. Ensure all doors leading to and from construction are either monitored or locked to prevent access to the area from unauthorized persons.

C General Safety:

1. Follow all federal, state and local safety and health regulations.
2. Maintain safety in the construction site/area in accordance with the provisions of the contract which includes the OSHA Regulations, National Electrical Codes. NFPA 70, National Electric Code and NFPA 101, Life Safety Code. Work in a safe manner and take all proper precautions while performing your work. Extra precautions shall be taken when working around persons occupying the building during construction. Contractor required to conduct mishap investigations of all OSHA recordable moderate and major as well as high visibility incidents.
3. Provide Personal Preventive Equipment (PPE) for your employees.
4. Post appropriate signs in specific hazardous areas.
5. Keep tools, ladders, etc. away from patients to prevent injuries.

6. It is the responsibility of the Contractor to provide TB(tuberculosis) training and a PPD (purified protein derivative) test for any employees providing services at the Veterans Affairs Medical Centers (VAMC) located at the Butler VA Healthcare, Butler, The government reserves the right to review the contractor's records. Failure to present the proper training documentation upon the contracting officer's request will result in the individual being removed from the job; the individual may only return after proper documentation has been provided. There shall be no exceptions to this requirement.
7. In accordance with OSHA Recordkeeping requirements, the Contractor shall maintain a copy of the current calendar year's OSHA 300 Log of occupational injuries and illnesses, and copies of their previous OSHA 300A Summaries, for the preceding three-year period. Prime contractor required to establish and maintain an accident reporting, recordkeeping and analysis system.
8. In accordance with applicable OSHA construction and general industry standards, the Contractor will provide a fall protection plan and define, design, utilize, and maintain an appropriate fall protection system(s) to protect employees, subcontractors, and those individuals that may be exposed to fall hazards at the project's work site.

D. Safety

1. Safety Inspections: the professional Occupational Safety & Health staff at this facility will perform Safety inspections of all contract operations. Written reports of unsafe practices or conditions will be reported to the Contracting Officers Representative (COR) and Contracting Officer for immediate attention and resolution.

2. Onsite Supervisor shall conduct his own weekly safety inspection of construction areas. Form shall be available from COR. These shall be turned in weekly.

3. Prior to start of project the designated onsite supervisor shall complete the competent person interview worksheet form #3010v.1 (OCT. 2007)

E. Fire Alarms:

1. The fire alarm system connects all buildings at this facility, and is activated by various heat, duct, manual pull stations, and smoke sensors. Manual pull stations are provided at each entrance. Please survey the area in which you are working to locate the manual pull stations.
2. If in the event of a fire alarm sounding, you are to remain in your area, unless medical center personnel (Safety, Nursing or Engineering) instruct otherwise or unless a fire situation is in your area, in which case you should immediately evacuate.
3. Any work involving the fire protection systems will require written permission to proceed from the COR and Fire Department. **DO NOT tamper with or otherwise disturb any fire alarm system components without prior written permission. To do so without written permission will result in an adverse action.**

FAirborne Dust Control During Construction:

1. Generation of dust is of major concern within staff and especially in patient occupied buildings. Where operations involve the generation of dust, all efforts will be directed at reducing airborne generated dust to the lowest level feasible. This may be accomplished by a number of methods. These include misting the area with water, or use of tools attached to high efficiency particulate air (HEPA) filtering vacuums. Where large amounts of materials may be disturbed, resulting in airborne dust, establishment of full ceiling to floor plastic barriers may be required.
2. Classification of Jobs
   a. CLASS I - Includes but is not limited to minor disturbances involving plumbing, electrical, carpentry, and ductwork, and minor aesthetic improvements.
   b. CLASS II - (projects require barrier precautions) - Includes but is not limited to construction of new walls, construction of new rooms, major utility changes, major equipment installation, demolition of wallboards, plaster, ceramic tiles or ceiling and floor tiles, removal of windows, removal of casework, etc.

G. Infection Control Risk Assessment

VA Butler Healthcare
Butler, PA

Medical Center Memorandum EC-17
May 31, 2013

ATTACHMENT A

INFECTION CONTROL RISK ASSESSMENT
MATRIX OF PRECAUTIONS FOR CONSTRUCTION & RENOVATION

Step One:
Using the following table, *identify* the Type of Construction Project Activity (Type A-D)

TYPE A	**Inspection and Non-Invasive Activities.** Includes, but is not limited to: • removal of ceiling tiles for visual inspection limited to 1 tile per 50 square feet • painting (but not sanding) • wall covering, electrical trim work, minor plumbing, and activities which do not generate dust or require cutting of walls or access to ceilings other than for visual inspection
TYPE B	**Small scale, short duration activities which create minimal dust** Includes, but is not limited to: • installation of telephone and computer cabling • access to chase spaces • cutting of walls or ceiling where dust migration can be controlled
TYPE C	**Work that generates a moderate to high level of dust or requires demolition or removal of any fixed building components or assemblies** Includes, but is not limited to: • sanding of walls for painting or wall covering • removal of floor coverings, ceiling tiles and casework • new wall construction • minor duct work or electrical work above ceilings • major cabling activities • any activity which cannot be completed within a single work shift
TYPE D	**Major demolition and construction projects** Includes, but is not limited to: • activities which require consecutive work shifts • requires heavy demolition or removal of a complete cabling system • new construction

STEP 1:_____

Step Two:
Using the following table, ***identify*** **the Patient Risk Groups** that will be affected.
If more than one risk group will be affected, select the higher risk group:

Low Risk	Medium Risk	High Risk	Highest Risk
• Office areas	• Physical Therapy • Radiology/MRI • Respiratory Therapy	• Laboratories (specimen) • Outpatient • Pharmacy	• Central Sterile Supply • Nursing Unit • Negative pressure isolation rooms

STEP 2_____

Step Three: ***Match*** **the**

Patient Risk Group (***Low, Medium, High, Highest***) with the planned **Construction Project Type** (***A, B, C, D***) on the following matrix, to find the **Class of Precautions** (***I, II, III or IV***) or level of infection control activities required.

Class I-IV or Color-Coded Precautions are delineated on the following page.

IC Matrix - Class of Precautions: Construction Project by Patient Risk

	Construction Project Type			
Patient Risk Group	**TYPE A**	**TYPE B**	**TYPE C**	**TYPE D**
LOW Risk Group	**I**	**II**	**II**	**III/IV**
MEDIUM Risk Group	**I**	**II**	**III**	**IV**
HIGH Risk Group	**I**	**II**	**III/IV**	**IV**
HIGHEST Risk Group	**II**	**III/IV**	**III/IV**	**IV**

Note: Infection Control approval will be required when the Construction Activity and Risk Level indicate that **Class III** or **Class IV** control procedures are necessary.

STEP 3_____

DESCRIPTION OF REQUIRED INFECTION CONTROL PRECAUTIONS BY CLASS

	During Construction Project	Upon Completion of Project
CLASS I	1. Execute work by methods to minimize raising dust from construction operations. 2. Immediately replace a ceiling tile displaced for visual inspection.	None
CLASS II	1. Provide active means to prevent airborne dust from dispersing into atmosphere. 2. Water mist work surfaces to control dust while cutting. 3. Seal unused doors with duct tape. 4. Block off and seal air vents. 5. Place dust mat at entrance and exit of work area. 6. Remove or isolate HVAC system in areas where work is being performed. 7. Wipe work surfaces with disinfectant. 8. Contain construction waste before transport in tightly covered containers. 9. Wet mop and/or vacuum with HEPA filtered vacuum before leaving work area. 10. Remove isolation of HVAC system in areas where work is being performed.	None
CLASS III	1. Remove or Isolate HVAC system in area where work is being done to prevent contamination of duct system. 2. Complete all critical barriers i.e. sheetrock, plywood, plastic, to seal area from non work area or implement control cube method (cart with plastic covering and sealed connection to work site with HEPA vacuum for vacuuming prior to exit) before construction begins. 3. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units. 4. Contain construction waste before transport in tightly covered containers. 5. Cover transport receptacles or carts. Tape covering unless solid lid.	1. Do not remove barriers from work area until completed project is inspected by the owner's Safety Department and Infection Control Department and thoroughly cleaned by the owner's Environmental Services Department. 2. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction. 3. Vacuum work area with HEPA filtered vacuums. 4. Wet mop area with disinfectant. 5. Remove isolation of HVAC system in areas where work is being performed.

