SECTION 00 72 00

GENERAL CONDITIONS

Part 1 - General

1.1 Provide a Submittal Schedule within fourteen (14) days after receipt of Notice to Proceed and before any items are submitted for review. Compile a complete and comprehensive schedule for all submittals anticipated to be made during progress of the work and submit to the Contracting Officer for approval. The schedule of submittals must be coordinated with the Contractor's construction schedule. Include a list of each type of item for which Contractor's drawings, shop drawings, certificates of compliance, material samples, guarantees, or other types of submittals are required. For each submittal item indicate the specification section and paragraph or other source within the contract documents where the requirements for the submittal item are described. Indicate whether proposed materials, equipment, and other items are as specified or will be submitted as an "or equal" or as a substitution. Upon review and approval by the Contracting Officer, the contractor will be required to adhere to the schedule except where specifically otherwise permitted.

1.2 Work of this project shall be performed between the hours of 5:00 PM and 5:00 AM Monday through Friday, and at any time Saturdays and Sundays, holidays excepted, unless other times are arranged in advance and approved in writing by the Project Manager. ***Work near the residences adjacent to the Valet Parking Lot on Marine Corps Drive shall be accomplished during the day on Saturdays and Sundays only.*** When the contractor's work interferes with hospital functions, such as when work produces excessive noise, odors, dust, utility service interruptions, or other interferences with normal hospital operations that cannot be contained within the area of work, the contractor shall schedule said work at the hours directed by the Project Manager.

1.3 Infection Control: All work shall be performed in accordance with the Construction Specifications for Infection Control Section 02 85 00. For purposes of this project, the work shall be considered a minimum protection Class 3 throughout the existing facility and shall be accomplished using the controls indicated in the specifications and on the Infection Control Construction Permit (attached as part of the contract documents) for this class of protection. No work will be allowed to proceed until an Infection Control Construction Permit has been completed and signed and all protective measures required by the permit are in place.

1.4 The contractor shall arrange with the Project Manager for allocation of required workspace and for the storage of equipment and material to be used for this project. Storage space is very limited. There are no exclusive areas within the campus that can be given to the contractor for their storage needs. Additionally, no space will be made available for the placement of a contractor trailer for this project. The Contractor should schedule delivery of materials to limit the amount of storage space and time.

1.5 The Contractor shall note this scope of work does not detail all existing structures, utilities, or components that may potentially interfere with the contract work required. The contractor shall note any obstruction, utility, or condition that may hinder or interfere with the execution of this contract and the contractor shall make provisions in their contract price to resolve such interferences and other conditions that may hinder the proper completion of the work. All proposed utility relocations, interruptions, and shutdowns shall be approved by the Project Manager prior to commencing such work. The contractor shall verify all existing utility installations and take appropriate action prior to working around any potential utility installation.

1.5.1 Prior to drilling or coring into or through any concrete floor, beam, column, or other structural element the contractor shall conduct non-destructive surveys to identify the presence of any embedded items such as conduits, piping, reinforcing steel, or other items that may be damaged by the proposed drilling or coring. Contractor shall use the results of this survey to determine a location for drilling or coring that will not damage embedded items in the structure.

1.5.2 Prior to excavating for any purpose, the contractor shall perform a survey using ground-penetrating radar or other non-destructive survey method to identify the location of existing underground utilities. The contractor shall use the results of this survey to determine means necessary to protect existing underground utilities from damage during construction.

1.6 In the event a shutdown, restriction, or interruption of any utility services is required, a written request must be submitted (at least 15 calendar days in advance) and approved by the VA Project Manager. All utility shutdowns must be reviewed and approved by the VA. See Article 1.6 of Section 01 00 00 (General Requirements) for additional requirements.

1.7 Comply with Providence VAMC Policy 138-19 regarding Interim life Safety Measures at Appendix C of this specification. Provide Interim Life Safety Measures (ILSM) as necessary to ensure that the continued occupancy of all VAMC Providence buildings can be safely maintained during construction in accordance with NFPA 101, The Life Safety Code.

1.8 Contractor shall participate with the VA in the preparation of an Interim Life Safety Plan that will be implemented during construction of this project. At a minimum, the Contractor shall comply with the following requirements of the interim life safety plan:

1.8.1 Ensure building exits provide free and unobstructed egress for all occupants.

1.8.2 Contractor shall maintain escape facilities for construction workers at all times. Means of egress in construction areas will be inspected daily. If required by the Contractor’s operation, establish and mark alternate means of egress.

1.8.3 Ensure free and unobstructed access to all areas of the project site for emergency services and for emergency forces.

1.8.4 Ensure that existing fire alarm, detection, and suppression systems are not impaired by the Contractor’s operations.

1.8.5 Do not impair automatic sprinklers, smoke and heat detection, and fire alarm systems except for portions immediately under construction, and temporarily for connections. Provide fire watch in accordance with NFPA standards for impairments more than 4 hours in a 24-hour period. Request interruptions in writing a minimum of 72 hours in advance and coordinate with the Project Manager.

1.8.6 Provide signs to identify exit access, exits, and exit discharges as needed for interim life safety measures that are identified for the contractor's work.

1.8.7 Provide written procedures and guidelines for construction personnel and post in the immediate areas of construction including instructions and personnel to contact in the event of fire or emergency.

1.8.8 Maintain the construction area to minimize the potential for fire or safety hazards resulting from storage of construction material, construction waste and debris during construction operations.

1.8.9 All temporary construction shall be built of noncombustible/fire retardant materials and shall be smoke tight.

1.8.10 Ensure that all penetrations made in fire resistance assemblies of the existing hospital building, to include smoke barriers, fire separation assemblies, and fire walls, are properly fire stopped within 4 hours after making the penetration.

1.8.11 Any fire watch required shall be by a qualified person provided by the Contractor who shall maintain constant observation of the affected area and have no other duties. The person providing the fire watch shall be trained in fire prevention and in the use of fire extinguishers, occupant hose lines, occupant fire protection system, in sounding the building fire alarm and in notifying the local fire department, and in understanding the particular fire safety situation for the project.

1.9 Contractor shall comply with the requirements to prevent false fire alarms as provided in Appendix A of this specification. Contractor shall provide a fire watch in accordance with paragraph 1.8 above when impairment of the fire alarm system or the sprinkler system exceeds 4 hours in a 24 hour period.

1.10 Sprinkler systems will not be shut down except for portions of the sprinkler system under renovation, modification or construction, or for new connections to the sprinkler system. Sprinkler systems will not be shut down to avoid accidental discharge of the sprinkler system caused by unintentional damage to the sprinkler system from construction activity. Provide metal head guards at each sprinkler head within the limits of work.

1.11 Do not compromise the integrity of existing smoke and fire barriers within any building. Comply with Providence VAMC Policy 138-11 requirements for maintaining the integrity of the existing fire protective construction. VAMC Policy 138-11 is at Appendix E to this specification section. Obtain permits from Providence VAMC prior to any installation of equipment, cables, power connections, conduit, piping or other work that penetrates or disturbs a smoke or fire barrier. All such work shall be approved by Facilities Management Service (FMS) of the VAMC Providence. A penetration permit must be secured from FMS prior to disturbing the integrity of any fire or smoke barrier. The permit must be available for inspection at the project location. After

the work is completed, the penetration must be repaired (sealed) utilizing UL/FM-listed through penetration fire stopping materials that meet the original smoke and fire compartmentalization performance of the barrier that was penetrated. All penetrations and miscellaneous openings must be protected according to NFPA 101, chapter 8. Ensure that all penetrations made in fire resistance assemblies of the existing hospital building, to include smoke barriers, fire separation assemblies, and fire walls, are properly fire stopped within 4 hours after making the penetration.

Identify through-penetration fire stop systems with pressure-sensitive, self-adhesive, preprinted vinyl labels. Attach labels permanently to surfaces of penetrated construction on both sides of each fire stop system installation where labels will be visible to anyone seeking to remove penetrating items or fire stop systems. Include the following information on labels:

- The words: "Warning -Through Penetration Fire stop System-Do Not Disturb. Notify Building Management of Any Damage."
- Contractor's Name, address, and phone number.
- Through-Penetration fire stop system designation of applicable testing and inspecting agency.
- Date of Installation.
- Through-Penetration fire stop system manufacturer's name.
- Installer's Name.

Upon completion of any penetration fire stopping, a visual inspection for approval must be requested from, and completed by the COTR.

1.12 Comply with requirements of the Providence VAMC Contractor Safety Manual, latest edition, which is included at Appendix D to this specification.

1.13 The US Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, is incorporated by reference and the contractor shall comply with the requirements of this manual. In the event of a conflict between the requirements of EM 385-1-1 and the Providence VAMC Contractor Safety Manual, the more stringent requirements shall apply.

1.14 Obtain a Crane Permit when use of a crane is intended. Comply with requirements of Providence VA Medical Center Facilities Management Service SOP Policy Memo 138-16 at Appendix G.

1.15 Contractor shall submit a site-specific Safety Plan that provide project-and site-specific activity hazard analyses and accident prevention plans. The Contractor’s site-specific Safety plan shall be submitted for information purposes. The Safety Plan shall conform to the requirements of FAR 52.236-13 and shall include, as a minimum, provisions for the following:

- Site access and control to restrict access by unauthorized persons and allow for separation of VA staff, patients and visitors from construction personnel.
- Site security to restrict unauthorized entry by contractor personnel into areas of building 1 determined by the VA to be non-accessible; and

to address the need for identification badges to be worn by construction personnel; key control; and loading/unloading of materials and wastes.

- The contractor's substance abuse policy and training requirements
- Contractor's plan for site safety and health inspections
- Contractor's plan for safety and health training
- Contractor's site-specific fall protection program
- Contractor's site-specific electrical safety plan
- Contractor's requirements for use of personal protective equipment (PPE).
- Contractor's accident reporting and investigation program. The contractor shall submit a written incident report to the VA Project Manager within 24 hours after any accident, injury, occupational illness, or other safety-related incident occurs, regardless of how minor the nature of the incident.
- Contractor's emergency action plan and fire prevention and protection plan, to include training of contractor personnel in the provisions of these plans.
- Contractor's minimum safely training requirements for its personnel and the personnel of its sub-contractors.
- Contractor's requirements for sub-contractor conformance to the site-specific Safety Plan
- Identity of the Contractor's designated "Competent Person" as defined by 29 CFR 1926 (OSHA Construction Industry Regulations). The contractor shall provide a Competent Person who shall be on the project site during activities when the expertise of the designated Competent Person is required.
- Contractor's protocol for inspections by regulatory agencies.

1.16 Contractor shall comply with Providence VA Medical Center procedures for the Lockout/Tag Out of energy systems and devices. This procedure is stipulated in Facilities Management Service Standard Operating Procedure (SOP) Number 12 dated July 5, 2011, which is included as Appendix F to this specification section.

1.17 All permits shall be posted in a visible location where the work is being performed (e.g., penetration permit, hot work permit, infection control permit).

1.18 Unless noted otherwise, the Contractor shall have present on the project site at any time work is being performed an employee of the Contractor who possesses a PIV (Personal Identity Verification) badge issued by the Providence VAMC. The PIV badge is part of a program mandated by Homeland Security Presidential Directive 12 and the Federal Information Processing Standard Publication 201-1. PIV badges take up to 3 months to obtain due to VA policy that requires that a background investigation (NACI) be completed prior to issuing the PIV badge. Requests for a PIV badge shall be initiated through the VA's Project Manager to the PIV Sponsor in the Facilities Management Service office of the Providence VA Medical Center. The Contractor shall complete and submit the PIV Form 0711 and fingerprint forms, and provide two forms of identification (such as driver's license, birth certificate or passport). The Contractor shall pay the cost of any background investigation required to obtain the PIV badge. Providence VAMC will

approve no more than two (2) PIV badges for a contractor for a single project. In no case will a PIV badge be issued to any sub-contractor. All other contractor personnel shall obtain a short-term identification badge issued by the VA's Project Manager. Such badge shall be worn by the individual and prominently displayed at all times while on VA property. No employee of the contractor shall enter the project site without a valid identification badge issued by the VA. In order to obtain a short-term identification badge, contractor personnel shall present to the VA Project Manager a valid (non-expired) photo identification issued by a US federal, state or local government agency.

1.19 Smoking is not permitted anywhere on VA property, except in areas clearly marked and designated for smoking. Currently, there is only one such designated area at the VAMC Providence.

1.20 For written Requests for Information, Contractors shall use the form at Appendix B to this specification.

1.21 Parking is rigidly controlled throughout the Medical Center. Parking of privately-owned vehicles by contractor personnel is prohibited on the hospital campus and is only allowed at the Davis Park location off Chalkstone Avenue. Parking in designated patient parking areas is strictly prohibited. Parking on grass is also prohibited. Parking for equipment necessary to perform the work will be authorized in advance of starting the project. Parking passes will be issued by the VA Police. Parking by contractors will be regulated in accordance with Providence VA Medical Center Policy Memorandum 07B-3 entitled *Registration of Privately Owned Vehicles* at Appendix H.

1.22 Cutting and Patching: Cutting of existing surfaces shall be made along neat, straight lines and shall extend only to the limits needed for the new work. Where removals leave holes and damaged surfaces exposed in the finished work, patch and repair these holes and damaged surfaces to match adjacent finished surfaces, using new materials of the same quality as that applied to existing adjacent finished surfaces. Perform removals and patching in a manner to produce surfaces suitable for receiving new work. Finished surface of patched area shall be flush with the adjacent existing surface and shall match the existing adjacent surface in appearance, texture, level, and finish. If adjacent existing surfaces are painted, the patched surface shall be painted in 3 coats (primer and 2 finish coats) using a paint that is compatible with the materials used for patching and in a color that matches the existing paint finish. Painting of patched walls shall cover the entire patched surface and extend vertically across existing surfaces from floor level to ceiling level and horizontally to a point where the existing wall surface changes direction. If adjacent existing wall surfaces are finished with wall covering, provide new wall covering to match color and texture of existing. Cover entire patched surface and extend new wall covering vertically across existing surfaces from floor level to ceiling level and extend horizontally across existing surfaces to match existing wall covering in a neat vertical line.

1.23 Warranty Service: This hospital provides medical care to veterans 24 hours per day on every day of the year and therefore all building systems must be operating and functioning at all times. In the event that warranty service is required during the warranty period of any portion of the work provided as part of this contract, the contractor shall respond within 4 hours after notification that warranty service and/or repairs are required. Contractor response shall include dispatch of appropriate skilled trade personnel with the necessary materials, tools and equipment that shall arrive on site within 4 hours after notification of the need for warranty service. The contractor shall provide a single point of contact that is available 24 hours per day on every day of the year to receive notification of the need for warranty service. The requirement to respond within 4 hours of warranty service notification may be waived by the government if, at its sole discretion and judgment, the need for warranty service does not constitute an emergency.

1.24 Storm Water Control: Comply with requirements of Title IV, Subtitle C, Section 438 of the Energy Independence and Security Act of 2007 to use site planning, design, construction, and maintenance strategies for the project to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the project site with regard to the temperature, rate, volume, and duration of flow of storm water. Manage storm water flow to Natural Ground Cover (i.e. Forest like) conditions. Prior to the start of construction, provide the following documentation to demonstrate compliance:

- A site evaluation and soils analysis
- Calculations for the 95th percentile rainfall event
- Site design and storm water management practices employed on site
- Design calculations for each storm water management practice
- Volume of storm water managed by each storm water management practice implemented above
- Operations and maintenance protocols that will be implemented to manage storm water

1.25 APPENDICES

A – Fire Systems Protection During Construction
B – Request for Information
C – VAMC Providence Policy 138-19 Interim Life Safety Measures
D – Providence VAMC Contractor Safety Manual
E – VAMC Providence Policy 138-11 Fire Wall/Smoke Barrier Penetration Permits
F - Lockout / Tag out Procedure (FMS SOP #12)
G - Cranes
H - Registration of Privately Owned Vehicles
I - Asbestos Inspection Report – EnviroMed Services, Inc.
J - Lead Inspection Report – EnviroMed Services, Inc.

----END----

Appendix A

Fire Systems Protection During Construction

1. Preventing False Fire Alarms by Smoke Detectors During Construction

Construction and building maintenance activities can potentially generate sufficient airborne dust to activate a fire alarm through nearby smoke detectors. An alarm activated by a smoke detector is immediately transmitted to the municipal fire department, which responds to the hospital with equipment and personnel. In order to prevent false fire alarms from smoke detectors during construction or other maintenance activities, it has been the practice of construction personnel to place a cover over nearby smoke detectors to prevent airborne dust from entering the detector. This practice has been effective in preventing false fire alarms; however this practice has also led to undocumented impairments to the fire alarm system when these covers are not removed when no longer needed to prevent a false alarm.

The following measures will be taken to prevent false fire alarms through smoke detectors during construction while maintaining effective control over impairments to the fire alarm system:

-When it is determined that a smoke detector may be activated by construction dust, the contractor or project manager shall direct a request to one of the hospital's electronics technicians to disable the smoke detector or any other device of the fire alarm system. The request shall include the Node, Loop, and Address of the device(s) to be disabled, the duration, and the specific types of construction or maintenance activities that are planned. The electronics technician will disable the smoke detector until notified by either the contractor or project manager that construction has ended for the day. When notified that construction has ended for the day, the electronics technician will re-enable the smoke detector. The smoke detector that is disabled will indicate a "trouble" condition at the fire alarm control panel and serve as an active indication that a smoke detector or multiple detectors have been impaired. The "trouble" indication will also serve as a continuous reminder to hospital staff that the smoke detector(s) must be restored to normal service.

--Contractors or project managers shall provide at least **48** hours notice to the electronics technicians for disabling of a smoke detector or any other fire alarm system device.

--In no case will the smoke detector(s) be disabled for more than 8 hours in a single 24 hour period. If any smoke detector or any other fire alarm system device is disabled for more than 4 hours in a 24 hour period, the project manager will prepare an ILSM risk assessment and a fire watch shall be provided by the construction contractor as specified in the contract documents, or by hospital staff as designated by the project manager.

--Covers **shall not** be used on a smoke detector at any time. If found, covers shall be immediately removed from smoke detectors.

2. Sprinkler System Shutdowns during Construction

Construction and building maintenance may require the removal, modification, or relocation of sprinkler heads or piping. In order to prevent false fire alarms as a result of this sprinkler work, a procedure has been implemented for sprinkler system shutdowns. The following measures will be taken to prevent false fire alarms as a result of sprinkler work that maintains effective control over impairments to the installed sprinkler system:

When it is determined that the facility's sprinkler system must be shut down for system modifications, the contractor or project manager shall direct a request for shutdown to the VA. The request shall identify the specific area of the hospital impacted by the shutdown and the shutdown duration. The shutdown will be performed by VA staff. The VA staff will disable the fire alarm system points necessary to prevent false annunciation of a sprinkler system discharge. The VA staff, or the sprinkler system contractor when authorized in writing by the hospital, will close the appropriate riser valve(s) to isolate that portion of the sprinkler system that is being worked on or that needs to be isolated. The closed sprinkler valve(s) shall be identified with a sprinkler valve "SHUT" tag by the party that closed the valve(s). The closed sprinkler valve(s) will indicate a "trouble" condition at the fire alarm control panel to serve as an active indication that the sprinkler system has been impaired. The "trouble" indication will also serve as a continuous reminder to hospital staff that the sprinkler system must be restored to service.

If a section of the sprinkler system is to be drained for piping or sprinkler head replacement work, the VA staff will notify the City of Providence fire alarm division that the master box will be out of service and disable the appropriate sprinkler flow switches and/or fire main. Once the system is drained in the specific area, the VA staff can reinstall all sprinkler system flow switch devices and the master box so that they are not required to be present in the fire alarm room as a fire watch for the system. At the completion of the sprinkler system work, the contractor is responsible for notifying the VA staff that the construction activity has ended for the day and that the sprinkler system is to be refilled and restored to normal operation. The VA staff must take out all flow switches, fire alarm annunciating devices, and possibly main fire pump prior to recharging of the system. Once the appropriate devices are disabled the VA staff, or the contractor when authorized in writing by the hospital, can then start filling the system and bleeding air out the Inspector Test Valve (ITV) until the sprinkler system is completely refilled in the specific area of the facility. The contractor **must** stay in the impacted area for a minimum of **15** minutes after the system is refilled to ensure there are no leaks in or abnormalities to the fire and sprinkler systems.

--Contractors shall provide at least **48** hours notice to the VA for sprinkler system shutdown. Email is the preferred method of notification.

--In no case will the sprinkler system be disabled on two consecutive floors or in multiple areas at the same time in the main hospital building.

--In no case will the sprinkler system be disabled while smoke detectors or other fire alarm initiating devices are disabled in the same area.

--In no case will sprinkler systems be shut down except for portions of the sprinkler system under renovation, modification or construction, or for new connections to the sprinkler system. Sprinkler systems will not be shut down to avoid accidental discharge of the sprinkler system caused by unintentional damage to the sprinkler system from construction activity. Provide metal head guards at each sprinkler head within the limits of work.

--In no case will the sprinkler system be disabled for more than 8 hours in a single 24 hour period. If the sprinkler system must be disabled for more than 4 hours in a 24 hour period, the project manager will prepare an ILSM risk assessment and a fire watch shall be provided by the construction contractor as specified in the contract documents.

Appendix B

Request for Information Form

(See next Page)

Providence VA Medical Center
Facilities Management Service
633 Atwells Ave. 3rd floor
Providence, R.I. 02909
401-459-4760
Fax 401-421-0594

REQUEST FOR INFORMATION

NO.

PROJECT TITLE: _____ **CONTRACT NO.**_____ **VA PROJECT NO.** _____	**DATE REQUIRED:**
TO:	**FROM:**

REQUEST:

Requested By: _____ Date: _____

Signed: _____

RESPONSE:

☐ This response does not constitute a change to the contract and is not an authorization to the contractor to proceed with any work that modifies the contract price or the time of performance. If the contractor believes that this response modifies any portion of the contract, the contractor shall make timely notice to the Contracting Officer and await the Contracting Officer's direction before proceeding with any work that the contractor believes is a modification to the contract.

☐ This response may constitute a change to the contract documents. Do not proceed with any work indicated in this response that changes the contract documents until directed in writing by the Contracting Officer.

Response By:	Concur:
Signed:	Signed: VA Project Manager
Date:	Date:

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Appendix C

PROVIDENCE VAMC
INTERIM LIFE SAFETY MEASURES (ILSM) PLAN

ILSM MAY BE REQUIRED IN AREAS OR SMOKE COMPARTMENTS WHERE NEW CONSTRUCTION OR RENOVATIONS ARE TAKING PLACE.

DEFINITION:

INTERIM LIFE SAFETY MEASURES: A series of operational actions taken to temporarily reduce the hazard posed by existing fire prevention or Life Safety Code deficiencies during, and until the completion of a construction or renovation program within an area or smoke compartment.