CLASS IV	1. Isolate HVAC system in area where work is being done to prevent contamination of duct system. 2. Complete all critical barriers i.e. sheetrock, plywood, plastic, to seal area from non work area or implement control cube method (cart with plastic covering and sealed connection to work site with HEPA vacuum for vacuuming prior to exit) before construction begins. 3. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units. 4. Seal holes, pipes, conduits, and punctures appropriately. 5. Construct anteroom and require all personnel to pass through this room so they can be vacuumed using a HEPA vacuum cleaner before leaving work site or they can wear cloth or paper coveralls that are removed each time they leave the work site. 6. All personnel entering work site are required to wear shoe covers. Shoe covers must be changed each time the worker exits the work area. 7. Do not remove barriers from work area until completed project is inspected by the owner's Safety Department and Infection Control Department and thoroughly cleaned by the owner's Environmental Services Department.	1. Remove barrier material carefully to minimize spreading of dirt and debris associated with construction. 2. Contain construction waste before transport in tightly covered containers. 3. Cover transport receptacles or carts. Tape covering unless solid lid. 4. Vacuum work area with HEPA filtered vacuums. 5. Wet mop area with disinfectant. 6. Remove isolation of HVAC system in areas where work is being performed.

Step 4. **Identify the areas surrounding the project area, assessing potential impact**

Unit Below	Unit Above	Lateral	Lateral	Behind	Front
Risk Group	Risk Group	Risk Group	Risk Group	Risk Group	Risk Group

Step 5. **Identify specific site of activity (eg, patient rooms, medication room, etc.).**

Step 6. **Identify issues related to: ventilation, plumbing, electrical in terms of the occurrence of probable outages**.

Step 7. **Identify containment measures, using prior assessment. What types of barriers?**

(eg, solids wall barriers); Is HEPA filtration required?

(Note: Renovation/construction area shall be isolated from the occupied areas during construction and shall be negative with respect to surrounding areas)

Step 8. **Consider potential risk of water damage. Is there a risk due to compromising structural integrity? (eg, wall, ceiling, roof)**

Step 9. **Work hours: Can or will the work be done during non-patient care hours?**

Step 10. **Do plans allow for adequate number of isolation/negative airflow rooms?**

Step 11. **Do the plans allow for the required number & type of hand washing sinks?**

Step 12. **Does the infection control staff agree with the minimum number of sinks for this project?**

(Verify against AIA Guidelines for types and area)

Step 13. **Does the infection control staff agree with the plans relative to clean and soiled utility rooms?**

Step 14. **Plan to discuss the following containment issues with the project team (eg, traffic flow, housekeeping, debris removal (how and when)).**

Appendix: Identify and communicate the responsibility for project monitoring that includes infection control concerns and risks. The ICRA may be modified throughout the project. Revisions must be communicated to the Project Manager.

H. Contact with Asbestos Containing Materials :

1. Due to the age of our buildings, many contain asbestos containing materials (ACM). Primary ACM uses in the medical center includes floor tile, mastic, piping and HVAC insulation. The medical center has performed a comprehensive asbestos survey and has identified accessible ACM. Some areas contain damaged asbestos and should not be accessed without prior abatement.
2. The most common type of ACM insulation you may encounter includes thermal system insulation (TSI) and floor tile. ACM TSI is generally covered with a cloth wrap or lagging and the asbestos substrate generally appear white in color. **DO NOT SAND, DRILL, GOUGE, OR OTHERWISE DISTURB THIS TYPE OF INSULATION.** Contractors disturbing or releasing asbestos containing materials will be liable for all damages and cleanup costs.
3. Where disturbance of asbestos is likely, it has been addressed in the contract for removal. If contact with the presence of asbestos is presented, stop all work in the immediate area and immediately contact the COR or Environmental Protection Specialist to make necessary arrangements for removal.
4. In some areas, asbestos insulation has been identified on elbows between fiberglass piping insulation as patching materials among the fiberglass insulation. Fiberglass insulation used in this facility is usually yellow or pink in color, wrapped either by cloth or paper lagging.
5. To protect and ensure all your employees are aware that asbestos containing materials have been used in the construction of this facility, you are required to have them review this section and complete the awareness statement included as Attachment A. Once this documentation has been signed by all employees, forward to the COR for documentation.
6. A complete assessment of asbestos materials and conditions are available for viewing by contacting the facility Environmental Protection Specialist at extension 5508. Prior to performing work above any ceiling or starting in a new area, consult with the COR concerning existing conditions of ACM.
7. Some of the areas in the facility are identified as restricted areas due to condition of ACM. These are readily labeled. **DO NOT ENTER THESE AREAS** unless first contacting the COR. Entry requirements to these areas are awareness of the hazards, proper protective clothing (coveralls and respirators), and personal monitoring in accordance with OSHA requirements.
8. Submit contractor asbestos awareness statements for all persons working on the site prior to commencing work.

I Environmental Protection:

1. It may help you to be aware of the seriousness which the environmental protection requirements of each contract are regarded. Adherence to these requirements is subject to continuing scrutiny from the community and backed by severe penalties, such as fines and incarceration. These environmental requirements will be strictly enforced.
2. **NO** hazardous materials will be disposed of on Government property. All waste will be hauled off- site or disposed in contractor owned and operated waste removal containers.
3. A copy of all waste manifests for special or hazardous wastes will be forwarded to the COR. Environmental requirements will be strictly enforced.

J. Permit Required Confined Spaces:

1. Contractors performing work on this facility will follow all requirements outlined in OSHA Standards, 29 CFR 1910.146 for working in confined spaces. There are numerous permit required confined spaces on this facility. These spaces have been identified. Some spaces have been posted, but the majorities have not due to their configuration. A complete listing of these areas is located in the Fire Department.
2. Confined spaces are areas which are large enough to be entered, have limited egress/exit potential, and are not designed for permanent human occupancy. If you encounter any space which meets this definition, if it is a suspected confined space, please contact the COR for a listing of these spaces.
3. Contractors performing work in confined spaces are responsible for compliance with all applicable standards and regulations.

4. Contractor must obtain the applicable VA site-specific data sheets and hazard information during the planning and preparation for work activities within a confined space. Contractor will provide the COR a copy of their Confined Space Entry Program to be followed, including individual confined space training certificates for those contractor and/or subcontractors' employees that shall perform the required services of Entry Supervisor, Entry Attendant, and Entrant(s). During initial document submissions to the COR, the Contractor will provide an original copy of their Permit- Required Confined Space Entry Permit for review, and at the end of each PRCS covered work shift the completed PRCS permit shall be submitted to the designated VA representative. Contractor shall provide, maintain, inspect, calibrate as required, and utilize all necessary equipment to evaluate confined space atmospheres, safely enter and exit all confined spaces, perform work activities with pre-planned safe practices and procedures based on hazards present or created during the entry process, and protect confined space entry openings from unauthorized access through attendant, closure, and/or installation of physical barriers and signage, prior to leaving the confined space site.

K. Housekeeping:

1. Protect patients and VA personnel in occupied areas from the hazards of dust, noise, construction debris and material associated with a construction environment. Keep work area clear, clean and free of loose debris, construction materials and partially installed work which would create a safety hazard or interfere with VA personnel duties and traffic.
2. Wet mop occupied areas clean and remove any accumulation of dust/debris from cutting or drilling from any surface at the end of each workday.
3. Make every effort to keep dust and noise to a minimum at all times. Take special precautions to protect VA equipment from damage including excessive dust.
4. Maintain clear access to mechanical, electrical devices, equipment and main corridors. This will ensure access to existing systems in the event of an emergency.
5. Clean area of all construction debris and dust upon completion of demolition and/or renovation.

6. During construction operations, keep existing finishes protected from damage. Cover and protect all carpets during construction. Any carpets or surfaces damaged as a result of construction activities will be replaced at the contractor expense.

L Hot Work Permits:

1. Any hot work operations including cutting, welding, thermal welding, brazing, soldering, grinding, thermal spraying, thawing pipes or any other similar activity, will require a Hot Work Permit to be obtained by the
Contractor from the Fire Department. The Contractor will be responsible for conforming to all Medical Center regulations, policies and procedures concerning Hot Work Permits as outlined below:
    a. Prior to the performance of hot work in patient-occupied buildings, a request for a Hot Work Permit will be made to the Fire Department (extension 5055).
    b. The COR will inspect the area and ensure that the requirements of NFPA 241 and OSHA standards have been satisfied. The Hot Work Permit will be granted and will be posted in the immediate area of the work.
    c. The Hot Work Permit will apply only to the location identified on the permit. If additional areas involve hot work, additional permits must be requested.
    d. Upon completion of all hot work, the COR will be notified by the responsible individual to perform a re-inspection of the area.
2. Do not use any of the extinguishers in the medical center for standby purpose while conducting hot work. Contractors are required to supply their own Class ABC extinguishers. Medical center extinguishers are only to be used in the event of a fire.

M. Emergency Medical Services: Emergency medical services for stabilization purposes are available for contractors at this facility. For medical emergencies, dial 911 and state your location 325 New Castle Road, Building number and floor. High Visibility Accident. Any mishap which may generate publicity or high visibility.

N. Accident/Incident Criticality Categories:

No impact – near miss incidents that should be investigated but are not required to be reported to the VA;

Minor incident/impact – incidents that require first aid or result in minor equipment damage (less than $5000). These incidents must be investigated but are not required to be reported to the VA;

Moderate incident/impact – Any work-related injury or illness that results in: 1. Days away from work (any time lost after day of injury/illness onset);

2. Restricted work;
3. Transfer to another job;
4. Medical treatment beyond first aid;
5. Loss of consciousness;
6. A significant injury or illness diagnosed by a physician or other licensed health care professional, even if it did not result in (1) through (5) above or,
7. Any incident that leads to major equipment damage (greater than $5000). These incidents must be investigated and are required to be reported to the VA;

Major incident/impact – Any mishap that leads to fatalities, hospitalizations, amputations, and losses of an eye as a result of contractors' activities. Or any incident which leads to major property damage (greater than $20,000) and/or may generate publicity or high visibility. These incidents must be investigated and are required to be reported to the VA as soon as practical, but not later than 2 hours after the incident.

O. Medical Treatment. Treatment administered by a physician or by registered professional personnel under the standing orders of a physician. Medical treatment does not include first aid treatment even through provided by a physician or registered personnel.

P. Use of Government Owned Material and Equipment:: Use of Government owned material and equipment is PROHIBITED.

Q. Superintendent Communications:: At all times during the performance of this contract, the Contractors Superintendent is to be available by portable cellular phone. At the beginning of the contract and prior to beginning any construction, supply the COR with the telephone number for the superintendent.

R. Parking: Contractor employees may be assigned a parking area during the preconstruction meeting..

S. Traffic:

1. Traffic hazards are minimal at this facility. Drivers should be particularly concerned with pedestrian traffic.
2. Seat belt use is mandatory on the station.
3. Federal police officers maintain a 24-hour patrol of the area.

T.Contractor's Trailers: Contractor's trailers shall be located at the area assigned. All utility connections to the trailer shall be installed at the contractor expense. Their removal is required upon completion of the contract, unless approved by the COR to leave in place.

U. Smoking: No smoking is permitted in buildings or around hazardous areas. Any smoking inside a

government building is subject to a fine without warning. Contractor shall designate one area for their employees and sub-contractors as a smoking area, this will be coordinated with the COR.

V. Fluorescent (PCB Containing) Fixtures: All fluorescent lighting fixtures being removed as part of this project are to have their ballasts removed and turned over to the VAMC Environmental Protection Specialist for disposal. All other components of the lighting fixture are to be disposed of by the Contractor.

W. Road Closures: For any work requiring closure of a road or parking lot, a request for closure will be made in writing at least 5 days in advance for approval by the COR and Fire Department. Contractor requiring road closures will complete a permit and forward to the COR for authorization by the Fire Department. Permits will be issued for no longer than 1 week. Work lasting longer than 1 week will be authorized by multiple permits.

X. Water Source Connection: Contractors shall supply and install a backflow prevention device at all connection points to a VA supplied water source. Backflow prevention device shall be a Reduce Pressure Watts Series 009 or approved equivalent.

Y. Penetration Permit; Any breeching of a fire or smoke wall including making a hole or any other similar activity, will require a Penetration Permit to be obtained by the Contractor from the Fire Department. The Contractor will be responsible for conforming to all Medical Center regulations, policies and procedures concerning Penetration Permits.

Z. Water supply lines will be flushed before placing newly renovated or constructed area into service. Infection Control shall be notified prior to flushing and to be coordinated with COR.

VA BUTLER HEALTHCARE ENVIRONMENTAL PROTECTION REQUIREMENTS

ERE THE FOLLOWING REQUIREMENTS DIFFER FROM REQUIREMENTS ESTABLISHED BY A SPECIFIC TASK ORDER, THE TASK ORDER REQUIREMENTS SHALL GOVERN.

Contractors shall abide by the facilities Green Environmental Management System (GEMS) policies and procedures. Contractors shall use recycled content products and bio-based materials when possible and provide an estimate of the percentage of materials with recycled content that will be used on the awarded projects. Contractors are required to certify that all personnel and subcontractors have received Resource Conservation and Recovery ACT (RCRA) training. Contractors shall recycle all possible recyclable materials and report the total quantity of recycled and total quantity or waste removed during the projects. Reporting frequency will be set by the Contracting Officer.

1.0 ENVIRONMENTAL PROTECTION:

For the purpose of this specification, environmental pollution is defined as the presence of chemical, physical or biological elements of agents, which adversely affect human health or welfare; unfavorably alter ecological balance of importance to human life, affect other species of importance to man or degrade the utility of the environment for aesthetic and recreational purposes. The control of environmental pollution requires consideration of air, water and land, and involves noise, solid waste management and management of radiant energy and radioactive materials, as well as pollutants, or hazardous materials.

1.1 APPLICABLE REGULATIONS:

In order to prevent and to provide for abatement and control or any environment pollution arising from the construction activities of the Contractor and his subcontractors in the performance of this contract, shall comply with the applicable Federal, State and local laws and regulations concerning environmental pollution control and abatement, in effect on the date of issue of the Request for Proposal (RFP).