OBJECTIVES:

1. Determining when ILSM are necessary.
2. Insure that required ILSM in areas/smoke compartments where construction or renovations are taking place are fully adhered to.
3. Determining when ILSM can be terminated

PROCEDURES

1. All new construction/renovation projects must evaluated by the project coordinator /supervisor using the attached **PVAMC ILSM Requirement Assessment Worksheet.**
2. If, upon completion of the worksheet, it is determined that an ILSM Plan is not needed, the project coordinator will send a copy to the PVAMC Safety Manager for concurrence.
3. If, upon completion of the worksheet, it is determined that an ILSM Plan is needed, the project coordinator will complete the form by documenting the administrative actions necessary to mitigate the Life Safety Code deficiencies introduced, and send a copy to the PVAMC Safety Manager for concurrence.
4. Facilities Management Service staff will utilize the attached Interim Life Safety Measures Checklist for conducting inspections of contractor areas when necessary.
5. The **PVAMC ILSM Requirement Assessment Worksheet**, 11 Administrative Actions that may be applied to the project as ILSM, and ILSM assessment flowchart are provided for reference.

PVAMC ILSM Requirement Assessment Worksheet

- **These criteria will be used to evaluate smoke compartments in which a Life Safety Code deficiency has been identified, or in which construction, renovation or alteration activities are planned. Any "Yes" answers below may require ILSM to address occupant safety.**
- Document any methods you plan on using, and what measures were taken under comments.
- Send to the Environmental Safety and Health Office-TR7, after completion.

Submitter :_____ Date Submitted:

Log#_____

Project: Expected Duration:

Building: Floor: Room:

Criteria	YES	NO
The issue/work alters or significantly compromises exit access, exiting, or exit discharge building elements		
The issue/work compromises building compartmentation including fire or smoke walls, floor/ceiling assemblies, corridor walls, use area doors, or other defend in place elements		
The issue/work impairs the building Fire Protection Systems (alarm, sprinklers, suppression) for more than 4 hours in a 24-hour period.		
The activity includes Hot Work		
The activity includes large quantities of combustible materials, flammable materials, or generation of large amounts of dust and debris.		
Access to the area by emergency forces will be impaired		
Will non/limited combustible partitions be required?		

[ ] ILSM are required* [ ] ILSM are not required*

* A yes answer to any of the above criteria may require that an ILSM be initiated. Use the following check sheet to denote the interim life safety measures appropriate for the issue/work which compromises life safety. Daily inspections of egress access will be completed in accordance with the checked sheet and completed on the attached form during the pendency of the compromise to a life safety system.. Periodic inspections of other aspects of an ILSM shall be completed during the pendency of the ILSM. All forms will be maintained by the Safety M anager with copies in the project file.

If an ILSM is not required, provide the completed assessment only to the safety manager for review. Maintain a copy in the project file.

Work:

1.

Comments:

1.

Reviewed by:_____ Safety Manager Date:_____

Approved by:_____Chief Facilities Management Date:_____

Rev. 1 4-07-09

Interim Life Safety Measures Check Sheet to be implemented

Project Name or other identifying information: _____

Log Number: _____

Place a check mark in each applicable ILSM activity as determined by an assessment of the risks identified in the Assessment Work Sheet.

#1 INSPECTIONS / SURVEILLANCE

- ☐ Increased surveillance of buildings, grounds, and equipment: shift / daily / other:
- ☐ Means of exiting construction areas inspected daily
- ☐ Implementation of Fire Watch
- ☐ Not applicable

#2 ACCESSIBILITY

- ☐ Maintenance of escape/egress routes from construction areas
- ☐ Maintenance of access to emergency services for emergency equipment, fire alarm pull stations, Fire Department connections (internal & external)
- ☐ Not applicable

#3 EQUIPMENT – LIFE SAFETY

- ☐ Temporary fire alarm, detection, suppression system in place
- ☐ Monthly testing and inspection of temporary systems
- ☐ Provide additional firefighting equipment in project area
- ☐ Provide additional firefighting equipment in adjacent areas
- ☐ Not applicable

#4 COMMUNICATIONS

- ☐ Notification to Municipal Fire Department (or applicable emergency forces group)
- ☐ Not applicable

#5 CONSTRUCTION MATERIALS / PRACTICES

- ☐ Partitions smoke tight and constructed of noncombustible or limited combustible materials
- ☐ Prohibition of smoking throughout building and in and near construction areas
- ☐ Implement appropriate storage practices

#6 FIRE DRILLS

- ☐ Implement appropriate housekeeping practices
- ☐ Implement appropriate debris removal practices
- ☐ Not applicable
- ☐ 2 fire drills per shift per quarter throughout Hospital (one additional drill beyond requirement of EC.5.30).
- ☐ 2 fire drills per shift per quarter in areas adjacent to project (one additional drill beyond requirement of EC.5.30)
- ☐ More than 2 fire drills per shift per quarter throughout Hospital. If yes, how many_____
- ☐ More than 2 fire drills per shift per quarter in areas adjacent to project. If yes, how many_____
- ☐ Not applicable

#7 TRAINING

- ☐ Additional training for staff in immediate area
- ☐ Additional training for staff throughout hospital
- ☐ Additional training for incident response team
- ☐ Training to promote awareness of fire-safety building deficiencies, construction hazards, ILSM
- ☐ Training on changes in physical environment (egress routes)
- ☐ Training on firefighting equipment
- ☐ Training on compensating for impaired structural or compartmentalization features of fire safety
- ☐ Not applicable

Other measures:_____

Comments:_____

Prepared by: _____

Reviewed by:_____ Safety Manager Date:_____

Approved by:_____ Chief Facilities Management Date:_____

ILSM Inspection Form

Project Name: _____

Log Number: _____

Date:_____

Daily_____**Weekly**_____**Monthly**_____

	Measure	Applicable		Compliance Status	Date/Initials
		Y	N		
1.	Exits are inspected on a daily basis and are free and unobstructed. No construction materials, equipment, or debris block free use of all exits adjacent to the construction site or are impacted by the project. Temporary exit signs are in place.				
2.	Provide temporary, but equivalent fire alarm and detection system.				
3.	Provides additional fire-fighting equipment (fire extinguishers). Equipment is functional and tests are up to date.				
4.	Temporary construction partitions are smoke tight, or made of noncombustible material, or made of limited combustible material that will not contribute to the development or spread of fire.				
5.	Surveillance is increased of buildings, grounds, and equipment with special attention to construction areas and storage, excavation, and field offices.				
6.	Enforces storage, housekeeping, and debris removal practices that reduce the building's flammable and combustible fire load to the lowest feasible level.				
7.	Additional training is provided to those in the hospital on the use of fire-fighting equipment.				
8.	One additional fire drill per shift, per quarter is conducted.				
9.	Temporary systems are tested and inspected monthly, and the completion dates for these tests is documented.				
10.	Education is conducted to promote the awareness of building deficiencies, construction hazards, and temporary measures implemented to maintain fire safety.				
11.	Training for those who work in the hospital is done to compensate for impaired structural or compartmental features.				

Prepared by**:** _____Project Manager, Date: _____`

Inspected by: _____Date: _____

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Appendix D
General Conditions 00 72 00

Providence VA Medical Center
Construction Safety Manual

INTRODUCTION

All contractors, Project Managers, and employees engaged in construction activities at the PVAMC must be aware of the construction safety requirements outlined in this manual.

The implementation of construction safety programs will minimize the potential for injuries and illnesses to our patients, employees and visitors from unsafe construction activities conducted by contractors and VA employees, including operations and maintenance crews, permanent construction crews and temporary purchase and hire staff.

It is the policy of the VHA to protect patients, staff, visitors and contractors from safety and health hazards associated with construction activity on VA/VHA property and leased property at which VA-funded construction is occurring.

Construction activities are defined as those that include VHA projects performed by employees or contractors and enhanced use lease projects within structures fully managed by VHA or within the purview of VHA authority.

Safety is a philosophy and a practice that identifies and eliminates job site hazards throughout the lifecycle of a project and discourages work practices and equipment that place individuals at risk of injury.

This manual outlines programs and procedures to maintain a healthy environment of care for our patients and a safe and healthy worksite for employees, visitors and contractors during construction activities.

1.0 GENERAL INFORMATION

1.1 Standard Safety and Security Rules

The following are some reasons for which an employee of a contractor may be temporarily or permanently removed from Medical Center premises:

- Possession or use of alcoholic beverages or regulated drugs not prescribed by a physician
- Possession of explosives, firearms, ammunition, and other weapons
- Deliberate violation of safety or security rules
- Illegal dumping, handling, or disposal of hazardous materials
- Destruction or removal, without written permission, of any property belonging to Providence VAMC, the property owner, employee, or other contractors or employees
- Failure to follow the directions or instructions of a VA Police Officer, VA COTR or VA Project Manager
- Failure to wear in a visible manner a facility issued identification badge
- Intimidating, threatening, harassing, impeding or interfering with an inspector, security officer, or Providence VAMC employee or designated representative
- Using emergency exits other than for emergencies
- Misuse of fire prevention and protection equipment
- Unauthorized removal or destruction of a safety barricade, handrail, guardrail, warning sign, fall protection, or other warning devices intended to protect PVAMC's students, faculty, employees, neighbors or property.

For additional information on safety guidelines that are related to security issues, you may refer to the Providence VAMC Police Department

1.2 Safety Permits and Procedures

The following operations may present a hazard to PVAMC employees, visitors, patients, neighbors or property. Therefore, you must obtain written approval through the Providence VAMC Project Manager before:

- Working on fire protection/detection systems
- Penetrating any smoke/fire barrier wall
- Performing burning, welding, cutting, soldering, or other hot work
- Performing any work above an existing finished ceiling
- Obstructing an exit door or any exit path within any building
- Obstructing access to the hospital by emergency services
- Working on electrical, steam, chilled water systems or other energized systems
- Moving emergency equipment (fire extinguishers, first aid kits, etc.) provided by PVAMC
- Installing a temporary electrical service
- Working with hazardous chemicals (including solvents and paints)
- Generating hazardous wastes (including waste oil)
- Using powder actuated tools
- Using a gas, diesel, or LP (propane) powered engine indoors
- Operating a power vehicle or self-propelled work platform
- Excavation/trenching
- Using radioactive sources or conducting field radiography (x-ray)
- Working with asbestos-containing materials
- Working on security systems
- Working with compressed air/gases
- Using a laser
- Working on a fume or biological hood
- Working on a solvent storage cabinet
- Working on heating, ventilation, or air conditioning equipment
- Working on a roof
- Lifting or hoisting with cranes, derricks, hoists or helicopter
- Performing blasting operations

Special Rules for Operations Involving Utilities:

- Only Providence VAMC Facilities Operations may shut down or start up operating utilities.
- You must notify your Project Manager, who will coordinate with Providence VAMC Facilities Operations, *in advance* of the need for such shutdowns or startups.

Special Rules for Lockout/Tagout of Machinery, Pipes, etc.:

- If you intend to service or maintain machinery that could hurt someone if it were to unexpectedly start up, you must inform the Providence VAMC Project Manager of the Lockout/Tagout procedures you intend to follow.
- See Section 3.3 on Lockout/Tagout generally.

1.3 Housekeeping

You must maintain good housekeeping. You must keep work areas neat, clean, orderly and free of excess trash and debris and never block walkways, stairs, exits, or create a tripping hazard. Cover and/or place guardrails around open holes, trenches, or excavations into which PVAMC's visitors, patients, or employees may fall. Poor housekeeping at a job site may lead to an increased potential for safety hazards and an increased incidence of accidents and chemical spills.

1.4 Accident, Incident, Injury, or Illness

After notifying the appropriate emergency agency (e.g., 9-1-1), work related accidents, incidents, injuries, and illnesses must be immediately reported to the Providence VAMC Project Manager or representative. The Contractor is responsible for notifying OSHA for any incidents that are reportable to that agency.

2.0 ENVIRONMENTAL ISSUES

2.1 Hazardous Waste Management

Hazardous waste generated by a Contractor as part of its work must be properly identified, stored and disposed of in accordance with all applicable local, state and federal laws. The Contractor must coordinate with its Providence VAMC representative to provide a list of hazardous waste(s) to be generated during the project, and to determine the location(s) available for hazardous waste storage. The Contractor must also ensure, at a minimum, proper labeling, adequate secondary containment, segregation of incompatible materials and routine inspection of storage areas as required by law. In addition, all hazardous waste containers shall be constructed of a material that is compatible with the waste, shall be in sound condition, and shall be kept securely closed at all times in accordance with applicable regulations.
Containers and/or tanks used to store hazardous wastes must be managed in accordance with applicable regulations and must be inspected daily.
The Contractor is responsible for completing all disposal documents, which may include, but are not limited to, waste profiles, waste analytical samples and hazardous waste manifests. Providence VAMC shall be designated as the Generator on all documents and shall be provided with copies of all waste analyses, land disposal restriction forms and related documentation. Copies of all disposal documents shall be submitted to the Project Manager for review at least 5 days prior to shipment. The Project Manager or an EH&S representative will sign the manifests as the Generator. At the time of shipment, the Contractor shall provide the bottom three copies of the manifest to the Project Manager or the PVAMC EH&S representative for distribution to the appropriate agencies.
Contractor employees must be appropriately trained in hazardous waste procedures. In the event a Contractor encounters previously unidentified material that is reasonably believed to be radioactive, volatile, corrosive, flammable, explosive, biomedical, infectious, toxic, hazardous, asbestos containing or oil-based, the Contractor shall immediately stop work in the affected area and report the condition to the Project Manager. At no time shall such material be disposed of in chutes, dumpsters, drains, pipes or any other waste container. The Contractor agrees to cooperate with the Project Manager and any consultants engaged by the Project Manager to perform services with respect to the analysis, detection, removal, containment, treatment and disposal of such regulated materials.

2.2 Transport of Hazardous Materials

All transportation of hazardous materials while on Providence VAMC property shall be conducted in accordance with USDOT Hazardous Materials Regulations for proper packaging, marking/labeling, handling, documentation, etc. At no time should hazardous materials be transported via public or private roads at Providence VAMC in a manner that could result in an unsafe condition for personnel or the environment.

2.3 Spill Prevention and Control

Providence VAMC's Spill Prevention Control and Countermeasures (SPCC) Program establishes Medical Center-wide procedures for the prevention and detection of spills and/or releases of oil or hazardous materials, including the following:

- Based on the inventory of oil and hazardous chemicals that will be brought on-site, the Contractor shall have available equipment (e.g., secondary containment pallets, absorbent pads, absorbent booms, speedi-dry) that is suitable and sufficient to control a potential spill/release.
- The Contractor is responsible for identifying conveyances to the environment (e.g., sumps, storm/floor drains, etc.) and adequately minimizing spill potential to these areas.
- The Contractor is responsible for the proper storage of all flammable and combustible chemicals that are brought and/or stored on site to complete the work of this contract. Such storage may require the use of safety containers, safety cabinets, and/or secondary containment. The Contractor shall also ensure that any incompatible chemicals are safely segregated. The Contractor is responsible for maintaining and securing all chemical containers and all chemical storage areas. This requires selecting locations and methods to minimize exposure to rainfall, surface water, and the ground surface or subsurface. Enclosures, shelters, and secondary containment should be used where appropriate.
- The Contractor must use appropriate protective procedures such as double containment, employee training, overflow protection, and other measures as part of activities involving the use, storage, or handling of petroleum products or hazardous materials on Providence VAMC Property.
- The Contractor must ensure that his/her employees are adequately trained in spill procedures outlined below. The Medical Center's SPCC Program also establishes reporting requirements in the event of a spill or release of oil or hazardous materials. In the event of a release or spill, the Contractor must follow all of the reporting requirements of the SPCC Program as specified below:

(1) The Contractor shall extinguish all sources of ignition and isolate incompatibles or reactive chemical substances.
(2) The Contractor shall determine if the spill/release is incidental or non-incidental.
(3) For incidental spills/releases:

- The Contractor shall attempt to stop or contain the spill/release at the source provided that doing so does not endanger anyone.
- The Contractor shall prevent discharge of materials to environmental receptors including drains, sumps, soil, etc.
- The Contractor shall immediately notify the Project Manager of all incidental spills/releases.
- The Contractor is responsible for the proper collection, storage and disposal of waste materials in compliance with EPA and R.I. DEM regulations and in cooperation with the Project Manager.

(4) For non-incidental spills/release:

- The Contractor shall immediately report the spill/release to the Medical Center's Environmental Health & Safety (EH&S) Department who will advise you on the need for initiating contact with spill response vendors.
- The Contractor shall follow the steps for incidental spill/releases identified in item (3) above, provided that it is safe to do so.
- PVAMC's EH&S Department will coordinate ALL reporting to outside agencies and will conduct follow-up written notifications if necessary.
- The Contractor will conduct an incident analysis and coordinate with the Project Manager and the PVAMC EH&S Department on any actions that are required to prevent recurrence.
- If it is deemed necessary to engage a professional spill cleanup company, the PVAMC EH&S Department will coordinate the cleanup through the Project Manager.

2.4 Pest Control

If a Contractor or his/her employees see evidence of cockroaches, mice, ants or other pests during the course of their work, they must notify the Project Manager immediately. The Contractor shall not use any insecticide products on Medical Center property unless such activities are part of your contracted work and you are specifically trained to do so.

2.5 Air Emissions

Combustion Units

[Combustion units include, but are not limited to, boilers, heaters, emergency generators and kilns.]

[1] ***"Incidental"*** spills meet **ALL** of the following criteria: 1) personnel are familiar with the hazards associated with the spilled material; 2) containment/response does not pose potential health and safety hazards (e.g. fire, explosion or chemical exposure); 3) a small quantity (less than 10 gallons) of material is spilled/release which **DOES NOT** reach the environment or pose potential health and hazardous; and 4) spilled/release material can be readily absorbed, neutralized, or otherwise controlled at the time of release by employees in the immediate area or by maintenance personnel.

"Non-incidental" spills include 1) major spills/release (e.g. greater than 10 gallons) that do not reach the environment or 2) any amount of spilled material that escapes to the environment (including drains, sumps, soil, etc.).

All Contractors must immediately report the following to the Project Manager:

- Any maintenance or repairs to a combustion unit that could result in a change in maximum heat input value or overall emissions (e.g. burner replacement or fuel conversions)
- Any conditions discovered which could have resulted in an increase on air pollutant emissions.

CFC Containing Units [CFC containing units include those containing any ozone depleting refrigerants including, but not limited to, Chlorofluorocarbons (CFC) and Hydrochlorofluorocarbons (HCFC).]

Contractors shall immediately notify the Project Manager whenever they become aware of any unintentional or intentional release of CFCs above de-minimis levels as established by EPA regulators.

Contractors shall provide the following documentation to the Project Manager:

- EPA certifications for any reclaimers to which CFC products evacuated from Providence VAMC systems are to be sent.
- Certifications for any CFC recycle/recovery equipment to be used at PVAMC
- Technician Certifications
- Service records for all units containing greater that 50 pounds of refrigerant. Records must include the date and type of service and the type and quantity of refrigerant added.

Contractors shall immediately notify and provide documentation to the Project Manager whenever:

- A leak rate equals or exceeds 35% per year for commercial/industrial processes
- A leak rate equals or exceeds 15% per year for comfort cooling processes
- A release occurs of >100 pounds in a 24 hour period for CFC-12, CFC-113 ad R-500. *Halon* Service providers shall immediately notify the Project Manager whenever it becomes aware of any unintentional or intentional release of halon.

2.6 Stormwater and Wastewater

Stormwater

Projects that disrupt over one (1) acre of land must adhere to the EPA's Phase II stormwater requirements. These projects are required to obtain a NPDES permit and implement best management practices. The Contractor is responsible for obtaining such permits before the start of work.

Wastewater

Providence VAMC's wastewater discharge is regulated by Narragansett Bay Commission (NBC). The discharge of any wastewater must adhere to these permit requirements. These include but are not limited to:

- No discharge of mercury, silver or other metal-bearing wastewater
- No discharge of highly corrosive substances (5 < pH > 10.5)
- No discharge of flammable materials that could create a hazard for Providence VAMC personnel these are the only references that will be noted in the policy. or NBC treatment works personnel.

1.0 The Contractor must identify all wastewater streams for the Project Manager and obtain approval for drain discharge.

2.7 Biological/Chemical/Radioactivity Hazards

Some Providence VAMC operations involve the use of biological, chemical, or radioactive material that can be hazardous to PVAMC's visitors, patients, or employees if not handled safely. Areas where work with biological, chemical, or radioactive materials is being performed will be marked with appropriate signs.
Do not enter these areas and do not handle hazardous biological, chemical, or radioactive material unless it is part of your contracted work and you are specifically trained to do so.

2.8 Asbestos Containing Materials

Providence VAMC will have determined, before work is begun, the presence, location, and quantity of asbestos-containing or potentially asbestos-containing materials that would be specifically impacted by the work of your contract. The Providence VAMC Project Manager will provide a specific asbestos audit report for those work areas in question. The contractor shall not disturb asbestos-containing materials unless such activities are part of your contracted work and you are specifically trained to do so. Asbestos abatement contractors should coordinate with the Project Manager and the Medical Center's EH&S Department for specific requirements for asbestos abatement work.
The Contractor shall not disturb, damage or otherwise handle any *suspect* asbestos containing material. It is recommended that the following suspect materials be assumed to contain asbestos:
Cement Pipes, High Temperature Gaskets, Electrical Wiring Insulation
Cement Wallboard, Lab Hoods/Benches/Gloves, Chalkboards
Cement Wallboard, Fire Blankets/Curtains/Doors, Roofing Shingles and Felt
Flooring, Backing, Elevator Equipment Panels, Base Flashing
Construction Mastics, Elevator Brake Shoes, Thermal Paper Products
Acoustical Plaster, HVAC Duct Insulation, Caulking/Putties
Decorative Plaster, Boiler Insulation Adhesives
Textured Paints/Coatings, Breeching, Insulation, Wallboard
Ceiling Tiles and Lay-in Panels, Pipe Insulation, Joint Compound
Spray-applied Insulation, Cooling Towers, Vinyl Wall Coverings
Blown-in Insulation, Electrical Cloth, Asphalt Floor Tile
Fireproofing Materials, Heating and Electrical Ducts, Vinyl Sheet Flooring
Taping Compounds, Electrical Panel Partitions, Vinyl Floor Tile
Packing Materials (wall/floor penetrations), Ductwork, Flexible Fabric, Connectors, Spackling Compounds
The Contractor shall not sweep, dust, vacuum or mop dust or debris that is the product of a suspect asbestos containing material. The Contractor shall also not pick up or throw away any suspect asbestos-containing waste or trash. If it material that is suspected to be asbestos-containing is disturbed and becomes airborne, the Contractor shall immediately notify the Project Manager.
If it is part of the Contractor's work, stripping of floor finishes shall be done using low abrasion pads at speeds lower than 300 rpm and wet methods shall be used. The Contractor shall take care not to overstrip floors and shall stop stripping immediately upon removal of the old surface coat. Sanding of flooring material is strictly prohibited unless it is part of your contracted work and you are specifically trained to do so.
Any suspect asbestos containing material that is observed by the Contractor to be crushed, ripped, broken or in any way damaged should be reported to the Project Manager immediately.
Contractors must, within 24 hours, convey to the Providence VAMC Project Manager any information they newly discover concerning the presence, location and quantity of asbestos-containing or potentially asbestos-containing materials.

2.9 Lead Paint

Unless the Providence VAMC Project Manager provides a specific lead-paint inspection, Contractor's should assume that any painted surface they come in contact with is coated with lead-based paint. Therefore, Contractor's should not perform any intrusive, dust-generating work on painted surfaces (e.g., drilling, cutting, brazing, scraping, demolition), unless the surface has confirmed to be non-lead or unless such work is part of your contracted work and you are specifically trained to do so.
Any painted surfaces that have loose, flaking, chipping or otherwise non-intact paint should not be

impacted by the Contractor and should be reported to the Project Manager immediately.
Lead paint abatement contractors should coordinate with the Project Manager and the Medical Center's EH&S Department for specific requirements for lead abatement work. Refer to the section of this manual on Hazardous Waste for guidelines on the proper disposal of lead containing paint.

3.0 OSHA SAFETY ISSUES

3.1 Hazardous Materials and Hazard Communication

Hazardous Materials

- Do not handle or use hazardous materials without training by your company's representative.
- No solvents, paints, or similar flammable, toxic, or irritating materials may be used in areas occupied by Providence VAMC employees, visitors, or patients unless specifically approved in writing by the Providence VAMC Project Manager.
- Maintain adequate ventilation when paints or solvents are used.
- Use flammable solvents and materials with extreme caution.
- Store flammable paints and solvents in approved flammable liquid storage cabinets if inside buildings.

Hazard Communication

The Contractor shall submit an inventory of all hazardous chemicals that are brought on-site with accompanying Material Safety Data Sheets to the Project Manager. The Contractor shall also ensure that all containers that are brought on site for the storage of hazardous chemicals (e.g., gas, paint, etc.) are labeled and inspected in accordance with all applicable regulations. The Contractor shall remove all hazardous chemicals that it brings on-site when work involving a specific hazardous chemical is complete.
The Contractor may request and review Material Safety Data Sheets for any chemicals that are encountered on Medical Center property during the performance of its work.

3.2 Confined Space Entry

Background

Providence VAMC has developed and implemented a Confined Space Entry Program to protect all Medical Center employees who are required to enter confined spaces. PVAMC's complete written program is available for review upon request to the Project Manager.
This Medical Center-wide program defines a "Confined Space" and an "Enclosed Space" in accordance with 29CFR §§ 1910.146 and 1910.269, respectively. Entrance into any of these spaces by a Contractor requires adherence with all applicable regulations as well as with certain Medical Center protocols as defined further below.
As part of the Confined Space Entry Program, the Medical Center performed hazard assessments, developed inventories and posted all confined and enclosed spaces at the point of entry. These postings include information on the classification of the space (e.g., "Permit Required", "Non-permit Required"), the confined space ID number, the location, the known hazards, and the minimum personal protective equipment needed for entry. Where available the Medical Center's experience with the confined space is also included on the signage. The Medical Center Confined Space Inventory and hazard assessment forms are available for review.

Requirements

- The Contractor is responsible for developing, implementing and maintaining his/her own Confined Space Entry Program, including provisions for emergency rescue in accordance with OSHA regulations as it applies to the work of this contract.
- If during the course of its work, the Contractor encounters a confined space that has not been previously identified by the Medical Center, it must immediately bring the space to the attention of the Project Manager and delay entry until Providence VAMC has examined the space.
- When both Medical Center personnel and Contractor personnel are working in or near confined spaces, the Contractor shall coordinate all operation with the affected Medical Center personnel before entry.
- Advance notification is always required. Whether you enter a confined space with a PVAMC employee or not, the Contractor's entry attendant must always first *inform* the Providence VAMC Project Coordinator *before* you enter a confined space.

The Contractor shall provide the Project Coordinator with:
- The exact location of the confined space and confined space ID number;
- The time of entry and approximate entry duration; and
- The names of authorized attendants and entrants.
- *After the entry*: If you have entered a “permit-required” confined space, you must, after the entry is concluded, notify Providence VAMC Project Coordinator of (1) the permit space program you followed and (2) any hazards you confronted or created in the space.

3.3 Lockout / Tagout

Providence VAMC protects its patients, visitors, employees, neighbors and property in part by complying with 29 CFR 1910.147 – Control of Hazardous Energy Sources (Lockout/Tagout). As part of PVAMC’s Lockout/Tagout Program, standard locks and tags are used to control the start-up of equipment that is being serviced or maintained by its employees. At no time shall the Contractor or its employees override any locks or tags that they encounter during the performance of its work.
The Contractor is responsible for developing; implementing and maintaining his/her own Lockout/Tagout Program in accordance with OSHA regulations as it applies to the work of this contract. The Contractor shall submit a copy of its Lockout/Tagout Program to the Project Manager or Property Manager before the start of any work where 29 CFR 1910.147 is applicable. The only purpose of this submission is to ensure that, for the safety of PVAMC’s students, faculty, employees, neighbors or property, the Contractor’s Lockout/Tagout procedures are consistent with restrictions and prohibitions of PVAMC’s Lockout/Tagout program.
- Providence VAMC Engineering and Utilities will shut down and start up utility systems.
- The Contractor will maintain a log of all machines and equipment that are locked out and/or tagged out during the performance of the work of this contract. This log shall identify the equipment that was worked on, the date that work was performed, and the name of the individual performing the work.

The Contractor will submit this log to the Project Manager on a monthly basis when Lockout/Tagout work is being performed.

3.4 General Electrical Safety

- Only qualified electricians are permitted to work on electrical systems and equipment that uses or controls electrical power.
- Do not operate electrical tools or equipment in wet areas or areas where potentially flammable dusts, vapors, or liquids are present, unless specifically approved for the location.
- Should a circuit breaker or other protective device "trip," ensure that a qualified electrician checks the circuit and equipment and corrects problems before resetting the breaker.
- Erect barriers and post warning signs to ensure non-authorized personnel stay clear of the work area.
- Report hazards (lack of protective guards or covers, damaged equipment, etc.) to the PVAMC Medical Center Project Manager immediately.
- Do not leave electrical boxes, switch gear, cabinets, or electrical rooms open when not directly attended. Insulate energized parts when covers have been removed or doors are ajar. Use of cardboard, plywood, or other flammable materials to cover energized circuits is prohibited.

3.5 Compressed Gas Cylinders

Compressed gases can pose a severe hazard to PVAMC’s patients, visitors, employees, neighbors and property. Therefore, the following measures must be taken for their protection:
- Valve protection caps must be in place when compressed gas cylinders are transported, moved, or stored.
- Close cylinder valves and replace valve covers when work is complete and when cylinders are empty or moved.
- Secure compressed gas cylinders in an upright position in a welding cart or to a solid object (using chains, straps, or a rigid retaining bar). Secure compressed gas cylinders on an approved carrier while being transported.

- Keep cylinders at a safe distance or shielded from welding or cutting operations. Do not place cylinders where they can contact an electrical circuit.
- Keep oxygen and flammable gas regulators in proper working order and a wrench in position on the acetylene valve when in use. If not manifolded together, separate oxygen and flammable gas cylinders by 20 feet or a 5 foot high fireproof barrier.
- If a leak develops in a cylinder and it cannot be immediately corrected, move the cylinder to a safe location outside the building.
- Use only approved spark igniters to light torches.
- Cylinders must not be taken into or stored in confined spaces, including gang boxes and office/storage trailers.
- Do not store hoses and regulators in unventilated or closed containers or areas.
- Do not leave behind partially filled or empty cylinders. Always remove them from the site.

3.6 Powder-Actuated Tools

Powder-actuated tools can pose hazards to PVAMC's patients, visitors, employees, neighbors and property. Such tools are, therefore, not permitted in occupied Providence VAMC buildings without the approval of the PVAMC Medical Center Project Manager. In addition:

- Contractor's who operate powder-actuated tools must be properly trained in their use and carry a valid operator's card provided by the equipment manufacturer.
- Each powder-actuated tool must be stored in its own locked container when not being used.
- A sign at least 7 inches by 10 inches with bold face type reading "POWDER-ACTUATED TOOL IN USE" must be conspicuously posted when the tool is being used.
- Powder-actuated tools must be left unloaded until they are actually ready to be used.
- Powder-actuated tools must be inspected for obstructions or defects each day before use.
- All Powder-actuated tool operators must have and use appropriate personal protective equipment such as hard hats, safety goggles, safety shoes and ear protectors.

3.7 Welding, Cutting, and Brazing Hot Work Permit

- Obtain a permit from the Project Manager for each separate work activity and ensure that all conditions of the permit are met at all times. The permit must be obtained from the Contract Coordinator prior to the start of any welding/cutting/brazing work. In addition, the Contractor must also maintain its own hot work permit system in accordance with OSHA regulations.
- Remove combustible materials from the area before beginning work.
- Elevate oxygen/acetylene hoses seven feet above the work area or otherwise protect them from damage.
- Install anti-flash back (safety/check) valves in both the oxygen/acetylene hoses at the regulator.
- Shield adjacent areas with welding partitions.
- Have a second person stand by with an approved fire extinguisher for welding and burning operations in accordance with OSHA regulations and permit requirements. This person should remain in the area for a minimum of 30 minutes after the hot work is completed to ensure the site is cold.

3.8 Cranes and Rigging

Each crane, rigging, or hoist brought onto Providence VAMC property must have an annual inspection performed by a certified testing agency. Before operations begin on site, documentation, including a log book, must be provided to Providence VAMC Project Manager or its designee.
The operator is responsible for the proper placement of the crane in relationship to the load to be handled and the landing area so as to obtain the best rated lift capacity, and the installation and maintenance of crane swing radius protection.
All operators must possess a valid R.I. hoisting license. Documentation of this license shall be provided to the Providence VAMC Project Manager. At no time shall loads be hoisted by a non licensed operator.

3.9 Miscellaneous Additional Safety Rules for the Protection of PVAMC Patients, Visitors, Employees, Neighbors and Property

- Do not perform work over the heads of people or leave tools or equipment overhead.
- Isolate your work area with safety markers, tape barriers, blinker lights, etc.
- Report unsafe acts or conditions to your supervisor.

DRAFT

Appendix E

FIRE WALL/SMOKE BARRIER PENETRATION PERMIT

POLICY MEMORANDUM 138 – 11 MARCH, 25 2011

PART 1 GENERAL

1.1 PURPOSE

A. To establish policy and procedures regarding penetrations in ceilings, floors, pipe chases, rated fire walls, and smoke barriers for the purpose of maintaining the integrity of Building #1 Type II-222 Construction as required in NFPA 101, Chapter 8 and the Joint Commission to provide for the safety of occupants during fire incidents. (The equivalent Construction Type per ICC Building Code is Type IB.)

1.2 POLICY

A. All penetrations made in floors, fire barriers and smoke partition for the purpose of installation/removal of pipe, conduit, cable, or ductwork or other modifications including incidental damage, or the removal of such item, will be repaired and firestopped upon the completion of the work, and documented as repaired. This policy applies to all vertical and horizontal penetrations and to all medical center staff and Contractors.

1.3 DEFINITIONS

A. Penetrations are any holes, openings or faults created in a fire barrier or smoke partition that compromise the integrity of the smoke or fire rating of the penetrated structure.

B. Firestopping materials are any materials used to replace or repair any penetrations. Materials used must meet specifications and testing by FM, UL, or WH that ensure that the original integrity and rating of the penetrated surface will be restored.

C. Fire Barriers are floor/ceiling assemblies and walls, including supporting construction that meets the conditions of acceptance of NFPA 251, Standard Methods of Tests of Fire Endurance of Building Construction and Materials. Fire barriers are designed to form fire compartments and are constructed to be continuous from outside wall to outside wall, floor to floor or ceiling, from one fire barrier to another, or a combination thereof, including continuity through concealed spaces.

D. Smoke Barrier is a continuous membrane designed and constructed to restrict the passage of smoke . Smoke Barriers are designed to form smoke compartments and are constructed to be continuous from outside wall to outside wall, floor to floor or ceiling, from one fire or smoke barrier to another, or a combination thereof, including continuity through concealed spaces.

1.4 SUBMITTALS

A. Submit manufacturers literature, data, installation instructions and detail drawings for each type of penetrating item and the construction of the barrier it is passing through indicating the type of firestopping and/or smoke stopping material used. Manufacturer's details shall indicate the listing number given by FM, UL, or WH for each firestopping system.

B. Alternate submittals can be a Certified Laboratory test report for ASTM E814 tests of systems not listed by FM, UL, or WH. (ASTM E814 is the Standard Test Method for Fire Tests of Through-Penetration Firestops.) Another type of submittal is a written Manufacturer's Engineering Judgement, derived from a similar UL system, that a modified design meets the required protection level of the UL listed test.

PART 2 PRODUCTS

2.1 FIRESTOP SYSTEMS

A. Use either factory built Firestop Devices or field erected through penetration firestop systems to form a specific listed firestop system that will maintain the required integrity of the fire or smoke barrier and stop the passage of gases or smoke.
B. Through prenetration firestop systems and firestop devices tested in accordance with ASTM E814 or UL 1479 use the "F" or "T" rating to maintain the same rating and integrity as the fire barrier being sealed. "T" ratings are not required for penetrations smaller than or equal to 4 inch nominal pipe of 16 square inches in overall cross sectional area.
C. Products requiring heat activation to seal an opening by its intumescence shall exhibit a tested and demonstrated ability to function as designed to maintain the fire or smoke barrier.
D. Firestop sealants used for firestopping or smoke sealing shall have the following properties:
    1. Contain no flammable or toxic solvents.
    2. Have no dangerous or flammable out gassing during the drying or curing of products.
    3. Water resistant after drying or curing and unaffected by high humidity, condensation or transient water exposure.
    4. When used in exposed areas, shall be capable of being sanded and finished with similar surface treatments as used on the surrounding wall, ceiling or floor surface.
E. Firestopping system or devices used for penetrations by glass pipe, plastic pipe or conduits, unenclosed cables, or other non-metallic materials shall have the following properties:
    1. Classified for use with the particular type of penetrating material used.
    2. Penetrations containing loose electrical and/or computer data cables, and other non-metallic communications cables shall be protected using firestopping systems that allow unrestricted cable changes without damage to the seal.
    3. Intumescent products which would expand to seal the opening shall act as a fire, smoke, toxic fume and water sealant.
F. Maximum flame spread of 25 and smoke development of 50 when tested in accordance with ASTM E84.
G. FM, UL, or WH rated or tested by an approved Laboratory in accordance with ASTM E814.
H. Materials shall be asbestos free.

PART 3 EXECUTION

3.1 Submit for approval all product data drawings and installation instructions, as required by "Submittals", after examining the Contract Documents and performing an on-site careful examination of the areas to receive firestopping. If there is any doubt about the location of fire rated or smoke rated partitions, request or refer to information contained in the current SOC (Statement of Condition) document and drawings available at the FMS offices.

3.2 In all cases when a ceiling, floor, wall or partition designated as a fire or smoke barrier is compromised for the purpose of installation, repair, or other modification, the following steps are required:
A. All penetration contracted work, **including Information Resource Management (IRM) projects**, is to be submitted and approved by a Facilities Management Service (FMS) Project Manager or Maintenance Department PM.
B. A penetration permit must be secured from a FMS Project Manager or FMS Maintenance Department PM prior to disturbing the integrity of any wall or floor/ceiling barrier. The permit must be available for inspection at the subject location. ***(See Attachment "A", enclosed.)***

C. Provide temporary firestopping, smoke seal and waterproofing of all penetrations in smoke and fire rated floor and wall assemblies immediately following core drilling or cutting if permanent work and firestopping measures will follow at a later time.
D. Where penetrations are created in existing floors and/or partitions, they shall be temporarily firestopped by the close of construction each day. In the case of major projects requiring the prolonged existence of floor and/or partition openings, temporary firestopping shall be provided at the end of each workday. Temporary firestopping may constitute a single layer of fire rated gypsum board secured in place over the opening or mineral fiber may be placed in the opening. Fiber thickness shall be sufficient to meet or exceed the inherent fire resistance rating of the building material being penetrated and shall be secured in place with non-combustible material or fasteners.
E. After the final work is completed, the penetration must be firestopped according to the submitted and approved UL, FM or WH listed through penetration firestopping materials or system that meet the original smoke barrier or fire rated construction requirements.
F. Upon completion of any penetration repair, a visual inspection for approval shall be requested from and completed by a FMS Project Manager or FMS Maintenance Dept PM.
G After completion of the field inspection, the completed permit will be signed by the Contractor/Installer and the inspecting FMS – PM or FMS Maintenance Dept PM. That signed document shall then become the official Document or Record and be distributed as indicated on the Permit Form.

PART 4 RESPONSIBILITY

4.1 It is the responsibility of the FMS Project Manager or FMS Maintenance Dept to ensure that penetration permits are issued and final inspections are conducted. Any deficiencies found remaining during the inspection will be discussed with the COTR and remedied by the firestop installer.
4.2 The Chief of Facilities Management Service is responsible for ensuring that any PVAMC staff making penetrations into fire and/or smoke barriers shall secure penetration permits prior to beginning work, properly firestop the wall/ceiling/floor penetration, and sign off the permit after inspection and completion of the work.
4.3 Contractors are responsible for assuring that they properly firestop any penetrations that they make in ceiling, floor, pipe chases, fire rated walls, and smoke barriers in accordance with submitted and approved firestop materials and/or systems.
4.4 Contract Officer Technical Representatives (COTR's) are responsible for ensuring that all Contractors and FMS personnel adhere to this policy during construction, renovation or demolition activities, including pulling electrical and/or data cables. The COTR is responsible for verifying that all holes and penetrations made during the construction activities are properly sealed. The COTR is also responsible for ensuring that this memorandum is properly inserted in all applicable Contracts and Work Orders issued by FMS.

End of Policy Memorandum

REFER TO AND FILL OUT THE ATTACHED "FIRE/SMOKE BARRIER PENETRATION PERMIT".

DRAFT

Appendix E

FIRE WALL/SMOKE BARRIER PENETRATION PERMIT

POLICY MEMORANDUM 138 – 11 MARCH, 25 2011

Attachment A

FIRE/SMOKE WALL PENETRATION PERMIT

Contractor or FMS Dept or VA Service Requesting Permit: _____
Responsible Person For Request (Firm/Dept & Person): _____
Location of Penetrations (Bldg/Floor): _____
Work Narrative (Project No. or Purpose): _____
_____

Before issuing a Floor/Fire Wall/Smoke Barrier Penetration Permit, the FMS Project Manager or Maintenance Dept shall review the following checklist with the Permit Requesting Responsible person for compliance.
(Contractor to be reminded that all penetrations shall be temporarily firestopped at close of each work day.)

Question	Yes	No	N/A
Did the Responsible person (indicated above) obtain prints (SOC Plans) from FMS Maintenance Section or PM Section detailing hourly rated walls and smoke barriers in the building; and have they thoroughly identified the scope of the firestop work?			
Is the manufacturer's UL, FM, or WH product and application guide for each type of wall or floor penetrated by each type of utility element been submitted, approved and available for on- site review by installers and inspectors?			
Has the Responsible person (indicated above) prepared an itemized schedule of floor and fire/smoke walls to be penetrated indicating the UL, FM or WH system to be used?			

Materials utilized in repair:
Fire-stopping UL, FM or WH System Number(s) ***Attach submittals***: _____
_____
_____
Wall Board Type & number of layers (if used) _____
Other: (Manufacturer's Engineering Judgment:) ***Attach submittal***: _____
Approving FMS PM or Maintenance Signature: _____ Date: _____

After penetrations are sealed, FMS - PM or Maintenance Dept, and the Responsible Person shall inspect the area to ensure compliance with the required standards, make any corrections, and sign off on lines below.

Signature of **Responsible Person** Filing for Permit: _____
Signature **FMS PM** or **Maintenance Staff**: _____
Signature of **COTR:** _____

Submit fully signed Copies to Contractor, COTR, Safety Officer, and FMS - PM and/or Maintenance Dept.

APPENDIX F

VA MEDICAL CENTER
PROVIDENCE, RHODE ISLAND

FACILITIES MANAGEMENT SERVICE
FMS/SOP#12
August 30, 2011

LOCKOUT / TAGOUT PROCEDURE

1. PURPOSE

To establish procedures for the Lockout/Tagout (LOTO), of energy isolating devices. The procedures will be used to ensure that the machine or piece of equipment is isolated from all potentially hazardous energy. This includes LOTO by employees performing service or maintenance related activities; where the unexpected energization, start-up or release of stored energy could cause injury.

2. POLICY

a. It is the policy of Facilities Management Service , that FMS Employees are instructed in the safety significance of the LOTO procedures, as well as how to use those procedures. Only Authorized Employees may LOTO machines or equipment.

b. Every new employee and FMS employee whose work operations are or may be in a LOTO area will be instructed in the purpose and use of the LOTO procedure. Affected Employees will be notified by the Authorized Employees whenever a LOTO will occur, as well as when the equipment is being placed back in service.

c. VAMC FMS Personnel will initiate all utility and equipment LOTO with VA LOTO devices. Contractors will add their LOTO padlock to the device or lockbox as appropriate.

3. DEFINITIONS

a. LOCKOUT/TAGOUT: shall mean the procedure of properly and safely securing equipment or systems administratively (tags, instructions, etc.) and physically (mechanical, electrical or pneumatic devices) or a combination of both.

b. AUTHORIZED EMPLOYEE: Employee trained and determined competent to effectively de- energize and LOTO machinery/equipment.

c. AFFECTED EMPLOYEE: Employee that can not perform a LOTO, but is exposed to LOTO when the employee's or surrounding machinery/equipment is under LOTO.

4. PROCEDURES

a. Preparation for LOTO:

1. Obtain the proper Hazardous Energy Control Procedure (Attachment 1) for the equipment or machine to be LOTO. Determine if changes need to be made to the procedures based on changes to the equipment and/or personnel. If a procedure is not written use Attachment 1 to prepare the procedure prior to proceeding with the LOTO.
2. Locate the LOTO Permit, (Attachment 2).
3. Locate the ENERGY LOCKOUT INDEX (Attachment 3) located in the LOTO 3-ring binder in the Lockout Locker. (File attachments 1 & 2 in the LOTO binder in the "ACTIVE LOTO" section after filling them out.)
4. Identify all Affected Employees that may be involved in the impending LOTO.
5. Obtain necessary locks and/or tags and devices to implement the LOTO.

b. Sequence of LOTO System Procedure:

1. Fill out the ENERY LOCKOUT INDEX (Attachment 3), located in the LOTO Binder.
2. Fill out the LOTO PERMIT (Attachment 2), sections 1, 2, & 3.