1.2 PROTECTION OF LAND RESOURCES:

It is intended the land resources within the project boundaries of work performed under this contract be preserved in their present condition or be restored to a condition after completion of all Construction that will appear to be natural and not detract from the appearance of the project. Insofar as possible, the Contractor shall confine his activities to
areas defined by the plans or specifications.

1.2.1 RESTORATION OF LANDSCAPE DAMAGE

(This does not include trees and brush being cleared):

Any trees or other landscape feature scarred or damaged by the Contractor's equipment or operations shall be restored as nearly as possible to its original condition at the Contractor's expense. The Contracting Officer will decide what method of restoration shall be used and whether damaged trees shall be treated and healed or removed and replaced. We require all native species approved by the GEMS Manager and 2 trees replaced for every 1 removed or damaged

1.2.2 POST-CONSTRUCTION CLEANUP OR OBLITERATION:

The Contractor shall obliterate all signs of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary structures, stockpiles of excess of waste materials, or any other vestiges of construction resulting from this contract as directed by the Contracting Officer.

1.3 PROTECTION OF WATER RESOURCES:

The Contractor shall not pollute ground water, streams, lakes or reservoirs with fuels, oils, bitumen's, calcium chloride, painting materials, acids or other harmful materials. It is the responsibility of the Contractor to investigate and comply with all applicable Federal, state, County and Municipal laws concerning pollution of ground water, rivers and streams. All work under this contract shall be performed in such a manner that objectionable conditions will not be created in the project.

1.4 PROTECTION OF FISH AND WILDLIFE:

The Contractor shall at all times perform all work and take such steps required to prevent any interference or disturbance to fish and wildlife. The Contractor will not be permitted to alter water flow or otherwise disturb native habitat adjacent to the project area which, in the opinion of the Contracting Officer or his designated representative, are critical to fish and wildlife. Fouling or polluting of water will not be permitted. Wash waters and wastes shall be processed, filtered, ponded or effectively treated prior to their release into any body of water.

1.5 HAZARDOUS MATERIAL STORAGE & USE: 1.5.1. Hazardous Material Usage

1.5.1.1. The contractor shall establish hazardous material (HM) storage and distribution system when HM is to be used. All HM required to support the contract shall be reported to the Green Environmental Management System (GEMS) Coordinator using the Contractor HM Identification Form. The Contractor HM Identification Form will be provided to the Contractor at or prior to the Pre-Construction meeting. Additional HM needed by the contractor shall be identified to the Contracting Officer's Representative for approval by the HMP.

1.5.1.2. The contractor planning to use HM for the work must register with the GEMS prior to start of work in order to support the installation's compliance with Executive Order 12856, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements.

1.5.1.3. The contractor shall maintain Contractor HM Identification Form for HM on the job site for inspection/verification.

1.5.1.4. Contracting Officer's Representative (COR) will verify that the HM identified to (GEMS) Coordinator is the only HM in use on the job site.

1.5.1.5. Contractors shall provide the (GEMS) Coordinator:

1.5.1.5.1. A list of each material and quantity of material for all proposed HM. Hazardous Material (HM) shall mean any item that is:

- a health hazard or physical hazard as defined in 29 CFR, 19 10.1200(c). - regulated in its disposal by EPA under 40 CFR.
- hazardous as defined by DOT regulations under 49 CFR.

- hazardous as defined by the Dangerous Goods Regulations of the International Air Transport Association.

1.5.1.5.2. A safety data sheet (SDS) for each item on the list.

1.5.1.6. The contractor shall establish his/her own HM storage and issue location that complies with federal, state and local environmental regulations. Materials issued shall be tracked for quantities used. Unused materials shall be inventoried and removed from the VAMC Facilities prior to close out of the contract or expiration date of the HM. Reports of materials delivered, used and removed from the installation shall be submitted to the Contracting Officer monthly and prior to contract close out.

1.5.1.7. The contractor shall comply with all federal, state and local environmental standards.

1.5.1.8. The Facility (GEMS) coordinator shall be notified and accompany the Contracting Officer, Facility Engineer and other responsible parties i.e., COR, etc., on all project close out inspection to ensure all used/unused HM was removed from the installation.

1.6 HAZARDOUS WASTE REQUIREMENTS:

1.6.1 General: This section includes the handling of all hazardous waste (HW) as generated by the contractor or government hazardous waste encountered by the contractor during the course of this contract.

1.6.2 Non-Hazardous Waste: The contractor is responsible for the disposal of all non-hazardous waste.

1.6.3 Hazardous Waste:

1.6.3.1 Contractor Hazardous Waste: This shall include any hazardous waste that is a result of the use of hazardous materials (HM) and through leakage or spills. Pennsylvania regulations define any spills or leakage of oils (fuel) as hazardous waste. Contractor shall be fully responsible for the use, reporting and disposal of this material or waste, in accordance with all Federal, State and local regulations. The contractor shall provide a copy of his/her registration with the state Department of Environmental Protection (DEP) for the Northwest region/Environmental Protection Agency (EPA)ID number; hazardous waste transporter' s name and copy of their license or permit to transport hazardous waste; and the Treatment, Storage, and Disposal Facility (TSDF) name and copy of their license, permit, or interim status from EPA to receive hazardous waste.

1.6.3.2 Notification Requirements: The contractor shall notify the Green Environmental Management System (GEMS) Office before the start of work, if he will be generating HW and when he actually starts generating HW. While the EPA and the Commonwealth of Pennsylvania permit the use of accumulation sites (Ref: 40 CFR 262.34) local authorization is required prior to establishing such a site. This approval is obtained from the Green Environmental Management System Office after a favorable joint review conducted by the (GEMS) Coordinator, The Safety Manager, The COR, and the Contracting Officer

1.6.3.3.1 Waste Streams: The contractor shall report all waste streams to (GEMS). This shall also include any process changes that could affect the characteristics of the wastes being generated in order to determine whether a specific waste is hazardous. The (GEMS) office will follow the facility's medical center memorandum to characterize the waste to determine the proper waste disposal procedures.

1.6.3.4 Operational Requirements: The following generic requirements and conditions apply to the operation of hazardous waste accumulation points (HWAP):

1.6.3.4.1 Facility:

Usually sited in close proximity to the point where a waste stream is generated, the proposed HWAP and its actual location must be reviewed and approved by the (GEMS) coordinator prior to establishing the site.

At a minimum, the HWAP will be identified with a sign of no less than 1 inch upper case letters denoting "HAZARDOUS WASTE", "HAZARDOUS WASTE ACCUMULATION POINT", OR EQUIVALENT. The site

needs to be clearly distinguishable from other areas, and must be designed to preclude people from unknowingly entering the location and to reduce unauthorized entry as much as possible. The use of signs, pylons, ropes, floor/markings, fencing, etc, may be used to more clearly define the HWAP location.

Containers holding liquid hazardous waste must be stored on (GEMS) approved containment pallets to preclude spreading leaks and spills. The pallets will be installed prior to collecting liquid waste. ..on approved pallets that meet GEMS requirements.

An existing HWAP is solely for the function and waste streams covered by the original approval. Waste from other functions and new waste streams will not be added to HWAP containers without prior approval from (GEMS) office.

HWAP are subject to regulatory and GEMS inspection. 1.6.3.4.2 Safety/ Emergency Response:

A suitable spill response kit will be located within responsible proximity to the HWAP (i.e. line of sight). Also required is access to a telephone and a list of emergency response telephone numbers. All spills will be reported to the GEMS coordinator.

The use of applicable personnel protective equipment (PPE), consistent with what is required when handling "virgin product" will be used when handling hazardous waste.