3. Make a copy of an existing LOTO HAZARDOUS ENERGY CONTROL SPECIFIC INSTRUCTION (Attachment 1) or fill out a blank form with all required information.

4. Notify all Affected Employees that a LOTO is going to utilized and the reason thereof. The Authorized Employee shall know the type and magnitude of energy that the machine or equipment utilizes and shall understand the hazards thereof.
5. If the machine or equipment is operating, shut it down by the normal stopping procedure (depress stop button, open toggle switch, etc.).
6. Operate the switch, valve, or other energy isolating device(s) so that the equipment is isolated from its energy source(s). Stored energy (such as that in springs, elevated machine members, rotating flowheels, hydraulic systems, and air, gas, steam or water pressure, etc.) must be dissipated or restrained by methods such as repositioning, blocking, bleeding down, etc. .
7. LOTO the energy isolating devices with assigned individual lock(s) and tag(s).
8. After ensuring that no personnel are exposed, and as a check on having disconnected the energy sources, operate the push button or other normal operating controls to make certain the equipment will not operate.
CAUTION: Return operating control(s) to "neutral" or "off" position after the test (de-energized state).
9. The equipment is now LOTO.

c. Restoring Machines or Equipment to Normal Production Operations:
1. After the servicing and/or maintenance are completed, equipment is ready for normal operations, check the area around the machines or equipment to ensure that no one is exposed.
2. After all tools have been removed from the machine or equipment, guards have been reinstalled and employees are in the clear, remove all LOTO devices. Operate the energy isolating devices to restore energy to the machine or equipment.
3. Complete Attachments 1, 2 & 3 and file in the "Completed Lockouts" section of the Lockout Binder.

d. Procedure Involving More Than One Person
1. One Authorized Employee will be designated as responsible for the LOTO.
2. The Hazardous Energy Control Procedure (HECP) will be reviewed with each group member.
3. If more than one Facility Management Section or contractor is involved, one Authorized Employee will coordinate the LOTO to ensure that all control measures are applied and that there is continuity of protection for the group.
4. Each Authorized Employee or contractor will affix the LOTO pad lock to the group lockout. Each pad lock must be identified to the person applying it. Authorized Employee or contractor will remove their LOTO device/padlock when they stop working on the equipment or machine being serviced. Outside personnel or contractors involved in operations relating to equipment or machinery lockout that affects our employees, must submit their energy control procedures to the project engineer. Affected Employees must be trained and notified as outlined in this written program. The responsible supervisor for the affected area will ensure that outside personnel and Affected Employees are informed of the proper procedure.

e. Basic Rules for Using LOTO System Procedure.
1. All equipment shall be LOTO to protect against accidental or inadvertent operation when such operation could cause injury to personnel. Do not attempt to operate any switch, valve, or other energy isolating device where it is LOTO. Violation of the LOTO can result in disciplinary action.
2. It is the policy of the Facilities Management Service that VA in-house personnel will **NOT** perform work on equipment that has not had the electrical service LOTO. If circumstances require that work be performed with live electrical connections the work will be contracted out.

4. TRAINING

a. Training will be the responsibility of the Supervisor's within Facility Management Service with assistance from the Environmental Safety & Health Department.
b. Affected and Authorized employee training will consist of at least the following elements:
1. Review of OSHA Standard 29CFR 1910.147 "The Control of Hazardous Energy" requirements.
2. Type and magnitude of energy sources.
3. Purpose and use of the Hazardous Energy Control Procedures.
4. Nature and limitations of tags.
5. How to isolate equipment/machinery for LOTO.
6. Conditions for restoring machinery/equipment and removing tags.

c. The LOTO Training will be given to Affected Employees as part of orientation.
d. Authorized Employees will receive training prior to their initial involvement with any LOTO operation.
e. Retraining will be given for Authorized and Affected Employees whenever there is a change in job assignment, a change in machines, or equipment or process that presents a new hazard or a change in the Facilities Management Hazardous Energy Control Procedure.
f. A list of names and dates of training will be kept by the Facilities Management Service's Education Tracking Coordinator.

5. ANNUAL INSPECTION

a. Each year the Environmental Safety & Health Department will conduct an inspection of the FMS Maintenance LOTO Program.
b. This will be accomplished by reviewing the LOTO Binders in B-1, B-6 and B-10. The inspection will include the LOTO Cabinet with the various LOTO Devices. Active LOTO's sites will be visited accompanied by a FMS representative to verify the Hazardous Energy Control Procedure (HECP) was implemented.
c. When LOTO is used the HECP will be reviewed with each Authorized Employee.
d. This will be certified by the designated ES&H inspector on an annual basis. The documentation should include employee names, dates of the inspection, and the Annual Lockout/Tagout Assessment Form (Attachment 4) used.

6. RESPONSIBILITY

a. The Chief, Facilities Management Service is responsible for the administration of the maintenance LOTO Program.
b. The Project Engineer is responsible for ensuring that the contractor personnel are thoroughly familiar with and comply with this policy.
c. Facilities Management Service Supervisors are responsible for their personnel's familiarization and strict compliance with this policy and shall ensure that their personnel have available and utilize proper locks, blocks, danger tags, and protective equipment.

7. REFERENCES

NFPA-70E, Electrical Safety Requirements for Employee Workplaces.
OSHA Standard 29 CFR 1910.147

8. RESCISSION

Facilities Management Service Policy Memorandum #05, Lock/Out Tag/Out Procedures, Dated July 14, 2003.

JOHN J. BELIVEAU

Chief, Facilities Management Service

Attachments (4)

Distribution: Engineering Section Employees

APPENDIX G

VA MEDICAL CENTER FACILITIES MANAGEMENT SERVICE

PROVIDENCE, RHODE ISLAND SOP POLICY MEMO 138-16
December 22, 2011

CRANES

1. PURPOSE

The purpose of this memorandum is to establish procedures for the use of cranes at this facility. The procedures will be used to ensure that the lifting of loads above the ground surface is performed in a safe manner and fully informs facility staff of the details of the lift to be performed using a crane. This policy also defines responsibilities for these procedures.

2. POLICY

a. It is the policy of Facilities Management Service that all work with cranes shall be performed in a manner in strict compliance with construction industry regulations of the Occupational Health and Safety Administration and with the safety guidelines and policies of the Department of Veterans Affairs.

b. It is the policy of Facilities Management Service that employees and contractors be informed about specific details of crane operations when such crane use is proposed at this facility and that such information be provided to the facility staff by the crane user prior to use of a crane at this facility.

c.

d. It is the policy of the Providence VA Facilities Management Service that the requirements stated herein will be enforced.

3. DEFINITIONS

a. *Crane Operator*. A person who has demonstrated that they are proficient in the operation of the various types of cranes. Certification may be provided by the employer or an accredited testing agency, such as the National Commission for the Certification of Crane Operators (NCCCO).

b. *Competent Operator*. A crane operator who:

1. Is capable of identifying existing and predictable hazards with regard to the particular crane being operated.

2. Is capable of identifying existing and predictable hazards with regard to the hoisting operations being undertaken.

3. Has the training and experience to properly set up and safely control all crane functions.

c. *Competent Person.* Per OSHA, one who is capable of identifying existing and predictable hazards in the surroundings; is capable of identifying working conditions that are unsanitary, hazardous or dangerous to employees; and has authority to take prompt corrective measures to eliminate them.

d. *Controlling Entity.* Contractor or other entity that is in actual control of a project. Could be the General Contractor, Construction Manager, Prime Contractor or the Owner, depending upon the level of control applied with regard to the selection, operation and maintenance of cranes.

e. *Controlling Supervisor.* The individual who is directly responsible for crane operation maintenance at a particular project.

f. *Critical Lift Plan.* A document that is used to plan crane lifts that have the potential for increased risk. A critical lift plan should detail the weight(s) and dimensions of the load to be hoisted; the path of travel of the load, including various height and clearance dimensions; the maximum radius or radii at which the load will be hoisted; and the exact configuration of the crane(s) to be used. Load charts for the make, model, serial number and configuration of the crane(s) shall be attached.

g. *Maximum Intended Load.* The heaviest load that a crane's capacity chart shows it is capable of lifting in a given configuration and radius.

h. *Qualified Person.* By possession of a recognized degree, certificate or professional standing or by extensive knowledge, training and experience, one who has successfully demonstrated his/her ability to solve or resolve problems relating to the subject matter, the work or the project.

i. *Types of Cranes.* Generally mobile cranes, such as crawler cranes, rough terrain cranes, truck cranes, boom trucks and the various other types of mobile cranes generally used on construction sites.

4. PROCEDURES

a. OSHA requires a Competent Person to inspect all operational components of the crane on a daily basis. The Competent Person must have received training in the provisions of the OSHA Standard, be capable of understanding the hazards associated with the crane being used and have the authority from the employer to correct and abate any hazard associated with the crane.

b.

c. The Crane Operator *must* be certified in the operation of the crane. A certification is determined through a *written test* that the Crane Operator knows the information necessary for safe operation of the specific type of equipment the

individual will operate; and the Crane Operator is able to read and locate relevant information in the equipment manual and other materials pertaining to the crane.

d. A Signal Person shall be used for any crane operation. Each Signal Person should know and understand the type of signals used; be competent in the application of the type of signals used; and have a basic understanding of crane operation and limitations, including the crane dynamics involved in swinging and stopping loads, and boom deflection from hoisting loads.

e. After assembly on-site, the crane shall have a thorough inspection similar to an annual inspection. A Competent Person shall perform this inspection.

f. The crane operator shall perform a daily inspection of the crane, including an operational check of all control mechanisms.

g. A permit shall be obtained from Facilities Management Service Engineering Section by any party proposing to use a crane at this facility. The permit shall be submitted to the designated project manager of the Facilities Management Service Engineering Section and shall not be valid until signed by the project manager. The permit form to be used is at Attachment A to this memorandum.

h. If any crane operation is determined to be a Critical Lift, the party submitting the crane permit shall include with the permit form a critical lift plan that is signed by a registered professional engineer.

5. RESPONSIBILITY

a. The Chief, Facilities Management Service is responsible for the administration of the Crane program.

b. The Project Manger is responsible for ensuring that contractor personnel are thoroughly familiar with and comply with this memorandum including the required use of the attached Crane Permit for all lifts.

c. The Contractor is responsible for the following:

1. Preparation and submittal to the Project Manager a completed Crane Permit Application with all required information.
2. Provide adequate supervision of all hoisting operations.
3. Ensure that the crane operator performs a daily inspection of the crane, including an operational check of all control mechanisms.

4. Determine if the crane operation will be a "critical pick" as defined by the evaluation on the attached Crane Permit form.
5. Determine, through verifiable methods, the weight(s) of items to be hoisted.
6. Ensure that all parties involved know the weight(s) of the loads to be lifted
7. Ensure that appropriate rigging equipment is available to handle the specified loads
8. Ensure that a qualified rigger is assigned to inspect all rigging equipment and to oversee the rigging of all loads.
9. Ensure that all parties understand the hoisting operations as planned, including the path of travel of all hoisted loads.
10. Determine if outside factors, such as weather, will interfere with the hoisting operations.
11. Ensure that tag lines or other methods are used to maintain complete control of the load at all times.
12. Ensure that persons who are not involved in hoisting operations are not in the path of travel or otherwise endangered by hoisted loads.
13. Ensure that the signal person(s) is properly qualified and that the chosen signaling system is appropriate and adequate for the job.

d. The Crane Operator has the overall responsibility for the lift. Supervisors should never be able to override an operator's decision to stop a lift. If an operator does stop a lift, a full review of all parameters shall be undertaken before operations are resumed.

JOHN J. BELIVEAU

Chief, Facilities Management Service

ATTACHMENTS

A – Crane Permit

Crane Permit

Description of Proposed Crane Work: (Include # of items to be picked and expected # of days and location)			
Proposed date for lift start:		Expected completion date:	
1. Crane Information			
Make:	Model:		Capacity (tons):
Total Boom Length:	Will Jib Be Used: (yes or no)		Jib Length:
Maximum Boom Length Required:		Maximum pick Radius Required:	
2. Load information			
Description of Maximum load (include Dimensions):			
Weight of Max Load:	How was load determined:		
3. Rigging Information			
List all rigging components (Including number, type, size, capacity, etc.) **Note – Anti-Two Block device is required:**			
Weight of Line, Block & All Rigging:			

4. Total Gross Load	**5. "Worst Case" Lift Scenario**
a) Weight of Max Load:	a) Maximum Pick Radius:
b) Weight of Line, Block & All Rigging:	b) Total Gross Load:
c) Safety Factor Added Weight:	c) Crane Chart Capacity at Max Pick Radius:
d) Total Gross Load:	d) % of Crane Capacity (b/c):

6. **Critical Pick Evaluation**	
a) Will crane need to "walk" with loads?	_____ Yes _____ No

b) Will pick require more than one crane?	_____ Yes _____ No
c) Will pick be made over occupied building or facility?	_____ Yes _____ No
d) Does "worst case" lift scenario exceed 75% of crane capacity (5d)?	_____ Yes _____ No
If the answer to any of the above is "yes" then this is a critical lift that will require additional information and the signature of a licensed professional engineer.	

7. Crane Location Information

a) Will crane pick affect pedestrian or vehicular traffic? If "yes", a traffic control plan must be submitted.	_____ Yes _____ No
b) Are there overhead power lines or other hazards in the lift area?	
c) Will load or any part of the crane be over or within 15 feet of electrical lines, pipes process systems or operating equipment?	_____ Yes _____ No
d) Will crane height exceed 120 feet? If 'yes" the crane must have a light beacon at the top.	_____ Yes _____ No
e) Will crane height exceed 200 feet? If 'yes" the FAA must be notified at least 30 days prior.	_____ Yes _____ No

8. Additional Information (All must be provided)

a) Plot plan showing crane location, adjacent structures, roadways, utilities, etc. within the swing radius.

b) Scale elevation sketch of drawing showing crane location, adjacent structures and load.

c) Applicable crane load charts.

d) Valid crane operators' license.

e) Valid third party annual inspection certificate.

Contractor Signatures	**VA Signatures**
Certified Crane Operator _____	**VA Safety Official** _____
OSHA Competent Person _____	**VA Project Manager** _____

APPENDIX H

VA MEDICAL CENTER **POLICY MEMORANDUM 07B-**
3PROVIDENCE, RHODE ISLAND **January 03, 2012 (07B)**

REGISTRATION OF PRIVATELY OWNED VEHICLES

1. PURPOSE

To provide for the registration of all staff members and contractor vehicles which are parked or operated on the Medical Center grounds. This program will allow VA Police Officers to identify the ownership of vehicles, monitor and control vehicle parking, enforce applicable traffic regulations and facilitate contact with the owners of vehicles when it is necessary and in the interest of safety, security and legitimate enforcement efforts.

2. POLICY

a. All staff members must register their vehicles with the VA Police Service within 48 hours after their reporting for duty at the Medical Center. Compliance with this policy is a condition of employment.

b. The registration process will include issuance of a numbered VA parking permit. This permit must be displayed on the inside, driver side, lower corner of the windshield or inside, center, of the windshield by the rear-view mirror. Permits may be displayed in any visible location on motorcycles.

3. DEFINITIONS

4. MEMBERSHIP

None.

5. PROCEDURES

a. All staff members and contractor supervisors will complete the vehicle registration form at the time of initial employment or service and will report to the VA Police Service for issuance of a permit. Proof of a valid state vehicle registration and current motor vehicle insurance policy must be provided at the time of registration. Color coded and numbered permits will be issued as follows:

(1) Staff Physicians, the Director and Associate Directors - RED.

(2) Employees - GREEN or Employees in Car Pool Program - BROWN.

(3) Volunteers - YELLOW.

(4) Temporary - BLACK.

(5) Contractor Supervisor - ORANGE (hanging style)

(6) Special Permit- As directed by Police Services.

b. All staff members who have previously registered their vehicles must re-register their vehicle each time any of the following occurs:

(1) Change of state registration plate number.

(2) Change of vehicle.

(3) Loss of permit (i.e., windshield replacement).

c. Vehicle permits are considered a controlled item and as such, must be returned to the VA Police upon completion of a staff member's employment or service at the Medical Center.

d. Handicapped parking spaces, located in all parking lots on Medical Center grounds, may be utilized by any staff member who has been issued a state or VA handicap placard. The placard must be displayed at all times while said vehicles are parked in a handicapped designated space.

(1) Requests for VA handicap placards will be submitted to the Chief, VA Police. The requesting employee will be referred to the Employee Health Clinician for determination of the extent of disability. The Employee Health Clinician will then forward this determination to the Chief, VA Police for determination of issuance or non-issuance of the placard. All VA handicap placards will be issued for a limited period of time. Long term disabilities will require issuance of a state handicap placard. VA handicap placards are considered a controlled item and as such, must be returned to the VA Police.

e. Vendors and contract staff of administrative services are required to obtain a temporary parking placard issued by either the Facilities Management Service or the Police Service.

6. RESPONSIBILITY

a. The Human Resources Management Service is responsible for instructing new employees as to this policy and the requirement to respond to the VA Police office to process a vehicle registration form.

b. Service Chiefs/Line Managers are responsible for instructing new volunteers as to this policy and the requirement to respond to the VA Police office to process a vehicle registration form.

c. The VA Police Service is responsible for issuance of all parking permits and placards and maintaining accurate records of all motor vehicles registered at the Medical Center.

d. The Employee Health Clinician is responsible for assisting the Chief, VA Police in determining a staff member's eligibility for issuance of a VA handicap placard for acute or episodic illnesses requiring short-term parking needs.

e. All staff members are responsible for compliance with this policy and notifying the VA Police Service of all incidences of lost, stolen or damaged permits.

7. REFERENCES

VA Handbook 0730

8. RESCISSIONS

Policy Memorandum 07B-03, Registration of Privately Owned Vehicles, dated August 1, 2009.

VINCENT NG

Medical Center Director

Attachments: None

DISTRIBUTION: D

Appendix I

ENVIROMED SERVICES, INC.

Asbestos Inspection
for
Scattered Sites
VA Healthcare
830 Chalkstone Avenue
Providence, Rhode Island

Prepared for:

Dewberry-Goodkind, Inc.
Architects/Engineers
280 Summer Street
Boston, MA 02210

June 28, 2010

EnviroMed Project # IH-10-054

470 Murdock Ave., Meriden, CT 06450
(203) 238-4846• facsimile (203) 238-4243

TABLE OF CONTENTS

I. PROJECT NARRATIVE

Overview

On June 28, 2011 state licensed asbestos inspectors from EnviroMed Services performed an asbestos inspection at scattered sites at the VA Hospital located in Providence, Rhode Island. The asbestos inspection was performed in anticipation of the installation of a new underground steam distribution system that would enter buildings at the Hospital at several scattered locations.

Summary of Results

A total of eighteen (18) bulk samples were collected at the site. The bulk samples were analyzed by EnviroMed Services, Inc., an accredited laboratory (NVLAP # 200858-0) for asbestos content using Polarized Light Microscopy (PLM).

Building 1 - Crawlspace

The Building 1 Crawlspace was inspected for asbestos at 3 locations where new steam piping would enter the building and connect to existing piping. The existing piping was observed to be insulated with non-asbestos fiberglass insulation. A white mastic on the ends of the fiberglass pipe insulation was sampled and no asbestos was detected in this material. The ceiling, walls, and floor of the Building 1 Crawlspace are bare concrete.

Building 1 – Exterior Foundation

The Building 1 Exterior Foundation was inspected for asbestos at 3 locations where new steam piping would enter the building and connect to existing piping. The Building 1 foundation was observed to be coated with a black waterproofing mastic below grade. The waterproofing mastic was found to be asbestos-containing.

Building 5 – Exterior Foundation

The Building 5 Exterior Foundation was inspected for asbestos at 1 location where new steam piping would enter the building and connect to existing piping. The Building 5 foundation was observed to be coated with a black waterproofing mastic below grade. The waterproofing mastic was found not to be asbestos-containing.

Building 9 - Crawlspace

The Building 9 Crawlspace was inspected for asbestos at 1 location where new steam piping would enter the building and connect to existing piping. The existing piping was observed to be insulated with non-asbestos fiberglass insulation. A white mastic on the ends of the fiberglass pipe insulation was sampled and no asbestos was detected in this material. One large pipe fitting with mudded fitting insulation was

observed and sampled at the inspection area. No asbestos was detected in the mudded fitting insulation. Asbestos-containing pipe insulation debris was observed on the dirt floor of the Building 9 crawlspace.

Building 9 – Exterior Foundation

The Building 9 Exterior Foundation was inspected for asbestos at 1 location where new steam piping would enter the building and connect to existing piping. The Building 9 foundation was observed to be coated with a black waterproofing mastic below grade. The waterproofing mastic was found to be asbestos-containing.

Building 10 – Boiler Room

The Building 10 Boiler Room was inspected for asbestos at 1 location where new steam piping would enter the building and connect to existing piping. The existing piping was observed to be insulated with asbestos-containing pipe and fitting insulation.

Building 10 – Exterior Foundation

The Building 10 Exterior Foundation was inspected for asbestos at 1 location where new steam piping would enter the building and connect to existing piping. The Building 9 foundation was observed to be coated with a white waterproofing paint. The waterproofing paint was found not to be asbestos-containing.

Man Hole #4

Man Hole #4 was inspected for asbestos. The piping in Manhole #4 was found to be insulated with asbestos-containing pipe and fitting insulation.

Man Hole #12

Man Hole #12 was inspected for asbestos. The piping in Manhole #12 was found to be insulated with asbestos-containing pipe and fitting insulation.

Building 14 - Crawlspace

The Building 14 Crawlspace was inspected for asbestos at 1 location where new steam piping would enter the building and connect to existing piping. The existing piping was observed to be insulated with non-asbestos fiberglass insulation. A white mastic on the ends of the fiberglass pipe insulation was sampled and no asbestos was detected in this material. A spray fireproofing material was observed on the Building 14 Crawlspace. No asbestos was detected in a sample taken of the fireproofing material.

Building 14 – Exterior Foundation

The Building 14 Exterior Foundation was inspected for asbestos at 1 location where new steam piping would enter the building and connect to existing piping. The Building 14 foundation was observed to be

coated with a black waterproofing mastic below grade. The waterproofing mastic was found not to be asbestos-containing.

Section II presents the complete list of analytical results for samples collected.

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II. SAMPLE LOG AND RESULTS TABLE

Sample Number	Location	Material Sampled	Percent Asbestos	Date Sampled
1-1	Building 1 - Crawlspace	White Mastic on Yellow Fiberglass Pipe Insulation	NAD	06-28-2011
1-2	Building 1 - Crawlspace	White Mastic on Yellow Fiberglass Pipe Insulation	NAD	06-28-2011
1-3	Building 1 – Exterior Foundation	Black Foundation Waterproofing	NAD	06-28-2011
1-4	Building 1 – Exterior Foundation	Black Foundation Waterproofing	2%	06-28-2011
1-5	Building 1 – Exterior Foundation	Black Foundation Waterproofing	2%	06-28-2011
5-1	Building 5 – Exterior Foundation	Black Foundation Waterproofing	NAD	06-28-2011
3-1	Building 3 – Exterior Foundation	Black Foundation Waterproofing	2%	06-28-2011
2-1	Building 2 – Exterior Foundation	Black Foundation Waterproofing	2%	06-28-2011
9-1	Building 9 - Crawlspace	Mudded Pipe Fitting Insulation	NAD	06-28-2011
9-2	Building 9 - Crawlspace	White Mastic on Yellow Fiberglass Pipe Insulation	NAD	06-28-2011
9-3	Building 9 – Exterior Foundation	Black Foundation Waterproofing	3%	06-28-2011
10-1	Building 10 – Boiler Room	Magnesia Pipe Insulation	NAD	06-28-2011
10-2	Building 10 – Exterior Foundation	White Foundation Paint	NAD	06-28-2011
MH4-1	Man Hole #4	Pipe Insulation	25%	06-28-2011
MH12-1	Man Hole #12	Pipe Insulation	30%	06-28-2011
14-1	Building 14 - Crawlspace	Spray-On Fireproofing	NAD	06-28-2011
14-2	Building 14 - Crawlspace	White Mastic on Yellow Fiberglass Pipe Insulation	NAD	06-28-2011
14-3	Building 14 – Exterior Foundation	Black Foundation Waterproofing	NAD	06-28-2011

NAD = No Asbestos Detected

ENVIROMED SERVICES, INC.

Asbestos Inspection
for
VA Healthcare- Building 2
830 Chalkstone Avenue
Providence, Rhode Island

Prepared for:

Dewberry-Goodkind, Inc.
Architects/Engineers
280 Summer Street
Boston, MA 02210

April 14, 2010

EnviroMed Project # IH-10-054

470 Murdock Ave., Meriden, CT 06450
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I. PROJECT NARRATIVE

Overview

On April 11, 2011 a state licensed inspector from EnviroMed Services, Dominick Fiore (license # ACC-0859), with the assistance of Gene Berube performed an asbestos inspection in Building #2 at the VA Hospital located in Providence, Rhode Island. The inspection was conducted in preparation for a heating system renovation in the building.

Summary of Results

A total of one hundred and one (101) bulk samples were collected. The bulk samples were analyzed by EnviroMed Services, Inc., an accredited laboratory (NVLAP # 200858-0) for asbestos content using Polarized Light Microscopy (PLM).

The following asbestos-containing materials were found in Building #2:

- Transite board behind radiators
- Wall panel glue in basement Room B4.
- 12" light brown vinyl floor tile in Room 203B
- 12" patterned vinyl floor tile in the 2nd floor suite area
- Note that asbestos-containing pipe and fitting insulation is assumed to be present inside the walls of the building associated with the radiators.

Section II presents the complete list of analytical results for samples collected.

II. SAMPLE LOG AND RESULTS TABLE

Sample Number	Location	Material Sampled	Percent & Type of Asbestos	Date Sampled
1	Room 104	Transite cement panel inside radiator cover	15% Chrysotile	04-11-2011
2	Room 104	Light tan linoleum floor	NAD	04-11-2011
3	Room 104	Yellow mastic under sample #2	NAD	04-11-2011
4	Room 104	Ceiling plaster-Skim	NAD	04-11-2011
5	Room 104	Ceiling plaster -Rough	NAD	04-11-2011
6	Room 104	1'x1' Ceiling glue daub	NAD	04-11-2011
7	Room 104	1'x1' Ceiling glue daub	NAD	04-11-2011
8	Room 104	1'x1' attached ceiling tile	NAD	04-11-2011
9	Room 104	2'x2' ceiling tile birds feet white	NAD	04-11-2011
10	Room 103	Ceiling plaster- skim	NAD	04-11-2011
11	Room 103	Ceiling plaster -rough	NAD	04-11-2011
12	Room 103	1'x1' ceiling tile attached to plaster ceiling	NAD	04-11-2011
13	Room 103	Wallboard	NAD	04-11-2011
14	Room 103	Wallboard joint compound	NAD	04-11-2011
15	Room 103	Brown Glue daub under sample #12	NAD	04-11-2011
16	Room 103	2'x2' white birds feet ceiling tile	NAD	04-11-2011
17	Room 104	Wall Plaster – skim	NAD	04-11-2011
18	Room 104	Wall Plaster – base	NAD	04-11-2011
19	Room 105	Wall Plaster – skim	NAD	04-11-2011
20	Room 105	Wall Plaster – rough	NAD	04-11-2011
21	Room 105	Light brown floor linoleum	NAD	04-11-2011
22	Room 105	Yellow Adhesive behind sample #21	NAD	04-11-2011
23	Room 105	Gray floor leveler	NAD	04-11-2011
24	Room 105	Transite Panel behind radiator	10% Chrysotile	04-11-2011
25	Room 105	2'x2' white birds feet ceiling tile	NAD	04-11-2011
26	Room 106	Wall Plaster- skim	NAD	04-11-2011
27	Room 106	Wall Plaster- rough	NAD	04-11-2011
28	Room 106	Ceiling plaster -skim	NAD	04-11-2011
29	Room 106	Ceiling plaster - rough	NAD	04-11-2011
30	Room 119	Wall Plaster-skim	NAD	04-11-2011
31	Room 119	Wall Plaster-rough	NAD	04-11-2011
32	Room 119	1'x1' attached ceiling tile	NAD	04-11-2011
33	Room 119	Glue daub behind sample #3	NAD	04-11-2011
34	Room 119	2'x2' white birds feet pattern in ceiling tile	NAD	04-11-2011

Sample Number	Location	Material Sampled	Percent & Type of Asbestos	Date Sampled
35	Basement (b4)	Light brown textured spray on fire proofing	NAD	04-11-2011
36	Basement (b4)	2'x4' lay in ceiling tile worm/dot panel	NAD	04-11-2011
37	Basement (b4)	Wall panel glue	5% Chrysotile	04-11-2011
38	Basement (b4)	Wall panel glue	3% Chrysotile	04-11-2011
39	Basement (b4)	Wallboard	NAD	04-11-2011
40	Basement (b4)	Wallboard compound	NAD	04-11-2011
41	Basement (b4)	Light brown textured spray on waterproofing	NAD	04-11-2011
42	Basement (b4A)	2'x2' brown lay in ceiling tile	NAD	04-11-2011
43	Basement (b4A)	2'x2' brown lay in ceiling tile	NAD	04-11-2011
44	Basement (b5)	2'x4' worm dotted lay in ceiling tile	NAD	04-11-2011
45	Basement (b5)	Plaster ceiling-skim coat	NAD	04-11-2011
46	Basement (b5)	Plaster ceiling- rough coat	NAD	04-11-2011
47	Basement Hallway	Ceiling skim coat plaster	NAD	04-11-2011
48	Basement Hallway	Ceiling rough coat plaster	NAD	04-11-2011
49	Basement Hallway (b5)	Wallboard Joint compound	NAD	04-11-2011
50	Basement Hallway (b5)	Wonder board	NAD	04-11-2011
51	Basement Hallway (b5)	Wonder board	NAD	04-11-2011
52	Basement Hallway (b5)	Joint compound associated with wonder board	NAD	04-11-2011
53	Basement Hallway (b5)	Joint compound associated with wonder board	NAD	04-11-2011
54	Basement Hallway (b5)	Wall plaster skim coat	NAD	04-11-2011
55	Basement Hallway (b5)	wall plaster rough coat	NAD	04-11-2011
56	Basement Hallway (b1a)	2'x2' worm/dotted white lay in ceiling tile	NAD	04-11-2011
57	Basement Hallway	Hallway ceiling plaster skim	NAD	04-11-2011
58	Basement Hallway	Hallway ceiling plaster rough	NAD	04-11-2011
59	Second floor hallway	Transite Panel behind metal radiator cover	15% Chrysotile	04-11-2011
60	Second floor hallway	Wall plaster- skim	NAD	04-11-2011
61	Second floor hallway	Wall plaster-rough	NAD	04-11-2011
62	Second floor hallway	Black mastic applied to masonry	NAD	04-11-2011
63	Second floor Suite	Black mastic applied to masonry	NAD	04-11-2011
64	Second floor hallway	2'x2' worm/dotted white lay in ceiling tile	NAD	04-11-2011
65	Room 203B	2'x2' worm/dotted white lay in ceiling tile	NAD	04-11-2011
66	Second floor Suite	Wall plaster-skim	NAD	04-11-2011
67	Second floor Suite	Wall plaster- rough	NAD	04-11-2011
68	Room 206	6" brown cove base	NAD	04-11-2011
69	Room 203	6"brown cove base mastic	NAD	04-11-2011
70	Room 206	6"brown cove base	NAD	04-11-2011
71	Room 203	6"brown cove base mastic	NAD	04-11-2011
72	Second floor Bath Room	ceramic wall tile grout	NAD	04-11-2011
73	Second floor Bath Room	Ceramic wall tile grout	NAD	04-11-2011

Sample Number	Location	Material Sampled	Percent & Type of Asbestos	Date Sampled
74	Second floor Bath Room	Ceramic floor tile grout	NAD	04-12-2011
75	Second floor Bath Room	Ceramic floor tile grout	NAD	04-12-2011
76	Room 203B	Vinyl like wood floor pattern	NAD	04-12-2011
77	Room 203B	Mastic under sample#76	NAD	04-12-2011
78	Room 203B	12”x12” vinyl floor tile light brown	2% Chrysotile	04-12-2011
79	Room 203B	Vinyl floor tile mastic under sample #78	1% Chrysotile	04-12-2011
80	Second floor Suite	Vinyl like wood floor pattern	NAD	04-12-2011
81	Second floor Suite	12”x12” vinyl floor tile pattern	2% Chrysotile	04-12-2011
82	Second floor Suite	Black mastic under sample #81	NAD	04-12-2011
83	Room 115	Carpet Glue	NAD	04-12-2011
84	Room 115	Carpet Glue	NAD	04-12-2011
85	Room 115	Red Vinyl Floor tile under carpet	NAD	04-12-2011
86	Room 115	Red Vinyl Floor tile under carpet	NAD	04-12-2011
87	Room 115	Black Vinyl Floor Tile Mastic	NAD	04-12-2011
88	Room 115	Black Vinyl Floor Tile Mastic	NAD	04-12-2011
89	Men Bathroom 112	Wall Tile grout ceramic	NAD	04-12-2011
90	Women Bathroom 113	Wall Tile grout ceramic	NAD	04-12-2011
91	Women Bathroom 113	Floor Tile ceramic grout	NAD	04-12-2011
92	Men Bathroom 112	Floor Tile ceramic grout	NAD	04-12-2011
93	Room 100	12”x12” light tan vinyl floor tile with white specks	NAD	04-12-2011
94	Room 100	Gray floor leveler	NAD	04-12-2011
95	Room 100	Yellow floor tile mastic	NAD	04-12-2011
96	First Floor waiting area -101	Gray floor leveler	NAD	04-12-2011
97	First Floor waiting area -101	12’x12’ light tan Vinyl floor tile	NAD	04-12-2011
98	First Floor waiting area -101	Yellow Floor Tile Mastic	NAD	04-12-2011
99	First Floor waiting area -101	6” tan cove base	NAD	04-12-2011
100	First Floor waiting area -101	Tan cove base mastic	NAD	04-12-2011
101	First Floor waiting area -101	Gray floor leveler	NAD	04-12-2011
102	First Floor waiting area -101	Tan cove base mastic	NAD	04-12-2011

NAD = No Asbestos Detected

ENVIROMED SERVICES, INC.

Asbestos Inspection
for
VA Healthcare- Building 3
830 Chalkstone Avenue
Providence, Rhode Island

Prepared for:

Dewberry-Goodkind, Inc.
Architects/Engineers
280 Summer Street
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April 14, 2010

EnviroMed Project # IH-10-054

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I. PROJECT NARRATIVE

Overview

On April 12, 2011 a state licensed inspector from EnviroMed Services, Dominick Fiore (license # ACC-0859), with the assistance of Gene Berube performed an asbestos inspection in Building #3 at the VA Hospital located in Providence, Rhode Island. The inspection was conducted in preparation for a heating system renovation in the building.

Summary of Results

A total of seventy-four (74) bulk samples were collected including. The bulk samples were analyzed by EnviroMed Services, Inc., an accredited laboratory (NVLAP # 200858-0) for asbestos content using Polarized Light Microscopy (PLM).

The following asbestos-containing materials were found in Building #3:

- Transite board behind radiators
- Note that asbestos-containing pipe and fitting insulation is assumed to be present inside the walls of the building associated with the radiators.

Section II presents the complete list of analytical results for samples collected.

II. SAMPLE LOG AND RESULTS TABLE

Sample Number	Location	Material Sampled	Percent Asbestos	Date Sampled
1	Second Floor Room 205	Vinyl Floor Wood Pattern	NAD	04-12-2011
2	Second Floor Room 205	Adhesive behind sample #1	NAD	04-12-2011
3	Second Floor Room 205	Wall Plaster-Skim	NAD	04-12-2011
4	Second Floor Room 205	Wall Plaster- Rough	NAD	04-12-2011
5	Second Floor Room 205	Ceiling Plaster Rough	NAD	04-12-2011
6	Second Floor Room 205	Ceiling Plaster-Skim	NAD	04-12-2011
7	Second Floor Room 205	2”x2” dotted worm pattern ceiling tile	NAD	04-12-2011
8	Second Floor Room 206	Ceiling plaster-Skim	NAD	04-12-2011
9	Second Floor Room 206	Ceiling plaster –rough	NAD	04-12-2011
10	Second Floor Room 207	Wall plaster- skim	NAD	04-12-2011
11	Second Floor Room 207	Wall plaster rough	NAD	04-12-2011
12	Second Floor Bathroom 208	Transite Panel behind radiator panel	20% Chrysotile	04-12-2011
13	Second Floor Bathroom 208	6” Brown Cove Base	NAD	04-12-2011
14	Second Floor Bathroom 208	Gray Floor Leveler	NAD	04-12-2011
15	Second Floor Bathroom 208	12”x12” Brown Vinyl Floor Tile	NAD	04-12-2011
16	Second Floor Bathroom 208	Vinyl Floor	NAD	04-12-2011
17	Second Floor Bathroom 208	Vinyl Floor Tile Mastic Under sample #15	NAD	04-12-2011
18	Second Floor Bathroom 208	12”x12” Brown Vinyl Floor Tile	NAD	04-12-2011
19	Second Floor Bathroom 208	Cove Base mastic	NAD	04-12-2011
20	Second Floor Bathroom 208	Ceramic Wall Tile Grout	NAD	04-12-2011
21	Second Floor Bathroom 208	Ceramic Wall Tile Grout	NAD	04-12-2011
22	Second Floor Bathroom 209	12”x12” Vinyl Floor Tile	NAD	04-12-2011
23	Bathroom 209	Mastic Under Sample #22	NAD	04-12-2011
24	Bathroom 209	Gray Floor Leveling Compound	NAD	04-12-2011
25	Bathroom 208	Ceramic wall tile grout	NAD	04-12-2011
26	Room 204	Wallboard joint compound	NAD	04-12-2011
27	Room 204	Wallboard	NAD	04-12-2011
28	Room 211	Wood Pattern Vinyl Flooring	NAD	04-12-2011
29	Room 211	Mastic Under sample #28	NAD	04-12-2011
30	Room 203	Ceiling Plaster-Skim	NAD	04-12-2011
31	Room 203	Ceiling plaster-Rough	NAD	04-12-2011
32	Room 210	Wall Plaster-Skim	NAD	04-12-2011
33	Room 210	Wall Plaster Rough	NAD	04-12-2011
34	First Floor Entry Way	Vinyl Floor Tile Mastic on concrete (yellow)	NAD	04-12-2011
35	First Floor Entry Way	Vinyl Floor Tile Mastic On concrete (yellow)	NAD	04-12-2011
36	First Floor Entry Way	Carpet Mastic	NAD	04-12-2011
37	First Floor Entry Way	Carpet Mastic	NAD	04-12-2011
38	First Floor Entry Way	12”x12” Cream Vinyl Floor	NAD	04-12-2011

Sample Number	Location	Material Sampled	Percent Asbestos	Date Sampled
		Tile under Carpet		
39	First Floor Entry Way	12”x12” Cream Vinyl Floor Tile Under Carpet	NAD	04-12-2011
40	First Floor Entry Way	6” black Cove Base	NAD	04-12-2011
41	First Floor Entry Way	Cove Base Mastic Under Sample 40	NAD	04-12-2011
42	First Floor	12”x12” Vinyl Floor Tile white with gray specks	NAD	04-12-2011
43	First Floor	12”x12” Vinyl Floor Tile white with gray specks	NAD	04-12-2011
44	First Floor Bathroom 105	Vinyl Floor Tile mastic under sample #42	NAD	04-12-2011
45	First Floor Bathroom 105	Vinyl Floor Tile mastic under sample #42	NAD	04-12-2011
46	First Floor Bathroom 105	Gray Floor leveler	NAD	04-12-2011
47	First Floor Bathroom 105	Gray Floor leveler	NAD	04-12-2011
48	First Floor Bathroom 105	Black Mastic Under Floor Leveler	NAD	04-12-2011
49	First Floor Bathroom 105	Black Mastic Under Floor Leveler	NAD	04-12-2011
50	First Floor Bathroom 105	Ceramic Wall Tile Grout	NAD	04-12-2011
51	First Floor Bathroom 105	Ceramic Floor Grout under sample #42 and #43	NAD	04-12-2011
52	First Floor Bathroom 105	Ceramic Floor Grout under sample #42 and #43	NAD	04-12-2011
53	First Floor Bathroom 105	Ceramic Floor Cement Setting	NAD	04-12-2011
54	First Floor Bathroom 105	Ceramic Floor Cement Setting	NAD	04-12-2011
55	Hallway	Wood pattern vinyl flooring	NAD	04-12-2011
56	Hallway	Mastic under sample #55	NAD	04-12-2011
57	First Floor Room 107	Wall Plaster-Skim	NAD	04-12-2011
58	First Floor Room 107	Wall Plaster –Base	NAD	04-12-2011
59	First Floor Room 108	Wallboard	NAD	04-12-2011
60	First Floor Room 108	Wallboard Joint Compound	NAD	04-12-2011
61	First Floor Room 108	Ceiling plaster-Skim	NAD	04-12-2011
62	First Floor Room 108	Ceiling plaster-Base	NAD	04-12-2011
63	First Floor Room 109	Transite Panel behind radiator cover	5% Chrysotile	04-12-2011
64	First Floor Rear Entry Way	12”x12” Blue Vinyl Floor Tile	NAD	04-12-2011
65	First Floor Rear Entry Way	12”x12” Blue Vinyl Floor Tile	NAD	04-12-2011
66	First Floor Rear Entry Way	Yellow Mastic Under Sample #64	NAD	04-12-2011
67	First Floor Rear Entry Way	Yellow Mastic Under Sample #65	NAD	04-12-2011
68	First Floor Room 102	12”x12” Vinyl White With gray specks	NAD	04-12-2011
69	First Floor Room 102	Black Mastic Under S	NAD	04-12-2011
70	Basement	Caulking sealer applied to fiberglass	NAD	04-12-2011
71	Basement	Caulking sealer applied to fiberglass	NAD	04-12-2011
72	Basement	spray on fireproofing on	NAD	04-12-2011

Sample Number	Location	Material Sampled	Percent Asbestos	Date Sampled
		concrete deck		
73	Basement	spray on fireproofing on concrete deck	NAD	04-12-2011
74	Basement	spray on fireproofing on concrete deck	NAD	04-12-2011

NAD = No Asbestos Detected

ENVIROMED SERVICES, INC.

Asbestos Inspection
for
VA Healthcare- Building 5
830 Chalkstone Avenue
Providence, Rhode Island

Prepared for:

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April 14, 2010

EnviroMed Project # IH-10-054

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I. PROJECT NARRATIVE

Overview

On April 11, 2011 state licensed inspector from EnviroMed Services, Dominick Fiore (license # ACC-0859), performed an asbestos inspection in Building #5 at the VA Hospital located in Providence, Rhode Island. The asbestos inspection was performed in anticipation of heating system renovations in Building 5. The roof and exterior of the building were not inspected as part of the inspection.

Summary of Results

A total of fifty-four (54) bulk samples were collected in the building. The bulk samples were analyzed by EnviroMed Services, Inc., an accredited laboratory (NVLAP # 200858-0) for asbestos content using Polarized Light Microscopy (PLM).

No asbestos-containing materials were detected in Building 5. Note that asbestos-containing pipe and fitting insulation is assumed to be present inside the walls of the building associated with the radiators and above the fixed ceilings in the basements.

Section II presents the complete list of analytical results for samples collected.

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II. SAMPLE LOG AND RESULTS TABLE

Sample Number	Location	Material Sampled	Percent Asbestos	Date Sampled
1	Room 201	Wall Plaster Skim	NAD	04-11-2011
2	Room 201	Wall Plaster Base	NAD	04-11-2011
3	Room 201	Ceiling Plaster Skim	NAD	04-11-2011
4	Room 201	Ceiling Plaster Base	NAD	04-11-2011
5	Room 201	Heater Cover insulation board	NAD	04-11-2011
6	Room 201	Carpet	NAD	04-11-2011
7	2nd Floor Bathroom	6" Brown Cove Base	NAD	04-11-2011
8	2nd Floor Bathroom	Glue under Cove Base	NAD	04-11-2011
9	2nd Floor Bathroom	12" Vinyl Floor Tile	NAD	04-11-2011
10	2nd Floor Bathroom	Flooring Mastic	NAD	04-11-2011
11	2nd Floor Bathroom	Gray Leveling Compound	NAD	04-11-2011
12	Room 202	Ceiling Plaster Skim	NAD	04-11-2011
13	Room 202	Ceiling Plaster Base	NAD	04-11-2011
14	Room 202	Wall Plaster Skim	NAD	04-11-2011
15	Room 202	Wall Plaster Base	NAD	04-11-2011
16	Room 202	Carpet Glue	NAD	04-11-2011
17	Room 202	Heater Cover Insulation Board	NAD	04-11-2011
18	2nd Floor Bathroom	Wall Tile Grout	NAD	04-11-2011
19	2nd Floor Bathroom	Heater Cover Fiber Board	NAD	04-11-2011
20	2nd Floor Bathroom	12" Vinyl Floor Tile	NAD	04-11-2011
21	2nd Floor Bathroom	Flooring Mastic	NAD	04-11-2011
22	2nd Floor Bathroom	Grey Leveling Compound	NAD	04-11-2011
23	2nd Floor Bathroom	Wall Tile Grout	NAD	04-11-2011
24	Room 204	Carpet Glue	NAD	04-11-2011
25	Room 204	Wall Plaster Skim	NAD	04-11-2011
26	Room 204	Wall Plaster Base	NAD	04-11-2011
27	Room 204	Ceiling Plaster Skim	NAD	04-11-2011
28	Room 204	Ceiling Plaster Base	NAD	04-11-2011
29	Room 205	Carpet Glue	NAD	04-11-2011
30	Room 205	Heater Cover Fiber Board	NAD	04-11-2011
31	Room 205	Wall Plaster Skim	NAD	04-11-2011
32	Room 205	Wall Plaster Base	NAD	04-11-2011
33	Room 205	Ceiling Plaster Skim	NAD	04-11-2011
34	Room 205	Ceiling Plaster Base	NAD	04-11-2011
35	Room 101	Heater Cover Fiber Board	NAD	04-11-2011
36	Room 101	12" White Vinyl Floor Tile	NAD	04-11-2011
37	Room 101	Flooring Mastic	NAD	04-11-2011
38	Room 101	Wall Plaster Skim	NAD	04-11-2011
39	Room 101	Wall Plaster Base	NAD	04-11-2011
40	Room 101	Ceiling Plaster Skim	NAD	04-11-2011
41	Room 101	Ceiling Plaster Base	NAD	04-11-2011
42	1ST Floor Hallway	Wall Plaster Skim	NAD	04-11-2011
43	1ST Floor Hallway	Wall Plaster Base	NAD	04-11-2011
44	1ST Floor Hallway	Ceiling Plaster Skim	NAD	04-11-2011
45	1ST Floor Hallway	Ceiling Plaster Base	NAD	04-11-2011

Sample Number	Location	Material Sampled	Percent Asbestos	Date Sampled
46	Room 103	Carpet Glue	NAD	04-11-2011
47	Room 103	Wall Plaster Skim	NAD	04-11-2011
48	Room 103	Wall Plaster Base	NAD	04-11-2011
49	Room 102	Heater Cover Fiber Board	NAD	04-11-2011
50	Room 102	Wall Plaster Skim	NAD	04-11-2011
51	Room 102	Wall Plaster Base	NAD	04-11-2011
52	Room 102	Ceiling Plaster Skim	NAD	04-11-2011
53	Room 102	Ceiling Plaster Base	NAD	04-11-2011
54	Room 102	Ceiling Fiber Board	NAD	04-11-2011
55	Room 102	Ceiling Fiber Board	NAD	04-11-2011
56	Room 102	Susp. Ceiling Tile 2' x 2'	NAD	04-11-2011
57	Room 102	Fixed Ceiling Tile 2' x 2'	NAD	04-11-2011

NAD = No Asbestos Detected

Appendix J

ENVIROMED SERVICES, INC.

Lead Inspection Report

for

Buildings 2, 3, & 5
VA Medical Center
Providence, RI

prepared for:

Dewberry-Goodkind, Inc.
Architects/Engineers
280 Summer Street
Boston, MA 02210

April, 2011

EnviroMed Project # IH-11-054

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Section **Page**

I. INTRODUCTION

On April 11 and 12, 2011, EnviroMed Services performed a lead inspection using a RMD LPA-1 XRF at Building 2, 3 and 5 at the VA Medical Center located in Providence, Rhode Island. Brenda Eastman (Lead Inspector, Rhode Island license #ELI-0088) performed the inspection. The State of Rhode Island Lead Regulations deem paint to be a "toxic level" (actionable) when XRF reading is equal to or greater than 1.00 milligrams per centimeter squared (mg/cm^2), or 0.5% by weight in dry form by flame atomic absorption spectrophotometer.

Summary of Results

X-ray Fluorescence (XRF) Results

Actionable (toxic levels) of lead (greater than or equal to 1.0 mg/cm^2) were found on building components.

The following components had readings at actionable (toxic) levels:

- Walls
- Ceilings
- Kick Plate
- Pipe Drain
- Cove Base
- I-Beam
- Radiator
- Base Board
- Staircase Components

Section II includes the following Lead Inspection Report:

- All XRF data listed sequentially

II. LEAD INSPECTION REPORT

READING NUMBER	ROOM	COMPONENT	SUBSTRATE	COLOR	SIDE	FLOOR	SITE	XRF-RMD READING	UNITS
1	Calibration	-	-	-	-	-	-	0.7	mg/cm²
2	Calibration	-	-	-	-	-	-	0.7	mg/cm²
3	Calibration	-	-	-	-	-	-	0.7	mg/cm²
4	Room 201	Ceiling	Plaster	White	A	Second	VA Providence Bldg 5	-0.1	mg/cm²
5	Room 201	Wall	Plaster	Green	A	Second	VA Providence Bldg 5	1.1	mg/cm²
6	Room 201	Radiator	Metal	Grey	A	Second	VA Providence Bldg 5	1.1	mg/cm²
7	Room 201	Radiator Cover	Metal	Grey	A	Second	VA Providence Bldg 5	-0.2	mg/cm²
8	Room 201	Baseboard	Wood	White	A	Second	VA Providence Bldg 5	-0.1	mg/cm²
9	Room 201	Floor	Carpet	Blue	A	Second	VA Providence Bldg 5	0	mg/cm²
10	Room 206	Ceiling	Plaster	White	A	Second	VA Providence Bldg 5	-0.1	mg/cm²
11	Room 206	Wall	Plaster	Green	A	Second	VA Providence Bldg 5	2.3	mg/cm²
12	Room 206	Wall	Cermic	Green	A	Second	VA Providence Bldg 5	6.4	mg/cm²
13	Room 206	VOID	VOID	VOID	VOID	VOID	VA Providence Bldg 5	VOID	mg/cm²
14	Room 206	Radiator	Metal	Grey	A	Second	VA Providence Bldg 5	0.7	mg/cm²
15	Room 206	Radiator Cover	Metal	Green	A	Second	VA Providence Bldg 5	0	mg/cm²
16	Room 206	Floor	Vinyl	Mottled Beige	A	Second	VA Providence Bldg 5	-0.1	mg/cm²
17	Room 206	Cove Base	Vinyl	Brown	A	Second	VA Providence Bldg 5	-0.4	mg/cm²
18	Room 205	Ceiling	Plaster	White	A	Second	VA Providence Bldg 5	-0.2	mg/cm²
19	Room 205	Wall	Plaster	Green	A	Second	VA Providence Bldg 5	-0.1	mg/cm²
20	Room 205	Baseboard	Wood	White	A	Second	VA Providence Bldg 5	0	mg/cm²
21	Room 205	Radiator	Metal	Grey	A	Second	VA Providence Bldg 5	-0.2	mg/cm²
22	Room 205	Radiator Cover	Metal	Green	A	Second	VA Providence Bldg 5	0.2	mg/cm²
23	Room 205	Floor	Carpet	Blue	C	Second	VA Providence Bldg 5	-0.2	mg/cm²
24	Room 202	Ceiling	Plaster	White	C	Second	VA Providence Bldg 5	-0.3	mg/cm²
25	Room 202	Wall	Plaster	Green	C	Second	VA Providence Bldg 5	0.1	mg/cm²
26	Room 202	Radiator	Metal	Grey	C	Second	VA Providence Bldg 5	0.3	mg/cm²

READING NUMBER	ROOM	COMPONENT	SUBSTRATE	COLOR	SIDE	FLOOR	SITE	XRF-RMD READING	UNITS
27	Room 202	Radiator Cover	Metal	Green	C	Second	VA Providence Bldg 5	0	mg/cm²
28	Room 202	Baseboard	Wood	White	C	Second	VA Providence Bldg 5	-0.4	mg/cm²
29	Room 202	Floor	Carpet	Blue	C	Second	VA Providence Bldg 5	-0.2	mg/cm²
30	Room 203	Ceiling	Plaster	White	C	Second	VA Providence Bldg 5	0	mg/cm²
31	Room 203	Wall	Plaster	Green	C	Second	VA Providence Bldg 5	0	mg/cm²
32	Room 203	Wall	Ceramic	Green	C	Second	VA Providence Bldg 5	7.2	mg/cm²
33	Room 203	Radiator	Metal	Grey	C	Second	VA Providence Bldg 5	0.7	mg/cm²
34	Room 203	Radiator Cover	Metal	Green	C	Second	VA Providence Bldg 5	-0.1	mg/cm²
35	Room 203	Cove Base	Vinyl	Brown	C	Second	VA Providence Bldg 5	-0.5	mg/cm²
36	Room 101	Floor	Vinyl	Beige	A	Second	VA Providence Bldg 5	-0.4	mg/cm²
37	Room 101	Ceiling	Plaster	White	A	First	VA Providence Bldg 5	-0.2	mg/cm²
38	Room 101	Wall	Plaster	Yellow	A	First	VA Providence Bldg 5	0	mg/cm²
39	Room 101	Baseboard	Wood	White	A	First	VA Providence Bldg 5	-0.1	mg/cm²
40	Room 101	Radiator	Metal	Grey	A	First	VA Providence Bldg 5	0.2	mg/cm²
41	Room 101	Radiator Cover	Metal	White	A	First	VA Providence Bldg 5	-0.1	mg/cm²
42	Room 101	Floor	Carpet	Blue	B	First	VA Providence Bldg 5	-0.1	mg/cm²
43	Room 102	Ceiling	Plaster	White	B	First	VA Providence Bldg 5	-0.2	mg/cm²
44	Room 102	Wall	Plaster	Yellow	B	First	VA Providence Bldg 5	-0.2	mg/cm²
45	Room 102	Baseboard	Metal	Tan	B	First	VA Providence Bldg 5	-0.1	mg/cm²
46	Room 102	Cove Base	Vinyl	Tan	B	First	VA Providence Bldg 5	-0.1	mg/cm²
47	Room 102	Floor	Carpet	Blue	B	First	VA Providence Bldg 5	0.1	mg/cm²
48	Room 103	Ceiling	Plaster	White	C	First	VA Providence Bldg 5	-0.3	mg/cm²
49	Room 103	Wall	Plaster	Yellow	C	First	VA Providence Bldg 5	0	mg/cm²
50	Room 103	Baseboard	Wood	White	C	First	VA Providence Bldg 5	0.2	mg/cm²
51	Room 103	Radiator	Metal	Grey	C	First	VA Providence Bldg 5	-0.1	mg/cm²
52	Room 103	Radiator Cover	Metal	White	C	First	VA Providence Bldg 5	0.4	mg/cm²

READING NUMBER	ROOM	COMPONENT	SUBSTRATE	COLOR	SIDE	FLOOR	SITE	XRF-RMD READING	UNITS
53	Room 103	Floor	Carpet	Blue	C	First	VA Providence Bldg 5	0.3	mg/cm²
54	Entry Hall	Ceiling	Plaster	White	B	First	VA Providence Bldg 5	-0.1	mg/cm²
55	Entry Hall	Wall	Plaster	Yellow	B	First	VA Providence Bldg 5	-0.1	mg/cm²
56	Entry Hall	Baseboard	Wood	White	B	First	VA Providence Bldg 5	0.3	mg/cm²
57	Entry Hall	Radiator Cover	Metal	Yellow	B	First	VA Providence Bldg 5	0	mg/cm²
58	Entry Hall	Radiator	Metal	Grey	B	First	VA Providence Bldg 5	-0.1	mg/cm²
59	Entry Hall	Conduit	Metal	Yellow	B	First	VA Providence Bldg 5	0.1	mg/cm²
60	Entry Hall	Threshold	Marble	Grey	B	First	VA Providence Bldg 5	-0.6	mg/cm²
61	Entry Hall	Floor	Ceramic	Red	B	First	VA Providence Bldg 5	-0.6	mg/cm²
62	Entry Hall	Floor	Carpet	Blue	C	Second	VA Providence Bldg 5	0.2	mg/cm²
63	Room 204	Vceiling	Plaster	White	C	Second	VA Providence Bldg 5	-0.1	mg/cm²
64	Room 204	Wall	Plaster	Green	C	Second	VA Providence Bldg 5	-0.2	mg/cm²
65	Room 204	Baseboard	Wood	White	C	Second	VA Providence Bldg 5	0	mg/cm²
66	Room 204	Radiator	Metal	Grey	C	Second	VA Providence Bldg 5	0.4	mg/cm²
67	Room 204	Radiator Cover	Metal	Green	C	Second	VA Providence Bldg 5	-0.1	mg/cm²
68	Room 204	Floor	Carpet	Blue	A	Second	VA Providence Bldg 5	0	mg/cm²
69	Room 105	Ceiling	Plaster	White	A	First	VA Providence Bldg 5	-0.1	mg/cm²
70	Room 105	Wall	Plaster	Yellow	A	First	VA Providence Bldg 5	-0.2	mg/cm²
71	Room 105	Baseboard	Wood	Grey	A	First	VA Providence Bldg 5	-0.1	mg/cm²
72	Room 105	Radiator	Metal	Green	A	First	VA Providence Bldg 5	0.6	mg/cm²
73	Room 105	Radiator Cover	Metal	Yellow	A	First	VA Providence Bldg 5	0.1	mg/cm²
74	Room 105	Floor	Vinyl	Beige	D	First	VA Providence Bldg 5	-0.5	mg/cm²
75	Room 106	Ceiling	Wood	White	D	First	VA Providence Bldg 5	7.8	mg/cm²
76	Room 106	Ceiling Molding	Wood	White	D	First	VA Providence Bldg 5	-0.1	mg/cm²
77	Room 106	Baseboard	Metal	Beige	D	First	VA Providence Bldg 5	-0.2	mg/cm²
78	Room 106	Floor Tile	Metal	Beige	B	First	VA Providence Bldg 5	-0.5	mg/cm²

READING NUMBER	ROOM	COMPONENT	SUBSTRATE	COLOR	SIDE	FLOOR	SITE	XRF-RMD READING	UNITS
79	Room 104	Ceiling	Vinyl	White	B	First	VA Providence Bldg 5	0	mg/cm²
80	Room 104	Wall	Wall	Yellow	B	First	VA Providence Bldg 5	-0.1	mg/cm²
81	Room 104	Baseboard	Baseboard	Green	B	First	VA Providence Bldg 5	4.4	mg/cm²
82	Room 104	Cove Base	Covebase	Brown	B	First	VA Providence Bldg 5	-0.3	mg/cm²
83	Room 104	Radiator	Radiator	Grey	B	First	VA Providence Bldg 5	0.8	mg/cm²
84	Room 104	Radiator	Radiator	Yellow	B	First	VA Providence Bldg 5	-0.1	mg/cm²
85	Room 104	Floor	Floor	Beige	B	Basement	VA Providence Bldg 5	-0.2	mg/cm²
86	Basement Stair	Ceiling	Ceiling	White	B	Basement	VA Providence Bldg 5	-0.1	mg/cm²
87	Basement Stair	Wall	Wall	White	B	Basement	VA Providence Bldg 5	-0.3	mg/cm²
88	Basement Stair	Baseboard	Wood	White	B	Basement	VA Providence Bldg 5	0	mg/cm²
89	Basement Stair	I- Beam	Metal	White	D	Basement	VA Providence Bldg 5	2.1	mg/cm²
90	Basement Stair	Wall	Concrete	White	D	Basement	VA Providence Bldg 5	-0.2	mg/cm²
91	Basement Stair	Rail Cap	Wood	Grey	B	Basement	VA Providence Bldg 5	-0.1	mg/cm²
92	Basement Stair	Baluster	Wood	Grey	B	Basement	VA Providence Bldg 5	0	mg/cm²
93	Basement Stair	Newel Post	Wood	Grey	B	Basement	VA Providence Bldg 5	-0.2	mg/cm²
94	Basement Stair	Hand Rail	Wood	Varnish	B	Basement	VA Providence Bldg 5	-0.1	mg/cm²
95	Basement Stair	Stair Tread	Wood	Grey	D	Basement	VA Providence Bldg 5	-0.1	mg/cm²
96	Basement Stair	Stringer	Wood	Grey	D	Basement	VA Providence Bldg 5	0	mg/cm²
97	Basement Stair	Threshold	Wood	Grey	C	Basement	VA Providence Bldg 5	-0.1	mg/cm²
98	Basement Stair	Kick Plate	Wood	Grey	C	Basement	VA Providence Bldg 5	>9.9	mg/cm²
99	Basement 01	Ceiling	Pin Board	White	B	Basement	VA Providence Bldg 5	-0.1	mg/cm²
100	Basement 01	Wall	Concrete	White	A	Basement	VA Providence Bldg 5	-0.1	mg/cm²
101	Basement 01	Wall	Wood	White	B	Basement	VA Providence Bldg 5	0.4	mg/cm²
102	Basement 01	Wall	Brick	White	D	Basement	VA Providence Bldg 5	-0.1	mg/cm²
103	Basement 01	Wall	Concrete	White	C	Basement	VA Providence Bldg 5	-0.2	mg/cm²
104	Basement 01	Floor	Concrete	Grey	A	Basement	VA Providence Bldg 5	-0.2	mg/cm²

READING NUMBER	ROOM	COMPONENT	SUBSTRATE	COLOR	SIDE	FLOOR	SITE	XRF-RMD READING	UNITS
105	Basement 01	Wall Hatch	Metal	White	D	Basement	VA Providence Bldg 5	-0.4	mg/cm²
106	Basement 01	Conduit	Metal	White	C	Basement	VA Providence Bldg 5	0	mg/cm²
107	Basement 01	Sprinkler Conduit	Metal	Red	B	Basement	VA Providence Bldg 5	0.4	mg/cm²
108	Basement 01	I- Beam	Metal	White	B	Basement	VA Providence Bldg 5	1.1	mg/cm²
109	Basement 02	Ceiling	Pin Board	White	B	Basement	VA Providence Bldg 5	-0.1	mg/cm²
110	Basement 02	Wall	Concrete	White	A	Basement	VA Providence Bldg 5	-0.2	mg/cm²
111	Basement 02	Wall	Pin Board	White	B	Basement	VA Providence Bldg 5	0	mg/cm²
112	Basement 02	Wall	Wood	White	C	Basement	VA Providence Bldg 5	-0.6	mg/cm²
113	Basement 02	Wall	Wood	White	D	Basement	VA Providence Bldg 5	-0.2	mg/cm²
114	Basement 02	Floor	Concrete	Grey	C	Basement	VA Providence Bldg 5	-0.1	mg/cm²
115	Basement 02	I- Beam	Metal	White	D	Basement	VA Providence Bldg 5	1.8	mg/cm²
116	Basement 02	Access Hatch	Metal	White	A	Basement	VA Providence Bldg 5	-0.1	mg/cm²
117	Basement 02	Drain Pipe	Metal	White	A	Basement	VA Providence Bldg 5	6.4	mg/cm²
118	Basement 02	Sprinkler	Metal	Red	A	Basement	VA Providence Bldg 5	-0.3	mg/cm²
119	Basement 02	Cleat	Metal	White	A	Basement	VA Providence Bldg 5	-0.1	mg/cm²
120	Basement 02	Conduit	Metal	White	A	Basement	VA Providence Bldg 5	-0.1	mg/cm²
121	Basement 02	Pipe 3"	Metal	White	B	Basement	VA Providence Bldg 5	6	mg/cm²
122	Basement 02	Sink	Porcelein	Grey	B	Basement	VA Providence Bldg 5	-0.3	mg/cm²
123	Room 104	Ceiling	Plaster	White	C	First	VA Providence Bldg 2	-0.3	mg/cm²
124	Room 104	Wall	Plaster	Blue	C	First	VA Providence Bldg 2	-0.2	mg/cm²
125	Room 104	Floor	Linoleum	Tan	C	First	VA Providence Bldg 2	-0.2	mg/cm²
126	Room 104	Vent Pipe	Metal	Blue	C	First	VA Providence Bldg 2	-0.3	mg/cm²
127	Room 104	Radiator	Metal	Grey	C	First	VA Providence Bldg 2	0.7	mg/cm²
128	Room 103	Ceiling	Plaster	White	D	First	VA Providence Bldg 2	-0.1	mg/cm²
129	Room 103	Wall	Plaster	Blue	D	First	VA Providence Bldg 2	-0.1	mg/cm²
130	Room 103	Floor	Linoleum	Tan	D	First	VA Providence Bldg 2	-0.1	mg/cm²

READING NUMBER	ROOM	COMPONENT	SUBSTRATE	COLOR	SIDE	FLOOR	SITE	XRF-RMD READING	UNITS
131	Room 103	Wall	Wall Board	Tan	A	First	VA Providence Bldg 2	0.3	mg/cm²
132	Room 103	Conduit	Metal	Blue	D	First	VA Providence Bldg 2	0	mg/cm²
133	Room 105	Wall	Plaster	Blue	C	First	VA Providence Bldg 2	0	mg/cm²
134	Room 105	Radiator Vent	Metal	Blue	C	First	VA Providence Bldg 2	-0.3	mg/cm²
135	Room 105	Radiator	Metal	Grey	C	First	VA Providence Bldg 2	1.1	mg/cm²
136	Room 105	Floor	Linoleum	Tan	C	First	VA Providence Bldg 2	0.2	mg/cm²
137	Room 106	Wall	Plaster	Blue	C	First	VA Providence Bldg 2	-0.1	mg/cm²
138	Room 106	Ceiling	Plaster	White	C	First	VA Providence Bldg 2	0	mg/cm²
139	Room 106	Radiator Vent	Metal	Blue	C	First	VA Providence Bldg 2	-0.3	mg/cm²
140	Room 106	Radiator	Metal	Grey	C	First	VA Providence Bldg 2	1.1	mg/cm²
141	Room 106	Floor	Linoleum	Tan	C	First	VA Providence Bldg 2	-0.2	mg/cm²
142	Room 106	Conduit	Metal	Blue	C	First	VA Providence Bldg 2	0	mg/cm²
143	Room 119	Ceiling	Plaster	White	C	First	VA Providence Bldg 2	0	mg/cm²
144	Room 119	Ceiling Crown	Wood	Blue	A	First	VA Providence Bldg 2	-0.1	mg/cm²
145	Room 119	Wall	Plaster	Blue	A	First	VA Providence Bldg 2	0.1	mg/cm²
146	Room 119	Radiator Vent	Metal	Blue	A	First	VA Providence Bldg 2	-0.1	mg/cm²
147	Room 119	Radiator	Metal	Grey	A	First	VA Providence Bldg 2	-0.2	mg/cm²
148	Room 119	Floor	Linoleum	Tan	A	First	VA Providence Bldg 2	-0.3	mg/cm²
149	Room 119	Conduit	Metal	Blue	A	First	VA Providence Bldg 2	0.3	mg/cm²
150	Room 118	Ceiling	Plaster	White	A	First	VA Providence Bldg 2	0.1	mg/cm²
151	Room 118	Wall	Plaster	Blue	A	First	VA Providence Bldg 2	0.1	mg/cm²
152	Room 118	Radiator Vent	Metal	Blue	A	First	VA Providence Bldg 2	-0.1	mg/cm²
153	Room 118	Radiator	Metal	Grey	A	First	VA Providence Bldg 2	-0.2	mg/cm²
154	Room 118	Floor	Linoleum	Tan	A	First	VA Providence Bldg 2	-0.1	mg/cm²
155	Room 117	Ceiling	Plaster	White	A	First	VA Providence Bldg 2	0	mg/cm²
156	Room 117	Ceiling Crown mold	Wood	Blue	A	First	VA Providence Bldg 2	0.1	mg/cm²

READING NUMBER	ROOM	COMPONENT	SUBSTRATE	COLOR	SIDE	FLOOR	SITE	XRF-RMD READING	UNITS
157	Room 117	Wall	Plaster	Blue	A	First	VA Providence Bldg 2	-0.3	mg/cm²
158	Room 117	Radiator Vent	Metal	Blue	A	First	VA Providence Bldg 2	-0.3	mg/cm²
159	Room 117	Radiator	Metal	Grey	A	First	VA Providence Bldg 2	-0.1	mg/cm²
160	Room 117	Conduit	Metal	Blue	A	First	VA Providence Bldg 2	0.4	mg/cm²
161	Room 117	Floor	Linoleum	Tan	A	First	VA Providence Bldg 2	-0.2	mg/cm²
162	Room 114	Ceiling	Plaster	White	C	First	VA Providence Bldg 2	-0.2	mg/cm²
163	Room 114	Wall	Wall Board	Blue	C	First	VA Providence Bldg 2	-0.1	mg/cm²
164	Room 114	Radiator vent	Metal	Blue	C	First	VA Providence Bldg 2	-0.1	mg/cm²
165	Room 114	Radiator	Metal	Grey	C	First	VA Providence Bldg 2	-0.4	mg/cm²
166	Room 114	Floor	Linoleum	Tan	A	First	VA Providence Bldg 2	-0.2	mg/cm²
167	Room 115	Ceiling	Fixed Ceiling tile	White	A	First	VA Providence Bldg 2	-0.1	mg/cm²
168	Room 115	Ceiling Trim	Wood	White	A	First	VA Providence Bldg 2	0	mg/cm²
169	Room 115	Baseboard	Metal	White	A	First	VA Providence Bldg 2	-0.1	mg/cm²
170	Room 115	Floor	Carpet	Multi	A	First	VA Providence Bldg 2	0.7	mg/cm²
171	Room 113	Wall	Wall Board	Tan	C	First	VA Providence Bldg 2	-0.2	mg/cm²
172	Room 113	Wall	Ceramic	Grey	C	First	VA Providence Bldg 2	-0.2	mg/cm²
173	Room 113	Radiator Vent	Metal	White	C	First	VA Providence Bldg 2	-0.2	mg/cm²
174	Room 113	Radiator	Metal	Purple	C	First	VA Providence Bldg 2	0.2	mg/cm²
175	Room 113	Floor	Ceramic	Grey	C	First	VA Providence Bldg 2	-0.3	mg/cm²
176	Room 112	Wall	Wall Board	Tan	C	First	VA Providence Bldg 2	0	mg/cm²
177	Room 112	Wall	Ceramic	Grey	C	First	VA Providence Bldg 2	-0.2	mg/cm²
178	Room 112	Radiator	Metal	White	C	First	VA Providence Bldg 2	0.3	mg/cm²
179	Room 112	Radiator Vent	Metal	Grey	C	First	VA Providence Bldg 2	-0.3	mg/cm²
180	Room 112	Floor	Ceramic	Grey	C	First	VA Providence Bldg 2	-0.5	mg/cm²
181	Room 101	Wall	Plaster	Blue	A	First	VA Providence Bldg 2	-0.2	mg/cm²
182	Room 101	Cove Base	Vinyl	Tan	A	First	VA Providence Bldg 2	-0.3	mg/cm²

READING NUMBER	ROOM	COMPONENT	SUBSTRATE	COLOR	SIDE	FLOOR	SITE	XRF-RMD READING	UNITS
183	Room 101	Radiator Vent	Metal	Blue	A	First	VA Providence Bldg 2	-0.4	mg/cm²
184	Room 101	Radiator	Metal	Grey	A	First	VA Providence Bldg 2	-0.1	mg/cm²
185	Room 101	Floor	Vinyl Floor Tile	Tan	A	First	VA Providence Bldg 2	-0.1	mg/cm²
186	Room 102	Ceiling	Fixed Ceiling tile	White	A	First	VA Providence Bldg 2	0	mg/cm²
187	Room 102	Wall	Plaster	Tan	A	First	VA Providence Bldg 2	-0.1	mg/cm²
188	Room 102	Cove Base	Vinyl	Tan	A	First	VA Providence Bldg 2	0.4	mg/cm²
189	Room 102	Radiator Vent	Metal	Tan	A	First	VA Providence Bldg 2	-0.2	mg/cm²
190	Room 102	Radiator	Metal	Grey	A	First	VA Providence Bldg 2	-0.3	mg/cm²
191	Room 102	Conduit	Metal	Tan	A	First	VA Providence Bldg 2	0.2	mg/cm²
192	Room 102	Floor	Vinyl Floor Tile	Tan	A	First	VA Providence Bldg 2	-0.2	mg/cm²
193	Room 102	Wall	Plaster	Tan	D	First	VA Providence Bldg 2	0.1	mg/cm²
194	Room 102	Radiator Vent	Metal	Tan	D	First	VA Providence Bldg 2	-0.2	mg/cm²
195	Room 102	Radiator	Metal	Tan	D	First	VA Providence Bldg 2	-0.3	mg/cm²
196	Room 100	Wall	Plaster	White	B	First	VA Providence Bldg 2	-0.2	mg/cm²
197	Room 100	Baseboard	Vinyl	Tan	B	First	VA Providence Bldg 2	0.2	mg/cm²
198	Room 100	Radiator Vent	Metal	White	B	First	VA Providence Bldg 2	-0.1	mg/cm²
199	Room 100	Radiator	Metal	Grey	B	First	VA Providence Bldg 2	0.3	mg/cm²
200	Room 100	Floor	Vinyl Floor Tile	Tan	B	First	VA Providence Bldg 2	-0.2	mg/cm²
201	Room 100	Sprinkler Pipe	Metal	Red	B	First	VA Providence Bldg 2	-0.1	mg/cm²
202		Calibration						1.1	mg/cm²
203		Calibration						1.1	mg/cm²
204		Calibration						1	mg/cm²
205	Rear Entry	Stair Ceiling	Metal	Green	B	Basement	VA Providence Bldg 2	>9.9	mg/cm²
206	Rear Entry	Wall	Plaster	Green	B	Basement	VA Providence Bldg 2	0	mg/cm²
207	Rear Entry	Floor	Terraso	Yellow	B	Basement	VA Providence Bldg 2	-0.3	mg/cm²
208	Rear Entry	Radiator Vent	Metal	Green	B	Basement	VA Providence Bldg 2	-0.3	mg/cm²
209	Rear Entry	Radiator	Metal	Grey	B	Basement	VA Providence Bldg 2	0.7	mg/cm²

READING NUMBER	ROOM	COMPONENT	SUBSTRATE	COLOR	SIDE	FLOOR	SITE	XRF-RMD READING	UNITS
210	B1	Ceiling	Concrete	White	C	Basement	VA Providence Bldg 2	-0.1	mg/cm²
211	B1	Wall	Concrete	White	B	Basement	VA Providence Bldg 2	0.3	mg/cm²
212	B1	Cove Base	Vinyl	Brown	C	Basement	VA Providence Bldg 2	4.8	mg/cm²
213	B1	Wall	Block	White	C	Basement	VA Providence Bldg 2	-0.4	mg/cm²
214	B1	Baseboard	Metal	Tan	B	Basement	VA Providence Bldg 2	-0.1	mg/cm²
215	B1	Conduit	Metal	White	B	Basement	VA Providence Bldg 2	-0.2	mg/cm²
216	B1	Floor	Vinyl Floor Tile	Grey	B	Basement	VA Providence Bldg 2	0.4	mg/cm²
217	B6	Wall	Wall Board	White	C	Basement	VA Providence Bldg 2	-0.1	mg/cm²
218	B6	Wall	Concrete	White	D	Basement	VA Providence Bldg 2	0	mg/cm²
219	B6	Floor	Concrete	Grey	D	Basement	VA Providence Bldg 2	-0.2	mg/cm²
220	B5	Ceiling	Concrete	White	D	Basement	VA Providence Bldg 2	-0.3	mg/cm²
221	B5	Ceiling	Covebase	White	D	Basement	VA Providence Bldg 2	-0.2	mg/cm²
222	B5	Wall	Wall Board	White	C	Basement	VA Providence Bldg 2	0	mg/cm²
223	B5	Baseboard	Metal	White	D	Basement	VA Providence Bldg 2	-0.2	mg/cm²
224	B5	Cove Base	Vinyl	Black	C	Basement	VA Providence Bldg 2	-0.1	mg/cm²
225	B5	Floor	Linoleum	Black	C	Basement	VA Providence Bldg 2	0	mg/cm²
226	B4	Wall	Wall Board	Green	C	Basement	VA Providence Bldg 2	-0.4	mg/cm²
227	B4	Cove Base	vinyl	Brown	C	Basement	VA Providence Bldg 2	-0.1	mg/cm²
228	B4	Baseboard	Metal	Tan	C	Basement	VA Providence Bldg 2	-0.2	mg/cm²
229	B4	Floor	Carpet	Multi	C	Basement	VA Providence Bldg 2	0.3	mg/cm²
230	B4	Wall	Paneling	Brown	B	Basement	VA Providence Bldg 2	-0.2	mg/cm²
231	B4	Cove Base	Vinyl	Brown	B	Basement	VA Providence Bldg 2	-0.5	mg/cm²
232	B4	Baseboard	Metal	Tan	B	Basement	VA Providence Bldg 2	0	mg/cm²
233	B4A	Wall	Concrete	White	D	Basement	VA Providence Bldg 2	0.1	mg/cm²
234	B4A	Wall	Block	White	A	Basement	VA Providence Bldg 2	-0.2	mg/cm²
235	B4A	Cove Base	Cove Base	Brown	D	Basement	VA Providence Bldg 2	0.1	mg/cm²

READING NUMBER	ROOM	COMPONENT	SUBSTRATE	COLOR	SIDE	FLOOR	SITE	XRF-RMD READING	UNITS
236	B4A	Floor	Vinyl Floor Tile	Beige	A	Basement	VA Providence Bldg 2	-0.1	mg/cm²
237		Calibration						0.8	mg/cm²
238		Calibration						0.8	mg/cm²
239		Calibration						0.7	mg/cm²
240		Calibration						0.8	mg/cm²
241		Calibration						0.7	mg/cm²
242		Calibration						0.7	mg/cm²
243	B4	Hatch Door Crawl Space	Metal	Grey	B	Basement	VA Providence Bldg 2	-0.6	mg/cm²
244	Basement Hall	Wall	Plaster	Green	A	Basement	VA Providence Bldg 2	0	mg/cm²
245	Basement Hall	Floor	Concrete	Grey	A	Basement	VA Providence Bldg 2	-0.4	mg/cm²
246	Basement Hall	Ceiling	Plaster	White	A	Basement	VA Providence Bldg 2	-0.2	mg/cm²
247	Basement Hall	Access Hatch	Metal	Green	D	Basement	VA Providence Bldg 2	-0.3	mg/cm²
248	Basement Hall	Sprinkler Pipe	Metal	Red	C	Basement	VA Providence Bldg 2	-0.1	mg/cm²
249	Basement Hall	Conduit	Metal	Green	D	Basement	VA Providence Bldg 2	0.2	mg/cm²
250	Basement Hall	Stringer	Wood	Grey	D	Basement	VA Providence Bldg 2	4.4	mg/cm²
251	Basement Hall	Stair Tread	Rubber	Black	C	Basement	VA Providence Bldg 2	0	mg/cm²
252	Basement Hall	Stair Riser	Rubber	Black	C	Basement	VA Providence Bldg 2	4.1	mg/cm²
253	Basement Hall	Wall	Plaster	Green	B	Basement	VA Providence Bldg 2	-0.2	mg/cm²
254	Basement Hall	Stair Ceiling	Plaster	Green	A	Basement	VA Providence Bldg 2	0.4	mg/cm²
255	Basement Hall	Stair	Metal	Green	A	Basement	VA Providence Bldg 2	>9.9	mg/cm²
256	Basement Hall	Lower Wall	Plaster	Grey	B	Second	VA Providence Bldg 2	-0.1	mg/cm²
257	2nd Floor Stairwell	Wall	Plaster	Grey	B	Second	VA Providence Bldg 2	-0.1	mg/cm²
258	2nd Floor Stairwell	Wall	Plaster	Grey	C	Second	VA Providence Bldg 2	0.1	mg/cm²
259	2nd Floor Stairwell	Ceiling	Plaster	Grey	C	Second	VA Providence Bldg 2	-0.1	mg/cm²
260	2nd Floor Stairwell	Baseboard	Metal	Green	C	Second	VA Providence Bldg 2	7.3	mg/cm²
261	2nd Floor Stairwell	Floor	Terraso	Tan	C	Second	VA Providence Bldg 2	-0.2	mg/cm²
262	2nd Floor Stairwell	Radiator Vent	Metal	Green	C	Second	VA Providence Bldg 2	-0.2	mg/cm²
263	2nd Floor Stairwell	Newel Post	Metal	Green	D	Second	VA Providence Bldg 2	3.1	mg/cm²

READING NUMBER	ROOM	COMPONENT	SUBSTRATE	COLOR	SIDE	FLOOR	SITE	XRF-RMD READING	UNITS
264	2nd Floor Stairwell	Railing	Metal	Green	D	Second	VA Providence Bldg 2	6.6	mg/cm²
265	2nd Floor Stairwell	Baluster	Metal	Green	D	Second	VA Providence Bldg 2	3.8	mg/cm²
266	2nd Floor Stairwell	Stringer	Metal	Green	D	Second	VA Providence Bldg 2	>9.9	mg/cm²
267	2nd Floor Stairwell	Hand Rail	Wood	Varnish	B	Second	VA Providence Bldg 2	-0.2	mg/cm²
268	2nd Floor Stairwell	Stair Tread	Terasso	Tan	B	Second	VA Providence Bldg 2	-0.1	mg/cm²
269	2nd Floor Stairwell	Riser	Metal	Green	A	Second	VA Providence Bldg 2	5.5	mg/cm²
270	Room 205B	Wall	Plaster	Green	C	Second	VA Providence Bldg 2	-0.3	mg/cm²
271	Room 205B	Radiator Vent	Metal	Green	C	Second	VA Providence Bldg 2	-0.2	mg/cm²
272	Room 205B	Radiator	Metal	Grey	C	Second	VA Providence Bldg 2	0.3	mg/cm²
273	Room 205B	Cove Base	Vinyl	Brown	C	Second	VA Providence Bldg 2	-0.3	mg/cm²
274	Room 205B	Floor	Vinyl Floor Tile	Tan	C	Second	VA Providence Bldg 2	-0.1	mg/cm²
275	Room 205B	Ceiling	Plaster	White	C	Second	VA Providence Bldg 2	-0.1	mg/cm²
276	Room 205A	Ceiling	Plaster	White	C	Second	VA Providence Bldg 2	-0.1	mg/cm²
277	Room 205A	Wall	Plaster	Green	C	Second	VA Providence Bldg 2	0	mg/cm²
278	Room 205A	Wall	Ceramic	Orange	C	Second	VA Providence Bldg 2	-0.1	mg/cm²
279	Room 205A	Baseboard	Ceramic	Brown	C	Second	VA Providence Bldg 2	8.1	mg/cm²
280	Room 205A	Radiator Vent	Metal	Green	C	Second	VA Providence Bldg 2	-0.5	mg/cm²
281	Room 205A	Radiator	Metal	Grey	C	Second	VA Providence Bldg 2	1.1	mg/cm²
282	Room 205A	Floor	Ceramic	Tan	C	Second	VA Providence Bldg 2	-0.3	mg/cm²
283	Room 203B	Wall	Plaster	Green	C	Second	VA Providence Bldg 2	-0.2	mg/cm²
284	Room 203B	Radiator Vent	Metal	Grey	B	Second	VA Providence Bldg 2	-0.4	mg/cm²
285	Room 203B	Radiator	Metal	Brown	B	Second	VA Providence Bldg 2	0.3	mg/cm²
286	Room 203B	Cove Base	Vinyl	Varnish	B	Second	VA Providence Bldg 2	0	mg/cm²
287	Room 203B	Floor	Wood	White	B	Second	VA Providence Bldg 2	0	mg/cm²
288	Room 203	Ceiling	Fixed Ceiling tile	Green	B	Second	VA Providence Bldg 2	0	mg/cm²
289	Room 203	Wall	Plaster	Grey	B	Second	VA Providence Bldg 2	-0.1	mg/cm²

READING NUMBER	ROOM	COMPONENT	SUBSTRATE	COLOR	SIDE	FLOOR	SITE	XRF-RMD READING	UNITS
290	Room 203	Radiator Vent	Metal	Brown	B	Second	VA Providence Bldg 2	-0.4	mg/cm²
291	Room 203	Radiator	Metal	Grey	B	Second	VA Providence Bldg 2	0	mg/cm²
292	Room 203	Cove Base	Vinyl	Brown	B	Second	VA Providence Bldg 2	0.1	mg/cm²
293	Room 203	Floor	Wood	Varnish	B	Second	VA Providence Bldg 2	0	mg/cm²
294	Room 203	Wall	Plaster	Green	A	Second	VA Providence Bldg 2	1.1	mg/cm²
295	Room 203	Radiator Vent	Metal	Green	A	Second	VA Providence Bldg 2	0.4	mg/cm²
296	Room 203	Radiator	Metal	Grey	A	Second	VA Providence Bldg 2	0.5	mg/cm²
297	Room 203	Cove Base	Vinyl	Brown	A	Second	VA Providence Bldg 2	-0.1	mg/cm²
298	Room 203A	wall	Plaster	Green	A	Second	VA Providence Bldg 2	0	mg/cm²
299	Concrete Ceiling	Radiator Vent	Metal	Green	A	Second	VA Providence Bldg 2	-0.4	mg/cm²
300	Concrete Ceiling	Cove Base	Vinyl	Brown	A	Second	VA Providence Bldg 2	-0.1	mg/cm²
301	Concrete Ceiling	Floor	Wood	Varnish	C	Second	VA Providence Bldg 2	0.3	mg/cm²
302	Room 203 C	Wall	Plaster	Green	B	Second	VA Providence Bldg 2	0	mg/cm²
303	Concrete Ceiling	Wall	Plaster	Green	B	Second	VA Providence Bldg 2	-0.1	mg/cm²
304	Concrete Ceiling	Radiaotor Vent	Metal	Green	B	Second	VA Providence Bldg 2	-0.2	mg/cm²
305	Concrete Ceiling	Radiator	Metal	Grey	B	Second	VA Providence Bldg 2	0	mg/cm²
306	Concrete Ceiling	Cove Base	Vinyl	Brown	C	Second	VA Providence Bldg 2	0.1	mg/cm²
307	Concrete Ceiling	Floor	Wood	Varnish	C	Second	VA Providence Bldg 2	-0.1	mg/cm²
308	Concrete Ceiling	Radiator Vent	Metal	Green	D	Second	VA Providence Bldg 2	-0.1	mg/cm²
309	Room 209	Wall	Plaster	Green	D	Second	VA Providence Bldg 2	-0.2	mg/cm²
310	Concrete Ceiling	Radiator Vent	Metal	Green	D	Second	VA Providence Bldg 2	-0.2	mg/cm²
311	Concrete Ceiling	Radiator	Metal	Grey	D	Second	VA Providence Bldg 2	1.1	mg/cm²
312	Concrete Ceiling	Cove Base	Vinyl	Brown	D	Second	VA Providence Bldg 2	-0.2	mg/cm²
313	Concrete Ceiling	Floor	Wood	Varnish	D	Second	VA Providence Bldg 2	0	mg/cm²
314	Concrete Ceiling	Wall	Plaster	Green	A	Second	VA Providence Bldg 2	-0.2	mg/cm²
315	Concrete Ceiling	Radiator Vent	Metal	Green	A	Second	VA Providence Bldg 2	-0.1	mg/cm²

READING NUMBER	ROOM	COMPONENT	SUBSTRATE	COLOR	SIDE	FLOOR	SITE	XRF-RMD READING	UNITS
316	Concrete Ceiling	Radiator Vent	Metal	Green	D	Second	VA Providence Bldg 2	-0.3	mg/cm²
317	Concrete Ceiling	Radiator	Metal	Grey	D	Second	VA Providence Bldg 2	0.4	mg/cm²
318	Room 206	Ceiling	Plaster	White	C	Second	VA Providence Bldg 2	-0.5	mg/cm²
319	Room 206	Wall	Plaster	Green	C	Second	VA Providence Bldg 2	-0.2	mg/cm²
320	Room 206	Radiator Vent	Metal	Green	C	Second	VA Providence Bldg 2	0.1	mg/cm²
321	Room 206	Radiator	Metal	Grey	C	Second	VA Providence Bldg 2	0.6	mg/cm²
322	Room 206	Cove Base	Vinyl	Brown	C	Second	VA Providence Bldg 2	-0.2	mg/cm²
323	Room 206	Floor	Wood	Varnish	C	Second	VA Providence Bldg 2	0.1	mg/cm²
324	Room 207	Wall	Plaster	Green	C	Second	VA Providence Bldg 2	-0.1	mg/cm²
325	Concrete Ceiling	Radiator Vent	Metal	Green	C	Second	VA Providence Bldg 2	0.3	mg/cm²
326	Concrete Ceiling	Radiator Vent	Metal	Green	C	Second	VA Providence Bldg 2	-0.2	mg/cm²
327	Concrete Ceiling	Cove Base	Vinyl	Brown	C	Second	VA Providence Bldg 2	-0.3	mg/cm²
328	Concrete Ceiling	Floor	Wood	Varnish	C	Second	VA Providence Bldg 2	0.2	mg/cm²
329	Room 201	Wall	Plaster	Green	A	Second	VA Providence Bldg 2	0	mg/cm²
330	Concrete Ceiling	Radiator Vent	Metal	Green	A	Second	VA Providence Bldg 2	-0.3	mg/cm²
331	Concrete Ceiling	Radiator	Metal	Grey	A	Second	VA Providence Bldg 2	0.6	mg/cm²
332	Concrete Ceiling	Cove Base	vinyl	Brown	A	Second	VA Providence Bldg 2	-0.2	mg/cm²
333	Concrete Ceiling	Floor	Wood	Varnish	A	Second	VA Providence Bldg 2	0.2	mg/cm²
334	Calibration	Calibration					VA Providence Bldg 3	0.7	mg/cm²
335	Calibration	Calibration					VA Providence Bldg 3	0.6	mg/cm²
336	Calibration	Calibration					VA Providence Bldg 3	0.8	mg/cm²
337	Room 205	Ceiling	Plaster	White	C	Second	VA Providence Bldg 3	0.1	mg/cm²
338	Room 205	Wall	Plaster	White	C	Second	VA Providence Bldg 3	0.3	mg/cm²
339	Room 205	Baseboard	Wood	White	C	Second	VA Providence Bldg 3	0	mg/cm²
340	Room 205	Floor	Wood	Varnish	C	Second	VA Providence Bldg 3	-0.5	mg/cm²
341	Room 205	Radiator Vent	Metal	White	C	Second	VA Providence Bldg 3	-0.1	mg/cm²

READING NUMBER	ROOM	COMPONENT	SUBSTRATE	COLOR	SIDE	FLOOR	SITE	XRF-RMD READING	UNITS
342	Room 205	Radiator Vent	Metal	White	C	Second	VA Providence Bldg 3	0.1	mg/cm²
343	Room 205	Radiator	Metal	Grey	C	Second	VA Providence Bldg 3	0.4	mg/cm²
344	Room 204	Ceiling	Plaster	White	C	Second	VA Providence Bldg 3	-0.2	mg/cm²
345	Room 204	wall	Plaster	White	C	Second	VA Providence Bldg 3	0.3	mg/cm²
346	Room 204	Baseboard	Wood	White	C	Second	VA Providence Bldg 3	0	mg/cm²
347	Room 204	Floor	Wood	Varnish	C	Second	VA Providence Bldg 3	-0.4	mg/cm²
348	Room 204	Radiator Vent	Metal	White	C	Second	VA Providence Bldg 3	0.2	mg/cm²
349	Room 204	Wall	Plaster	White	B	Second	VA Providence Bldg 3	-0.1	mg/cm²
350	Room 204	Radiator Vent	Metal	White	B	Second	VA Providence Bldg 3	0.1	mg/cm²
351	Room 204	Baseboard	Wood	White	B	Second	VA Providence Bldg 3	0	mg/cm²
352	Room 202	Ceiling	Plaster	White	A	Second	VA Providence Bldg 3	-0.4	mg/cm²
353	Room 202	Wall	Plaster	White	A	Second	VA Providence Bldg 3	-0.2	mg/cm²
354	Room 202	Baseboard	Wood	White	A	Second	VA Providence Bldg 3	0	mg/cm²
355	Room 202	Radiator	Metal	White	A	Second	VA Providence Bldg 3	-0.3	mg/cm²
356	Room 202	Wall	Plaster	White	A	Second	VA Providence Bldg 3	0.1	mg/cm²
357	Room 202	Floor	Wood	Varnish	A	Second	VA Providence Bldg 3	-0.2	mg/cm²
358	Main area 2nd Floor	Ceiling	Plaster	White	A	Second	VA Providence Bldg 3	0	mg/cm²
359	Main area 2nd Floor	Wall	Plaster	White	A	Second	VA Providence Bldg 3	-0.1	mg/cm²
360	Main area 2nd Floor	Wall	Plaster	White	B	Second	VA Providence Bldg 3	-0.2	mg/cm²
361	Main area 2nd Floor	Baseboard	Wood	White	B	Second	VA Providence Bldg 3	-0.1	mg/cm²
362	Main area 2nd Floor	Floor	Wood	Varnish	B	Second	VA Providence Bldg 3	-0.3	mg/cm²
363	2nd Floor Bathroom	Ceiling	Plaster	White	B	Second	VA Providence Bldg 3	-0.1	mg/cm²
364	2nd Floor Bathroom	Wall	Plaster	White	B	Second	VA Providence Bldg 3	-0.1	mg/cm²
365	2nd Floor Bathroom	Wall	Ceramic	Green	B	Second	VA Providence Bldg 3	7.5	mg/cm²
366	2nd Floor Bathroom	Cove Base	Vinyl	Brown	B	Second	VA Providence Bldg 3	-0.4	mg/cm²
367	2nd Floor Bathroom	Radiator Vent	Metal	White	B	Second	VA Providence Bldg 3	-0.1	mg/cm²

READING NUMBER	ROOM	COMPONENT	SUBSTRATE	COLOR	SIDE	FLOOR	SITE	XRF-RMD READING	UNITS
368	2nd Floor Bathroom	Radiator	Metal	Grey	B	Second	VA Providence Bldg 3	-0.1	mg/cm²
369	2nd Floor Bathroom	Floor	Vinyl Floor Tile	Tan	B	Second	VA Providence Bldg 3	-0.4	mg/cm²
370	Room 206A	Ceiling	Plaster	White	C	Second	VA Providence Bldg 3	0	mg/cm²
371	Room 206A	Wall	Plaster	White	C	Second	VA Providence Bldg 3	-0.1	mg/cm²
372	Room 206A	Baseboard	Wood	White	C	Second	VA Providence Bldg 3	0	mg/cm²
373	Room 206A	Radiator Vent	Metal	White	C	Second	VA Providence Bldg 3	0.1	mg/cm²
374	Room 206A	Floor	Wood	Varnish	C	Second	VA Providence Bldg 3	-0.6	mg/cm²
375	Room 210	Ceiling	Plaster	White	C	Second	VA Providence Bldg 3	0	mg/cm²
376	Room 210	Wall	Plaster	White	C	Second	VA Providence Bldg 3	1.1	mg/cm²
377	Room 210	Radiator Vent	Metal	White	C	Second	VA Providence Bldg 3	0.2	mg/cm²
378	Room 210	Wall	Plaster	White	D	Second	VA Providence Bldg 3	0.4	mg/cm²
379	Room 210	Baseboard	Wood	White	D	Second	VA Providence Bldg 3	-0.2	mg/cm²
380	Room 210	Radiator Vent	Metal	White	D	Second	VA Providence Bldg 3	0.1	mg/cm²
381	Room 210	Radiator	Metal	White	D	Second	VA Providence Bldg 3	0.5	mg/cm²
382	Room 210	Floor	Wood	Varnish	D	Second	VA Providence Bldg 3	-0.3	mg/cm²
383	Room 208	Ceiling	Plaster	White	A	Second	VA Providence Bldg 3	0	mg/cm²
384	Room 208	Wall	Plaster	White	A	Second	VA Providence Bldg 3	0.1	mg/cm²
385	Room 208	Baseboard	Wood	White	A	Second	VA Providence Bldg 3	-0.3	mg/cm²
386	Room 208	Wall	Plaster	White	D	Second	VA Providence Bldg 3	-0.1	mg/cm²
387	Room 208	Baseboard	Wood	White	D	Second	VA Providence Bldg 3	0	mg/cm²
388	Room 208	Radiator Vent	Metal	White	D	Second	VA Providence Bldg 3	-0.2	mg/cm²
389	Room 208	Radiator	Metal	Grey	D	Second	VA Providence Bldg 3	0.4	mg/cm²
390	Room 208	Floor	Wood	Varnish	D	Second	VA Providence Bldg 3	-0.5	mg/cm²
391	2nd Floor Main Area	Ceiling	Plaster	White	A	Second	VA Providence Bldg 3	-0.1	mg/cm²
392	2nd Floor Main Area	Wall	Plaster	White	A	Second	VA Providence Bldg 3	0.1	mg/cm²
393	2nd Floor Main Area	Baseboard	Wood	White	A	Second	VA Providence Bldg 3	0	mg/cm²

READING NUMBER	ROOM	COMPONENT	SUBSTRATE	COLOR	SIDE	FLOOR	SITE	XRF-RMD READING	UNITS
394	2nd Floor Main Area	Radiator Vent	Metal	White	A	Second	VA Providence Bldg 3	0.3	mg/cm²
395	2nd Floor Main Area	Radiator	Metal	Grey	A	Second	VA Providence Bldg 3	0.6	mg/cm²
396	2nd Floor Main Area	Radiator Vent	Metal	White	A	Second	VA Providence Bldg 3	-0.5	mg/cm²
397	2nd Floor Main Area	Radiator	Metal	Grey	A	Second	VA Providence Bldg 3	0.5	mg/cm²
398	2nd Floor Main Area	Floor	Wood	Varnish	A	Second	VA Providence Bldg 3	-0.5	mg/cm²
399	2nd Floor Bathroom	Ceiling	Plaster	White	D	Second	VA Providence Bldg 3	-0.3	mg/cm²
400	2nd Floor Bathroom	Wall	Plaster	White	D	Second	VA Providence Bldg 3	0	mg/cm²
401	2nd Floor Bathroom	Wall	Ceramic	Tan	D	Second	VA Providence Bldg 3	-0.3	mg/cm²
402	2nd Floor Bathroom	Baseboard	Wood	Brown	D	Second	VA Providence Bldg 3	2.7	mg/cm²
403	2nd Floor Bathroom	Cove Base	vinyl	Brown	D	Second	VA Providence Bldg 3	-0.4	mg/cm²
404	2nd Floor Bathroom	Radiator Vent	Metal	White	D	Second	VA Providence Bldg 3	-0.5	mg/cm²
405	2nd Floor Bathroom	Radiator	Metal	Grey	D	Second	VA Providence Bldg 3	0.6	mg/cm²
406	2nd Floor Bathroom	Floor	Vinyl Floor Tile	Tan	D	Second	VA Providence Bldg 3	-0.5	mg/cm²
407	Room 101	Ceiling	Plaster	White	A	First	VA Providence Bldg 3	-0.2	mg/cm²
408	Room 101	Wall	Plaster	White	A	First	VA Providence Bldg 3	0.4	mg/cm²
409	Room 101	Baseboard	Wood	White	A	First	VA Providence Bldg 3	0.1	mg/cm²
410	Room 101	Radiator Vent	Metal	White	A	First	VA Providence Bldg 3	0.1	mg/cm²
411	Room 101	Radiator	Metal	Grey	A	First	VA Providence Bldg 3	0.4	mg/cm²
412	Room 101	Radiator Vent	Metal	White	A	First	VA Providence Bldg 3	0.2	mg/cm²
413	Room 101	Radiator	Metal	Grey	A	First	VA Providence Bldg 3	0.7	mg/cm²
414	Room 101	Radiator Vent	Metal	White	A	First	VA Providence Bldg 3	-0.4	mg/cm²
415	Room 101	Radiator	Metal	Grey	A	First	VA Providence Bldg 3	0.6	mg/cm²
416	Room 101	Wall	Plaster	White	D	First	VA Providence Bldg 3	-0.1	mg/cm²
417	Room 101	Baseboard	Wood	White	D	First	VA Providence Bldg 3	0	mg/cm²
418	Room 101	Radiator Vent	Metal	White	D	First	VA Providence Bldg 3	-0.4	mg/cm²
419	Room 101	Floor	Wood	Varnish	D	First	VA Providence Bldg 3	-0.5	mg/cm²

READING NUMBER	ROOM	COMPONENT	SUBSTRATE	COLOR	SIDE	FLOOR	SITE	XRF-RMD READING	UNITS
420	Room 106	Ceiling	Plaster	White	C	First	VA Providence Bldg 3	-0.3	mg/cm²
421	Room 106	Wall	Plaster	White	C	First	VA Providence Bldg 3	-0.2	mg/cm²
422	Room 106	Baseboard	Wood	White	C	First	VA Providence Bldg 3	0	mg/cm²
423	Room 106	Radiator Vent	Metal	White	C	First	VA Providence Bldg 3	0	mg/cm²
424	Room 106	Radiator	Metal	Grey	C	First	VA Providence Bldg 3	0.5	mg/cm²
425	Room 106	Wall	Plaster	White	D	First	VA Providence Bldg 3	0.1	mg/cm²
426	Room 106	Baseboard	Wood	White	D	First	VA Providence Bldg 3	0	mg/cm²
427	Room 106	Radiator Vent	Metal	White	D	First	VA Providence Bldg 3	-0.2	mg/cm²
428	Room 106	Radiator	Metal	Grey	D	First	VA Providence Bldg 3	0.5	mg/cm²
429	Room 106	Floor	Wood	Varnish	D	First	VA Providence Bldg 3	-0.5	mg/cm²
430	Room 104A	Ceiling	Plaster	White	C	First	VA Providence Bldg 3	-0.1	mg/cm²
431	Room 104A	Wall	Plaster	White	C	First	VA Providence Bldg 3	0	mg/cm²
432	Room 104A	Baseboard	Wood	White	C	First	VA Providence Bldg 3	0.5	mg/cm²
433	Room 104A	Radiator Vent	Metal	White	C	First	VA Providence Bldg 3	-0.2	mg/cm²
434	Room 104A	Radiator	Metal	Grey	C	First	VA Providence Bldg 3	0	mg/cm²
435	Room 104A	Radiator Vent	Metal	White	C	First	VA Providence Bldg 3	-0.1	mg/cm²
436	Room 104A	Radiator	Metal	Grey	C	First	VA Providence Bldg 3	0.5	mg/cm²
437	Room 104A	Floor	Wood	Varnish	C	First	VA Providence Bldg 3	-0.5	mg/cm²
438	1st Floor Rear Stairwell	Ceiling	Plaster	White	D	First	VA Providence Bldg 3	-0.2	mg/cm²
439	1st Floor Rear Stairwell	Wall	Plaster	White	D	First	VA Providence Bldg 3	-0.1	mg/cm²
440	1st Floor Rear Stairwell	Baseboard	Plaster	Tan	D	First	VA Providence Bldg 3	0.1	mg/cm²
441	1st Floor Rear Stairwell	Radiator Vent	Metal	White	D	First	VA Providence Bldg 3	-0.1	mg/cm²
442	1st Floor Rear Stairwell	Radiator	Metal	White	D	First	VA Providence Bldg 3	-0.1	mg/cm²

READING NUMBER	ROOM	COMPONENT	SUBSTRATE	COLOR	SIDE	FLOOR	SITE	XRF-RMD READING	UNITS
443	1st Floor Rear Stairwell	Floor	Vinyl Floor Tile	Grey	D	First	VA Providence Bldg 3	-0.3	mg/cm²
444	1st Floor Rear Stairwell	Conduit	Metal	White	D	First	VA Providence Bldg 3	0.2	mg/cm²
445	Room 105A	Ceiling	Plaster	White	C	First	VA Providence Bldg 3	-0.1	mg/cm²
446	Room 105A	Wall	Plaster	White	C	First	VA Providence Bldg 3	-0.3	mg/cm²
447	Room 105A	Baseboard	Wood	White	C	First	VA Providence Bldg 3	0.3	mg/cm²
448	Room 105A	Radiator Vent	Metal	White	C	First	VA Providence Bldg 3	-0.2	mg/cm²
449	Room 105A	Radiator	Metal	Grey	C	First	VA Providence Bldg 3	0.8	mg/cm²
450	Room 105A	Radiator Vent	Metal	White	C	First	VA Providence Bldg 3	-0.3	mg/cm²
451	Room 105A	Radiator	Metal	Grey	C	First	VA Providence Bldg 3	0.5	mg/cm²
452	Room 105A	Floor	Wood	Varnish	C	First	VA Providence Bldg 3	-0.5	mg/cm²
453	1st Floor Front Stairwell	Ceiling	Plaster	White	B	First	VA Providence Bldg 3	0	mg/cm²
454	1st Floor Front Stairwell	Wall	Plaster	White	B	First	VA Providence Bldg 3	0	mg/cm²
455	1st Floor Front Stairwell	Cove Base	Vinyl	Black	B	First	VA Providence Bldg 3	0.2	mg/cm²
456	1st Floor Front Stairwell	Radiator Vent	Metal	White	B	First	VA Providence Bldg 3	-0.4	mg/cm²
457	1st Floor Front Stairwell	Radiator	Metal	White	B	First	VA Providence Bldg 3	-0.1	mg/cm²
458	1st Floor Front Stairwell	Floor	Carpet	Black	B	First	VA Providence Bldg 3	0.2	mg/cm²
459	1st Floor Front Stairwell	Conduit	Metal	White	B	First	VA Providence Bldg 3	0.1	mg/cm²
460	1st Floor Front Stairwell	Fire Panel	Metal	Black	A	First	VA Providence Bldg 3	-0.2	mg/cm²
461	Room 101A	Ceiling	Plaster	White	A	First	VA Providence Bldg 3	-0.3	mg/cm²
462	Room 101A	Wall	Plaster	White	A	First	VA Providence Bldg 3	-0.1	mg/cm²
463	Room 101A	Baseboard	Wood	White	A	First	VA Providence Bldg 3	0	mg/cm²

READING NUMBER	ROOM	COMPONENT	SUBSTRATE	COLOR	SIDE	FLOOR	SITE	XRF-RMD READING	UNITS
464	Room 101A	Radiator Vent	Metal	White	A	First	VA Providence Bldg 3	0	mg/cm²
465	Room 101A	Radiator	Metal	Grey	A	First	VA Providence Bldg 3	0.2	mg/cm²
466	Room 101A	Floor	Wood	Varnish	A	First	VA Providence Bldg 3	-0.2	mg/cm²
467	Room 110	Ceiling	Plaster	White	A	First	VA Providence Bldg 3	-0.1	mg/cm²
468	Room 110	Wall	Plaster	White	A	First	VA Providence Bldg 3	-0.2	mg/cm²
469	Room 110	Baseboard	Wood	White	A	First	VA Providence Bldg 3	-0.1	mg/cm²
470	Room 110	Radiator Vent	Metal	White	A	First	VA Providence Bldg 3	-0.1	mg/cm²
471	Room 110	Radiator	Metal	Grey	B	First	VA Providence Bldg 3	0.4	mg/cm²
472	Room 110	Wall	Plaster	White	B	First	VA Providence Bldg 3	-0.2	mg/cm²
473	Room 110	Baseboard	Wood	White	B	First	VA Providence Bldg 3	-0.1	mg/cm²
474	Room 110	Radiator Vent	Metal	White	B	First	VA Providence Bldg 3	-0.1	mg/cm²
475	Room 110	Radiator	Metal	Grey	B	First	VA Providence Bldg 3	0.6	mg/cm²
476	Room 110	Floor	Wood	Varnish	B	First	VA Providence Bldg 3	-0.3	mg/cm²
477	102 Bath	Ceiling	Plaster	White	B	First	VA Providence Bldg 3	0.1	mg/cm²
478	102 Bath	Wall	Plaster	White	B	First	VA Providence Bldg 3	0.2	mg/cm²
479	102 Bath	Wall	Wood	White	B	First	VA Providence Bldg 3	-0.3	mg/cm²
480	102 Bath	Wall	Ceramic	Green	B	First	VA Providence Bldg 3	6.4	mg/cm²
481	102 Bath	Cove Base	Vinyl	Brown	B	First	VA Providence Bldg 3	-0.5	mg/cm²
482	102 Bath	Radiator Vent	Metal	White	B	First	VA Providence Bldg 3	-0.1	mg/cm²
483	102 Bath	Radiator	Metal	Grey	B	First	VA Providence Bldg 3	1.1	mg/cm²
484	102 Bath	Floor	Vinyl Floor Tile	Grey	B	First	VA Providence Bldg 3	-0.5	mg/cm²
485	Room 103	Ceiling	Plaster	White	C	First	VA Providence Bldg 3	-0.1	mg/cm²
486	Room 103	Wall	Plaster	White	C	First	VA Providence Bldg 3	-0.2	mg/cm²
487	Room 103	Baseboard	Wood	White	C	First	VA Providence Bldg 3	-0.2	mg/cm²
488	Room 103	Radiator	Metal	White	C	First	VA Providence Bldg 3	0	mg/cm²
489	Room 103	Radiator	Metal	Grey	C	First	VA Providence Bldg 3	0.4	mg/cm²

READING NUMBER	ROOM	COMPONENT	SUBSTRATE	COLOR	SIDE	FLOOR	SITE	XRF-RMD READING	UNITS
490	Room 103	Floor	Wood	Varnish	C	First	VA Providence Bldg 3	-0.3	mg/cm²
491	Room 103	Wall	Plaster	White	B	First	VA Providence Bldg 3	-0.1	mg/cm²
492	Room 103	Baseboard	Wood	White	B	First	VA Providence Bldg 3	-0.2	mg/cm²
493	Room 103	Radiator Vent	Metal	White	B	First	VA Providence Bldg 3	-0.3	mg/cm²
494	Basement	Wall	Wood	Grey	B	Basement	VA Providence Bldg 3	0	mg/cm²
495	Basement	Wall	Wood	Black	B	Basement	VA Providence Bldg 3	-0.2	mg/cm²
496	Basement	Wall	Wood	Grey	A	Basement	VA Providence Bldg 3	-0.1	mg/cm²
497	Basement	Wall	Wood	Grey	D	Basement	VA Providence Bldg 3	0	mg/cm²
498	Basement	Floor	Concrete	Grey	D	Basement	VA Providence Bldg 3	-0.5	mg/cm²
499	Basement	Pipe	Metal	White	D	Basement	VA Providence Bldg 3	4.7	mg/cm²
500	Room 208	Ceiling	Plaster	White	C	Second	VA Providence Bldg 2	-0.1	mg/cm²
501	Room 208	Wall	Plaster	Green	C	Second	VA Providence Bldg 2	-0.1	mg/cm²
502	Room 208	Cove Base	Vinyl	Brown	C	Second	VA Providence Bldg 2	0.3	mg/cm²
503	Room 208	Radiator Vent	Metal	Green	C	Second	VA Providence Bldg 2	-0.2	mg/cm²
504	Room 208	Radiator	Metal	Grey	C	Second	VA Providence Bldg 2	0.4	mg/cm²
505	Room 208	Wall	Plaster	Green	D	Second	VA Providence Bldg 2	-0.1	mg/cm²
506	Room 208	Cove Base	Vinyl	Brown	D	Second	VA Providence Bldg 2	0.2	mg/cm²
507	Room 208	Radiator Vent	Metal	Green	D	Second	VA Providence Bldg 2	-0.2	mg/cm²
508	Room 208	Radiator	Metal	Grey	D	Second	VA Providence Bldg 2	0.2	mg/cm²
509	Room 208	Floor	Wood	Varnish	D	Second	VA Providence Bldg 2	0.1	mg/cm²
510		Calibration						0.9	mg/cm²
511		Calibration						0.8	mg/cm²
512		Calibration						0.8	mg/cm²