Different hazardous wastes will not be mixed in the same container as this may cause a dangerous reaction. (Ref: 40 CFR 264.17).

1.6.3.4.3 Personnel Assignments and Training:

A Primary Manager and Alternate Manager will be appointed for the HWAP. These assignments will be made by letter of designation signed by the Senior Civilian Site Manager, or the Senior Contractor Representative, as applicable. A copy of the letter will be posted within the HWAP, with a copy provided to the GEMS coordinator and the Contracting Officer.

If not already completed and current, newly assigned HWAP managers must receive initial training on hazardous waste management prior to assuming their HWAP Management duties. Annual management refresher training is required for all managers. (Ref: 40 CFR 264.16, 40 CFR 265.16)

Supervisors and HWAP managers are responsible for ensuring that all assigned personnel are sufficiently trained prior to being allowed to handle hazardous waste. (Ref: 40 CFR 264.16, 265.16)

Training records are subject to regulatory and GEMS inspection. They will be retained for no less than three years after a person leaves or is no longer handling Hazardous Waste.

1.6.3.4.4 Inspection/Operational/ Checklists and Logs:

The supervisor or HWAP manager will post a checklist covering day-to-day operations. Specific to the particular location, this checklist highlights routine procedures the contractor follows handling its waste.

The HWAP manager will develop a checklist covering the manager's weekly inspection of the HWAP. Once approved by GEMS the checklist is endorsed by the manager's supervisor, a copy forwarded to GEMS coordinator, and the manager files the original for three years. (Ref: 40 CFR 264.14)

The HWAP manager will conduct an informal HWAP inspection on a daily basis. The weekly checklist may be used for this purpose. If another approach is employed it must include checking to make sure containers are in good condition and properly labeled; that levels of waste are not exceeding authorized quantities, and that containment measures are properly employed.

HWAP managers will maintain container-tracking logs. The log will include container number, the HWAP location, brief description of the waste stream, fill date (the date the container was filled to its authorized capacity), close date

(date container reaches its maximum allowable storage time, which for a HWAP is one year), date transferred (the date the container was picked up at the HWAP by a contractor) and shipped to (where the container went from the HWAP). Replace highlight with the first day that waste is added to the container

Using the weekly inspection checklist, the HWAP manager will document a full inspection of the HWAP facility, including container condition and marking. Pennsylvania requires that a record of these inspections (completed checklist or log summary) be retained "for at least three years from the date of inspection or until final closure of the facility, whichever period is longer". (Ref: 40 CFR 264.15, 264.174):

As noted previously, containers of liquid waste will be stored on pallets designed to contain spills and leaks.

A container will not be stored longer than one year regardless of how much unused space the container may possess.

Of any individual hazardous waste, the maximum a HWAP may accumulate is a 55-gallon drum, unless the material is an "acutely hazardous waste". For this, the maximum amount drops to a 1-quart container. The affects of expansion have to be considered. No more than 50 gallons will be accumulated in a 55-gallon drum (approximately 6 inches below the rim). Acutely hazardous waste should be limited to an amount about 2 inches below the rim of a 1- quart container. HWAP as used in this document is a Satellite Accumulation Area. The law states that the maximum total accumulation in all containers is 55 gallons and that all full containers must be removed within 3 days once that amount is reached. The limit for acutely hazardous waste is 2.2 pounds which is approximately one quart.

Except for adding waste, or to conduct an inspection of the level of waste in the container, the hazardous waste container will always be covered with its lid. (Ref: 40 CFR 264.173) Not just covered it has to be sealed and leak proof

Every HWAP hazardous waste container will have a clearly visible label affixed to the side of the container. At a minimum, the label will show "HAZARDOUS WASTE", a description of the hazardous waste (e.g. Toluene), and

the hazard(s) associated with the waste (e.g. ignitable). In addition, the label will have provision to post the date the container is filled at the HWAP.
Upon filling a hazardous waste container, the date is posted to the container label. The contractor must then arrange for transportation of the hazardous waste within the required timeframes allowed by their generator status. See above

1.6.3.4.6 Hazardous Waste Accumulation Point/Site Closure:

All actions leading to the closure of an accumulation site, and any follow-up requirements, must focus on ensuring that the contractor takes the steps necessary to control, minimize or eliminate the risk to personnel and the environment during shut down operations. Further, the contractor's efforts must preclude the risk of post closure release of hazardous waste and its constituents, as well as make post closure facility maintenance unnecessary. Preventing any hazardous waste, or hazardous waste constituent, or hazardous waste leaching, or contaminated runoff, or hazardous waste decomposition product from contaminating the earth, water or atmosphere is paramount. Likewise the contractor must ensure that contaminated equipment; facilities and surroundings (soil, water, and air) are properly decontaminated or disposed of as part of the closure process. (Ref: 40 CFR 264.111)

1.6.3.4.6.1 Initiating HWAP Site Closure:

The HWAP manager begins the closure process by submitting a written request to the GEMS Office to discontinue operating the location. The request must address the following:

Site designation/location Projected closure date

Reason for closure. Must include an explanation as to what is being done with the hazardous waste streams handled by the site.

1.6.3.4.6.2 Closure Review/ Approval:

Closing a HWAP requires prior approval by the GEMS Coordinator or designee, in concert with Facility Engineering and the COR. A favorable decision will be documented with a written approval from the GEMS Coordinator. Of

particular interest during this process is the disposition of the waste streams originally consigned to the HWAP; changes in location requiring separate review and approval, changes in designated management, post closure facility, equipment and environment clean-up requirements, and funding needed to cover closure costs.

Closure approval will include specific guidance as to the steps the manager must follow with the phase-out of the location.

1.6.3.4.6.3 Basic Closure Actions:

The facility accumulation site equipment, HW containment systems, and surrounding environment are checked for contamination, as applicable. Any such contamination must be assessed jointly by GEMS, and Facilities Engineering and the generating activity (Contractor). A determination is then made as to the cleanup procedures to be employed. Hazardous waste processing of cleanup materials may apply.

All signs, markings, etc., identifying the location as a HWAP, are removed.

1.6.3.5 Hazardous Waste Recycling and Universal Waste: The contractor shall obtain approval in writing from the GEMS office prior to recycling any hazardous waste (e.g. batteries, oil, mercury-containing light bulbs, etc.) The contractor shall provide a copy of the shipping document, bill of lading, etc. for items that are recycled. The contractor cannot sell government property to recycling companies.

1.7 Solid Waste Disposal and Recycling: The contractor shall manage all solid, or special wastes which can or cannot be disposed of as solid waste in a state approved landfill, JAW all Federal, State, and local environmental laws, policies, regulations and procedures. Recycling is required for recyclable waste, all waste that can be diverted from a landfill is to be diverted (i.e. clean fill etc.), any item that is re-usable should be re-used. The agency goal for contractor recycling is 50% of all waste.

1.7.1 The contractor shall monitor all solid waste to insure that it contains no infectious or hazardous waste. The contractor shall monitor all solid waste to insure that all recyclables are removed and recovered for recycling (paper, plastics, glass, cardboard, newspaper, metals, tires and aluminum cans). The contractor is responsible for providing recycling containers and contacting the appropriate agencies for pickup.

1.7.2 The contractor shall report all waste streams to the Contracting Officer and Green Environmental Management System Coordinator, including any process changes that could affect the characteristics of the wastes being generated in order to determine whether a specific waste is solid or special. The contractor must ensure that all waste streams are characterized and reported directly to the GEMS Coordinator.

END

Infection Control Construction Permit

Permit No:

Location of Construction:	Project Start Date:
Project Coordinator	Estimated Duration:
Contractor Performing Work	Permit Expiration Date:
Supervisor:	Telephone:

YES	NO	CONSTRUCTION ACTIVITY	YES	NO	INFECTION CONTROL RISK GROUP
		TYPE A: Inspection, non-invasive activity			GROUP 1: Low Risk
		TYPE B: Small scale, short duration, moderate to high levels			GROUP 2: Medium Risk
		TYPE C: Activity generates moderate to high levels of dust, requires greater 1 work shift for completion			GROUP 3: Medium/High Risk
		TYPE D: Major duration and construction activities Requiring consecutive work shifts			GROUP 4: Highest Risk

CLASS I	1. Execute work by methods to minimize raising dust from construction operations. 2. Immediately replace any ceiling tile displaced for visual inspection.	3. Minor Demolition for Remodeling
CLASS II	1. Provide active means to prevent air-borne dust from dispersing into atmosphere. 2. Water mist work surfaces to control dust while cutting. 3. Seal unused doors with duct tape. 4. Block off and seal air vents. 5. Wipe surfaces with disinfectant.	6. Contain construction waste before transport in tightly covered containers. 7. Wet mop and/or vacuum with HEPA filtered vacuum before leaving work area. 8. Place dust mat at entrance and exit of work area. 9. Remove or isolate HVAC system in areas where work is being performed.
CLASS III _____ **Date** _____ **Initial**	1. Obtain infection control permit before construction begins. 2. Isolate HVAC system in area where work is being done to prevent contamination of the duct system. 3. Complete all critical barriers or implement control cube method before construction begins. 4. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units. 5. Do not remove barriers from work area until complete project is thoroughly cleaned by Env. Services Dept. tightly covered containers.	6. Vacuum work with HEPA filtered vacuums. 7. Wet mop with disinfectant. 8. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction. 9. Contain construction waste before transporting 10. Cover transport receptacles or carts. Tape covering. 11. Remove or isolate HVAC system in areas where work is being performed.
CLASS IV _____ **Date** _____ **Initial**	1. Obtain infection control permit before construction begins. 2. Isolate HVAC system in area where work is being done to prevent contamination of duct system. 3. Complete all critical barriers or implement control cube method before construction begins. 4. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units. 5. Seal holes, pipes, conduits, and punctures appropriately. 6. Construct anteroom and require all personnel to pass through this room so they can be vacuumed using a HEPA vacuum cleaner before leaving work site or they can wear cloth or paper coveralls that are removed each time they leave the work site.	7. All personnel entering work site are required to wear shoe covers. 8. Do not remove barriers from work area until completed project is thoroughly cleaned by the Environmental Service Dept. 9. Vacuum work area with HEPA filtered vacuums. 10. Wet mop with disinfectant. 11. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction. 12. Contain construction waste before transport in tightly covered containers. 13. Cover transport receptacles or carts. Tape covering. 14. Remove or isolate HVAC system in areas where is being done.

Additional Requirements:

Date Initials	_____ Exceptions/Additions to this permit Date Initials are noted by attached memoranda
Permit Request By:	Permit Authorized By
Date:	Date:

_____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

CONTRACTOR/SUBCONTRACTOR/EMPLOYEE
NOTIFICATION OF ASBESTOS

THE DEPARTMENT OF VETERANS AFFAIRS MEDICAL CENTER LOCATED IN BUTLER PENNSYLVANIA, WAS CONSTRUCTED DURING A PERIOD WHEN ASBESTOS WAS COMMONLY USED IN BUILDING MATERIALS.

THE MEDICAL CENTER HAS COMPLETED A SURVEY FOR ASBESTOS. ALL BUILDINGS CONTAIN SOME TYPE OF ASBESTOS (I.E., STEAM LINES, FLOOR TILES, CRAWLSPACES, ETC.).

IF YOU OR YOUR EMPLOYEE ENCOUNTERS SUSPECTED FRIABLE ASBESTOS OR CONDITIONS THAT MAY CAUSE SUSPECTED ASBESTOS TO BECOME FRIABLE, NOTIFY THE COR IMMEDIATELY.

WHEN WORKING IN AREAS THAT ARE SUSPECTED OF HAVING ASBESTOS, RELOCATE EMPLOYEES AND PATIENTS FROM THE AREA UNTIL WORK IS COMPLETED.

IF THERE ARE ANY QUESTIONS, PLEASE FEEL FREE TO CONTACT THE COR AT EXT. 5059. THANK

YOU FOR YOUR ASSISTANCE.

PLEASE SIGN AND DATE AS ACKNOWLEDGEMENT OF THE ABOVE INFORMATION.

CONTRACTOR/SUBCONTRACTOR EMPLOYEE SIGNATURE:

Employee Name	Contractor/Subcontractor	Date

Attachment B

HOT WORK PERMIT

This permit applies only to the area specified below:

Date: _____

Building: _____

Floor/Area:_____

Nature of Job:

_____

The above location has been examined. The precautions checked on the reverse side of this have been taken to prevent fire. Permission is granted for this work.

Permit expires: Date: _____ Time: _____

Print Name: _____

Signed: _____
VAMC Fire Department

Time Started: _____# Smoke Detector Covers Issued

Time Finished:

FINAL CHECK

Work area and all adjacent areas to which sparks and heat might have spread were inspected for at least 30 minutes after the work was completed and found fire safe.

Signed: _____ Date:

After signing, return permit to the Fire DepartmentPermit No.

NECESSARY PRECAUTIONS

____ Cutting/Welding equipment in good condition

_____Floors swept clean of combustibles

_____ Flammable liquids removed from work area

_____ All wall and floor openings covered

_____ Fire watch provided during and 30 minutes after welding/cutting work is stopped.

_____ Fire extinguishing equipment on hand in case of fire Personnel instructed in the initiation of
_____ fire alarm

_____ Walls and ceilings protected from sparks and/or open flame

_____ Combustible floors protected by wetting, covering with wet
_____ sand

_____ Proper utilities secured such as oxygen, LP gas, Natural gas, etc.

I have been informed and understand the provisions of this permit. I understand this permit can be revoked at any time if I or my employees fail to follow the provisions outlined above.

Print Name: _____

Print Contractor Name: S i g n a t u r e :

Date:

PERMIT
FOR ROAD CLOSURE

VA Project No: _____ Date of Request:

Name of Contractor's Firm:

Date(s) of Requested Closure_____ Time(s) of Requested Closure:

Location Description: _____

Work To Be Done:

_____

_____

_____

_____

Protection Required: (To be completed by COR)

o Solid barricade with flashing lights to guard excavation site o Warning cones and/or construction barrier tape

o Construction fencing
o Flag/attendant for directing traffic
o Cover excavation site with steel sheet to permit traffic flow after administrative work hours. o Other (Describe)

COR CONCURRENCE: DATE

FIRE DEPARTMENT APPROVAL: _____ DATE _____
(Fire Department Officer approving permit will contact on duty Police Officer to inform of closure)

Original copy to be maintained in the Fire Department until completion of work. Once completed, return original to Planning & Development for filing.

ELECTRICAL POWER DISTRIBUTION SYSTEM

1. PURPOSE: This Veterans Health Administration (VHA) Directive provides guidance on policy regarding the installation, operation, testing, and maintenance of the Electrical Power Distribution System at VHA facilities.

2. BACKGROUND

a. VHA and the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) have adopted the National Fire Protection Association (NFPA), National Electrical Code (NFPA 70), Recommended Practice for Electrical Equipment Maintenance (NFPA 70B), Standard for Electrical Safety Requirements for Employee Workplaces (NFPA 70E), Standard for Health Care Facilities (NFPA 99), and Life Safety Code (NFPA 101) as the basis for the requirements of the design, installation, operation, testing, and maintenance of the Electrical Power Distribution System at VHA facilities.

b. JCAHO' s Environment of Care (EC) standards require written Utility Systems Operational Plans. The Electrical Utility System Operational Plan must assure reliability, control risks, reduce failures, and train users/operators of the Electrical Power Distribution System.

c. Occupational Safety and Health Requirements (OSHA) — Part 1910 Subpart J — The control of hazardous energy (lockout/tag out) (1910.147), Occupational Safety and Health Requirements Part 1910 Subpart S — Electrical (1910.301 — 1910.399), and Safety and Health Regulations for Construction Part 1926 Subpart K — Electrical (1926.400 — 1926.499) must apply.

d. Working on energized electrical equipment is inherently dangerous to patients, staff, visitors, and VHA property. Such actions, if unplanned or poorly executed, can result in disruption of operations, injuries, loss of life and/or property.

3. POLICY: It is VHA policy that the Electrical Power Distribution System must operate in a safe, reliable, and efficient manner, recognizing its importance and potential danger; and is in compliance with JCAHO, OSHA, and NFPA electrical standards.

4. ACTION

a. Network Director. The Network Director is responsible for ensuring that installation, operation, testing, and maintenance of the Electrical Power Distribution System meets or exceeds JCAHO and NFPA requirements, that all work on this system complies with OSHA standards, and that appropriate resources are provided to assure compliance.

TITIS VITA DIRECTIVE EXPIRES OCTOBER 31, 2011

b. Facility Director. The facility Director is responsible for ensuring that:

(1) Only qualified senior staff at the facility and/or qualified electrical contract professionals are authorized to execute any design, installation, operation, testing, and maintenance of the Electrical Power Distribution System in accordance with JCAHO and NFPA requirements and that all work on these systems is compliant with OSHA standards.

(2) Appropriate actions are taken to correct deficiencies found in the Electrical Power Distribution System.

(3) A management system is developed and implemented so that work on energized equipment does not take place without the facility Director's prior knowledge and approval.

(4) All electrical work is executed with all proximate energized circuits de-energized. It is the intent of this directive to make planned electrical system shutdowns for maintenance/repair the standard operating procedure, not the exception.

(5) Written procedures are established to prepare the medical center for a planned electrical outage. The procedures must take into account the worst case of risk to patients, staff, visitors, and VHA property. When a planned electrical outage cannot be accomplished, the following requirements are mandatory for working on energized circuit:

(a) Full and proper protective equipment (PPE) is available and worn by the qualified electricians (i.e., certified and tested insulating material to cover exposed energized electrical components, certified and tested insulated tools). ***NOTE:*** *Refer to the NFPA 70E, and General Safety Guidebook for guidance on the appropriate PPE.*

(b) Qualified electricians are provided with flame-retardant clothing for work at the proximity of energized electrical equipment.

(c) Before initiating work, a specific work plan is developed and a peer review of the plan documented.

1. The work plan must include: procedures to be used on and near the energized electrical equipment, barriers to be installed, safety equipment to be provided, and exit paths to be accessed.

2. An Energized Circuit Work Permit must be obtained from the Safety Office.

3. Any energized electrical work plan must have the prior knowledge, and approval of the Medical Center Director. ***NOTE:*** *However, the Chief of Engineering Service may approve energized electrical work plan for Branch Circuits, from the final overcurrent protecting devices to the outlets, that do not serve the critical patient care areas, such as Surgery Rooms, Critical Care, Intensive Care, Dialysis Units, Isolation Rooms, Catherization Laboratories, Emergency Rooms, or Supply, Processing, and Distribution (SPD) rooms.*

(6) An Electrical Distribution Operational Plan (EDOP) is developed which meets, or exceeds JCAHO, OSHA, and NFPA requirements.

(7) EDOP is approved.

(8) The Electrical Power Distribution System is supplied by a source of power from the Utility Power Company (UPC). A second independent source from the UPC, referred to as utility redundant feed, should be considered only when utility power reliability is proven to be questionable or it can be justified as cost effective.

(9) Where there are two sources of power supplies (Primary and Redundant Feeds) coming from the UPC, a test is coordinated with the UPC to maintain the tie-circuit breaker, or transfer switch for such system every 36- months.

(10) That where required by NFPA 70, NFPA 99, and NFPA 101, an Essential Electrical System (EES) is provided for each building.

(a) EES consists of alternate source of power, all connected electrical power distribution systems, and ancillary equipment.

(b) The EES must have a minimum of two independent sources of power: a normal source generally supplying electrical power to the entire Electrical Power Distribution System, and one or more alternate sources for use when the normal source of power is interrupted. The alternate source must be one or more low voltage (600 volts or less) emergency generator(s) located on the facility property. ***NOTE:*** *When the alternate source requirements are sufficiently small, a stored energy (battery) supplied source may be considered.*

(11) The EES, including all related components, such as Automatic Transfer Switches and emergency generators, is inspected weekly.

(12) The EES, including all related components, is exercised under load at least monthly, for a minimum of 30 minutes, in accordance with the requirements of NFPA 99 and NFPA 110.

(13) A test of the EES is planned and executed every 36 months that lasts for 4 hours continuously, in accordance with the requirements of NFPA 99 and NFPA 110. ***NOTE:*** *All risks to the patients, staff, visitors, and VHA property must be mitigated with proper planning.*

(a) This test must meet two objectives:

1. EES Response - a thorough test of the EES initiated by a loss of utility normal power.

2. Facility Staff Response - a thorough test of the medical center staff's ability to operate while restricted only to the EES.

(b) This test requires coordination with the local UPC. The main electrical switch, owned by the local UPC that serves the medical center, must be opened to simulate a total electrical power outage. This switch is to remain opened for a minimum of 4 hours continuously. During this time, the facility's staff must test, inspect and record the operation of the EES, including all related components. Deficiencies found in the EES shall be recorded, and corrected immediately.

(c) This test may be incorporated into the JCAHO required facility-wide disaster drills. Moreover, an unscheduled facility power outage of at least 4 hours continuous duration may be documented and considered the equivalent of the EES test, providing that all requirements listed in preceding subparagraph 4b(13)(b) are met.

(d) Individual medical centers with a significant rate of staff turnover, absence of key staff during the most recent test, significant incidents during the most recent test, significant modifications to the Electrical Power Distribution System, significant modifications or seasonal variation to the electrical loads, may consider more frequent testing of the EES.

(e) Testing, maintenance, and exercising of the EES, including all related components, must be executed to meet the requirements of NFPA 99 and NFPA 110, whichever is more stringent.

(14) Transformers, including all related components, are inspected, tested, and maintained every 36-months. The following is a minimum list of items to be inspected, tested, and maintained:

(a) Transformers of 500 kiloVoltAmps (kVA) or larger shall be cleaned exteriorly, inspected for sign of overheating with an infra-red thermal detecting equipment, and inspected for any damages to the housing, connection points, or insulation.

(b) Liquid cooled transformers must have the cooling liquid tested and replaced, when tests indicate that the liquid no longer meets manufacturer's specification. The liquid must be re-filled to meet the manufacturer's specification.

(c) Dry type transformers must be thoroughly cleaned exteriorly, and inspected for overheating with an infra-red thermal detecting equipment.

(15) Electrical equipment (including, but not limited to switchgears, switchboards, distribution panels, motor control centers, and all related components) is inspected, tested, maintained, and/or calibrated every 36-months. All work must be documented.

(a) Use lint-free rags to clean conductors, contact points between the circuit breakers and main buss bars, buss bars and interior of the electrical equipment. Use a vacuum cleaner to remove large debris; compressed air is not to be used for this purpose. Visually inspect for sign(s) of overheating, misaligned contacts, damaged insulation, or lose lugs.

(b) Lubricate all moving parts with manufacturer's approved lubricants.

(c) Test and exercise circuit breakers located in switchgears, switchboard, and distribution panels to ensure operation under overload, and short circuit conditions.

(d) Test ground fault protection devices for proper function if they are installed in the Electrical Power Distribution System.

(e) Inspect and tighten ground connections. Test ground resistance for the entire facility grounding system.

(f) Identify the hot spots in the electrical equipment by using an infra-red thermal detecting equipment. Tighten problem connections to meet equipment manufacturers' specification using a torque wrench or other approved devices.

(g) Calibrate and maintain adjustable protective relays.

(h) Test all control systems equipment for proper operation after maintenance is performed and before placing them back in normal service.

NOTE: *Subparagraphs 4b(1 5) (c), (d), (e), 0, (g), and (h) are typically done by qualified electrical contract professionals who specialize in electrical testing. For the Statement of Work, go to the web site at: http://vaww.ceosh.medva.gov/sow. ElectPowDistSysTesting.Doc*

(16) All work related to the inspection, testing, maintenance, and calibration is documented, and filed appropriately with copies going to the Network Director.

5. REFERENCES

a. NFPA 70, Latest Edition.

b. NFPA 70B, Latest Edition.

c. NFPA 70E, Latest Edition.

d. NFPA 99, Latest Edition.

e. NFPA 101, Latest Edition.

f. JCAHO Accreditation Manual for Hospitals, Latest Edition.

g. OSHA - Occupational Safety and Health Requirements Part 1910 Subpart J — The control of hazardous energy (lockout/tagout) (1910.147).

h. OSHA - Occupational Safety and Health Requirements Part 1910 Subpart S — Electrical (1910.301 — 1910.399).

i. OSHA - Safety and Health Regulations for Construction Part 1926 Subpart K — Electrical (1926.400 — 1926.499).

j. Statement of Work – Maintenance and Testing of the Electrical Power Distribution System. see website at: http://vaww.ceosh.med.va.gov/sow ElectPowDistSysTesting.Doc

k. CEOSH – General Safety Guidebook, Latest Edition. see website at: http://vaww.ceosh.med.va.gov/Guidebooks/GenSafety/gensafety.htm

6. FOLLOW-UP RESPONSIBILITIES: The Director, Healthcare Engineering Office (10NB), is responsible for the content of this Directive. Questions may be referred to 202-2735644.

7. RESCISSIONS: None. This VHA Directive expires October 31, 2011.

Michael J. Kussman

Michael J. Kussman, MD, MS, MACP Acting Under Secretary for Health

DISTRIBUTION: CO: E-mailed 10/18/06
FLD VISN, MA, DO, OC, OCRO, and 200 – E-mailed 10/18/06

Water Safety

A) Water Safety Plan: Establish and maintain a site-specific water safety plan. Prior to start of work, prepare a plan detailing project-specific water safety measures and submit to the Contracting Officer Representative (COR) for review for compliance with contract requirements in accordance with the Master Specifications, Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES.

B) The Water Safety Plan Submission:

1. Plumbing contractor competency must be included as part of the Water Safety Plan.
2. Shall be submitted, reviewed and approved prior to commencing construction.
3. Shall be resubmitted annually for review and approval in the event a contract extends more than a year.

C) At a minimum, the water safety plan shall address installer experience, license, and certifications in accordance with the International Plumbing Code (Master & Journeyman).

D) Installer Qualifications

1. Tradesman skilled in the appropriate trade shall be provided.
2. Provide installers appropriate license.
3. Provide additional qualifications or continuing education
4. Must have current knowledge of all applicable codes required.

SOP
Flushing and Disinfection Butler VA Healthcare Issue Date:
Update:

1. **PURPOSE:** To establish a policy and procedure for documentation of the required flushing and disinfection of newly installed drinking water piping and distribution components.

2. **POLICY:** Drinking water piping and distribution components newly installed or under repair will be flushed in accordance with the American Water Works Association Standard (ANSI/AWWA C65 1- 14); Disinfecting Water Mains.

3. **RESPONSIBILITIES:**

a. The Chief, Engineering Service is responsible for implementing this policy.

b. The Assistant Chief, Engineering Service is responsible for implementing this policy with the Maintenance Shop Foreman (s)

c. The Maintenance Shop Foreman(s) is responsible for:

i. Ensuring that VA plumbing staff performing the installation of new piping follow the flushing and disinfection procedures of this SOP.

ii. Ensuring that contractors performing the installation of new piping follow the flushing and disinfection procedures of this SOP.

d. The Contracting Officer Representative is responsible for:

i. Ensuring that the contractor performing the installation of new piping follows the flushing and disinfection procedures.

ii. Notifying the necessary VA maintenance staff of the work being performed by the contractor on the water system for proper inspection.

4. **PROCEDURES:**

a. Newly installed piping and distribution components performed by VA staff:

i. Work plan shall be established to outline the location, process and duration.

ii. Attachment A shall be filled out and approved by the Maintenance Supervisor/COR and the Chief Engineer/ Assistant Chief Engineer prior to any work commencing.

iii. Work shall be witnessed by the Maintenance Supervisor or designee to ensure that the chlorine solutions, levels and time durations are adhered to.

iv. Upon completion of work, the Maintenance Supervisor shall sign off on the Flushing/Disinfection Form, providing verification that the work was completed as indicated.

v. Completed forms shall be kept in the Maintenance Supervisor files.

b. Newly installed piping and distribution components performed by an outside contractor through a service call:

i. Work plan shall be established to outline the location, process and duration. Work plan shall be completed by the contractor.

ii. Attachment A shall be filled out and approved by the Maintenance Supervisor/COR and the Chief Engineer/ Assistant Chief Engineer prior to any work commencing.

iii. Work shall be witnessed by the Maintenance Supervisor or designee to ensure that the chlorine solutions, levels and time durations are adhered to.

iv. Upon completion of work, the Maintenance Supervisor and contractor shall sign off on the Flushing/Disinfection Form, providing verification that the work was completed as indicated.

v. Completed forms shall be kept in the Maintenance Supervisor files.

c. Newly installed piping and distribution components performed by an outside contractor through the NRM or Minor funding:

i. Work plan shall be established to outline the location, process and duration. Work plan shall be completed by the contractor.

ii. Attachment A shall be filled out and approved by the Maintenance Supervisor/COR and the Chief Engineer/ Assistant Chief Engineer prior to any work commencing.

iii. Work shall be witnessed by the COR, Maintenance Supervisor or designee to ensure that the chlorine solutions, levels and time durations are adhered to.

iv. Upon completion of work, the COR, Maintenance Supervisor or designee, and contractor shall sign off on the Flushing/Disinfection Form, providing

v. verification that the work was completed as indicated.

vi. Completed forms shall be kept in the COR project files.

Flushing/Disinfection Form

Date:

Building:

Water System/Location Being Worked On:

Staff or Contractor Performing the Work:

% Chlorine Solution Used for Hand Sanitization of Parts:

Chlorine Solution Used for Pipe Disinfection:

Verification that Chlorine Solution Can Be Discharged to Sanitary: Duration of Time for Disinfection:

Start Time:

End Time:

Chlorine Level Post Flush is Within City Water Concentration Levels:

Work Plan Approval:

Maintenance Supervisor/COR: Environmental Specialist:

Date: Date:

Witnessed by:

COR: Maintenance Supervisor:

Date: Date:

Contractor:

Date: