

SECTION D - CONTRACT DOCUMENTS, EXHIBITS, OR ATTACHMENTS

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ACH VENDOR/MISCELLANEOUS PAYMENT
ENROLLMENT FORM

This form is used for Automated Clearing House (ACH) payments with an addendum record that contains payment-related information processed through the Vendor Express Program. Recipients of these payments should bring this information to the attention of their financial institution when presenting this form for completion. See reverse for additional instructions.

PRIVACY ACT STATEMENT

The following information is provided to comply with the Privacy Act of 1974 (P.L. 93-579). All information collected on this form is required under the provisions of 31 U.S.C. 3322 and 31 CFR 210. This information will be used by the Treasury Department to transmit payment data, by electronic means to vendor's financial institution. Failure to provide the requested information may delay or prevent the receipt of payments through the Automated Clearing House Payment System.

D.1 ACH PAYMENT OMB No. 1510-0056

| AGENCY INFORMATION | | |
|-------------------------|-----------------------------|---|
| FEDERAL PROGRAM AGENCY | | |
| AGENCY IDENTIFIER: | AGENCY LOCATION CODE (ALC): | ACH FORMAT: CCD+ CTX CTP |
| ADDRESS: | | |
| | | |
| CONTACT PERSON NAME: | | TELEPHONE NUMBER: () |
| ADDITIONAL INFORMATION: | | |

| PAYEE/COMPANY INFORMATION | |
|---------------------------|----------------------------|
| NAME | SSN NO. OR TAXPAYER ID NO. |
| ADDRESS | |
| | |
| CONTACT PERSON NAME: | TELEPHONE NUMBER: () |

| FINANCIAL INSTITUTION INFORMATION | |
|--|-----------------------|
| NAME: | |
| ADDRESS: | |
| | |
| ACH COORDINATOR NAME: | TELEPHONE NUMBER: () |
| NINE-DIGIT ROUTING TRANSIT NUMBER: | |
| DEPOSITOR ACCOUNT TITLE: | |
| DEPOSITOR ACCOUNT NUMBER: | LOCKBOX NUMBER: |
| TYPE OF ACCOUNT: CHECKING SAVINGS LOCKBOX | |
| SIGNATURE AND TITLE OF AUTHORIZED OFFICIAL: (Could be the same as ACH Coordinator) | TELEPHONE NUMBER: () |

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Instructions for Completing SF 3881 Form

Make three copies of form after completing. Copy 1 is the Agency Copy; copy 2 is the Payee/ Company Copy; and copy 3 is the Financial Institution Copy.

- 1 Agency Information Section - Federal agency prints or types the name and address of the Federal program agency originating the vendor/miscellaneous payment, agency identifier, agency location code, contact person name and telephone number of the agency. Also, the appropriate box for ACH format is checked.
- 2 Payee/Company Information Section - Payee prints or types the name of the payee/company and address that will receive ACH vendor/miscellaneous payments, social security or taxpayer ID number, and contact person name and telephone number of the payee/company. Payee also verifies depositor account number, account title, and type of account entered by your financial institution in the Financial Institution Information Section.
- 3 Financial Institution Information Section - Financial institution prints or types the name and address of the payee/company's financial institution who will receive the ACH payment, ACH coordinator name and telephone number, nine-digit routing transit number, depositor (payee/ company) account title and account number. Also, the box for type of account is checked, and the signature, title, and telephone number of the appropriate financial institution official are included.

Burden Estimate Statement

The estimated average burden associated with this collection of information is 15 minutes per respondent or record keeper, depending on individual circumstances. Comments concerning the accuracy of this burden estimate and suggestions for reducing this burden should be directed to the Financial Management Service, Facilities Management Division, Property and Supply Branch, Room B-101, 3700 East West Highway, Hyattsville, MD 20782 and the Office of Management and Budget, Paperwork Reduction Project (1510-0056), Washington, DC 20503.

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**D.2 ENVIRONMENTAL STANDARD OPERATING PROCEDURE (ESOP) DATED
OCTOBER 1, 2014**

| Environmental Standard Operating Procedure (ESOP) | | | |
|--|--|---|-----------------------------------|
| Originating Office: Environment, Health & Safety | Revision: 4 Supersedes: 10/30/2013 | Prepared By: C. Kim | Approved By: EOC Committee |
| File Name: ASB-ESOP | Effective Date: 10/01/2014 | Document Owner: Chief of Engineering/Chief of EH&S | |

Title: Asbestos Management Plan (Operation & Maintenance)

1.0 PURPOSE

The purpose of this ESOP is to provide guidelines for the management of Asbestos Containing Materials (ACM) at the Veterans Affairs San Diego Healthcare System (VASDHS). If there are any specific situations or other concerns not addressed by this procedure, contact the Chief of Environment, Health & Safety (EH&S) at Extension 1069.

2.0 APPLICATION

This procedure applies to those individuals working with PACM and/or working in buildings containing ACM at VASDHS.

3.0 REFERENCES

29 CFR 1910.1001, Asbestos Standard

29 CFR 1926.1101, Asbestos in Construction Standard

Asbestos Hazard Emergency Response Act (AHERA), a provision of the Toxic Substances Control Act, 1983

40 CFR 61, Subpart M – National Emission Standard for Hazardous Air Pollutants (NESHAP), Asbestos

San Diego Air Pollution Control District (SDAPCD) Regulation XI, Subpart M - Rule 361.145

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VA Construction Specifications 01569 - 01572, Asbestos Control Requirements

VASDHS Safety Management Plan

Comprehensive Asbestos Management Survey Report - VASDHS

VASDHS GEMS Description Document, Appendix A, Environmental Management Procedures (*EMP-P & EMP-01 – EMP-13*)

Documents that are controlled by VASDHS in accordance with *EMP-07, GEMS Document and Record Control*, are shown in **bold**.

4.0 Procedure

4.1 Discussion:

Asbestos has been determined to be a naturally occurring carcinogen once used in a wide variety of building products. Asbestos-containing materials (ACM), asbestos-containing construction materials (ACCM), and *Presumed* asbestos-containing materials (PACM), hereafter referred to as ACM and PACM are present in the Veterans Administration San Diego Healthcare System (VADSHS), or Buildings #1 and #2 (Buildings), owned and operated by the Veterans Administration San Diego Health Care System, referred to hereinafter as (VASDHS).

The presence of ACM and PACM within the buildings does not, in and of itself, pose a hazard to human health. In order for asbestos to be a health hazard, the asbestos must be disturbed in a way that causes the fibers to become airborne where that can be inhaled or swallowed.

ACM and PACM can be distinguished as friable or non-friable. Friable is a term that describes a material that can be crumbled or crushed to a powder when dry with ordinary hand pressure. Friable materials, therefore, are considered potentially more hazardous because of their ability to more easily release airborne asbestos fibers and cause exposure to building occupants. Examples of friable ACMs include Thermal Systems Insulation (TSI) (e.g., pipe, fitting, duct, and tank insulation, spray-applied ceilings, lay-in ceiling panels, and spray-applied fireproofing). Non-friable materials (materials that cannot be crumbled or crushed to a powder with ordinary hand pressure) are not hazardous unless they are cut, ground, sanded, or disturbed in a way that fibers can be released into the air. Examples of non-friable ACMs include packings, gaskets, vinyl floor tiles, roofing materials, and Transite™ cement products.

This policy is designed to protect VASDHS employees, medical staff, vendors (contractors and sub-contractors), patients, tenants, and guests from quantifiable exposure to occupational

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asbestos respiratory hazards. Protection of VASDHS occupants from asbestos shall be achieved through a combination of measures including, but not limited to, education (training) of the said parties, periodic inspections of known ACM and PACM, implementation of appropriate response actions such as removal, enclosure, encapsulation, cleaning and operations and maintenance, adherence to certain policies and procedures, and compliance with all applicable Federal, state, and local laws and regulations that are described in this O&M program. This O&M program provides policies, procedures, and guidance to all levels of VASDHS staff and management.

Asbestos has been shown to cause serious health concerns. Occupational exposure to asbestos is regulated in 29 CFR 1910.1001 and 29 CFR 1926.1101. Asbestos is classified into two categories: friable asbestos containing material, and non-friable asbestos containing material.

The following categories of material are considered ACM:

Friable asbestos material. (Any material containing more than one-percent asbestos and that can be easily crumbled or reduced to powder by hand pressure.) May include previously non-friable material which becomes broken or damaged by mechanical force.)

Asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing product that has become friable.

Asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing product that will be or have been subjected to sanding, grinding, cutting, or abrading.

Other asbestos-containing materials that have a high probability of becoming or have become crumbled, pulverized, or reduced to powder in the course of demolition or renovation operations.

Designated personnel who perform assigned work tasks, which may disturb friable asbestos fibers, must be physically able to wear respirators per *Safety Management Plan*. Physical qualification standards for designated VASDHS personnel hired after December 1, 1987, must contain the requirement for the physical ability of the employee to wear respirators and protective clothing while performing duties requiring work with ACM. VASDHS ACM policy shall not be waived in the event of any emergency.

Construction contractors are required to comply with asbestos operational controls in construction areas. Contractors can elect, as specified in their contracts, to develop a negative exposure assessment after demolition per CFR 29 1926.1101. The assessment plan will be reviewed and approved by EH&S and Engineering.

Per 29 CFR 1926.1101(c)(1), the employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 0.1 fiber per cubic centimeter of air as an eight (8) hour Time-Weighted Average (TWA).

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Per 29 CFR 1926.1101(c)(2), the employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 1.0 fiber per cubic centimeter of air (1 f/cc) as averaged over a sampling period of thirty (30) minutes.

Operational Controls:

The following *general* operating procedures apply:

Regulated areas shall be demarcated from the rest of the workplace in any manner that minimizes the number of persons who will be exposed to asbestos. (29 CFR 1910.1001(e)(2))

Access to regulated areas shall be limited to authorized persons by Engineering Service through a key system. Only through an approval from Chief of Engineering and Chief of EH&S will any asbestos be removed or repaired. (29 CFR 1910.1001(e)(3))

Warning signs in regulated areas shall contain the following information both in English and Spanish :

DANGER

ASBESTOS

CANCER AND LUNG DISEASE HAZARD

AUTHORIZED PERSONNEL ONLY

In addition, where the use of respirators and protective clothing is required in the regulated area, the warning signs shall include the following information:

RESPIRATORS AND PROTECTIVE CLOTHING

ARE REQUIRED IN THIS AREA

(29 CFR 1910.1001(j) (3) (ii))

Warning labels shall be affixed to all raw materials, mixtures, scrap, waste, debris, and other products containing asbestos fibers, or to their containers. The warning labels shall include the following information:

DANGER

CONTAINS ASBESTOS FIBERS

AVOID CREATING DUST

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CANCER AND LUNG DISEASE HAZARD

(29 CFR 1910.1001(j) (4))

Waste, scrap, debris, bags, containers, equipment, and clothing contaminated with asbestos consigned for disposal, shall be collected, recycled and disposed of in sealed impermeable bags, or other closed, impermeable containers. (29 CFR 1910.1001(k)(6))

Smoking, eating, chewing tobacco or gum, or drinking in the interstitial spaces or any other area where work on ACM is being performed, is forbidden. (29 CFR 1910.1001(e)(5))

Any required protective clothing and equipment shall be satisfactorily cleaned, laundered, repaired, or replaced so as to maintain its effectiveness. VASDHS is required to provide clean protective clothing and equipment at least weekly to each affected employee. (29 CFR 1910.1001(h)(3)(i)) Only approved and authorized disposable protective clothing shall be worn in asbestos areas. All employees, contractors and other persons entering the interstitial spaces will be required to wear appropriate Personal Protective Equipment (PPE) such as disposable coveralls and respirators with High Efficiency Particulate Air (HEPA) filters as provided by their employer. PPE will be worn properly and at all times while personnel are in the interstitials. Failure to adhere to these procedures will result in disciplinary actions. (29 CFR 1910.1001(e)(4)) Engineering Service will provide all required protective clothing.

Protective suits will be removed when inside change rooms and placed in waste containers or bags. Respirators will then be removed when entering the clean room. Personnel should wash their hands and respirator before placing the respirator or filters in a clean, protective container. (29 CFR 1910.1001(h)(2)(i))

While coveralls are optional in the change rooms in the interstitial spaces in stairwells #9 and 11, respirators are still required.

In areas located below the interstitials, the ceiling provides a barrier between the interstitials and offices, public or patient areas. Prior to removing these barrier-ceiling tiles, the area will be vacated. If vacating the area is not feasible, personnel responsible for performing the job, which requires ceiling tile removal, will construct a containment barrier from the floor to the ceiling. Working within the confines of this barrier and wearing the required PPE, the designated employee will carefully lift and slide the ceiling tile to one side to prevent the generation of dust. The interstitial-side of the ceiling tile will be HEPA vacuumed through the first opening. Upon job completion, any debris will be HEPA vacuumed. If an unusual amount of debris is encountered, employees will seek direction from their supervisor prior to proceeding. Upon discovery of water leaks and/or ceiling damage, Engineering Service will secure and cordon off

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the area. Appropriate PPE is required for response to any leak or ceiling damage. Once initial damage control is complete, full asbestos containment shall be established.

Engineering Services personnel will be responsible for cleaning debris, vacuuming areas and wiping down surfaces. The following protocols should be adhered to:

Tiled floors and carpeted areas will be HEPA vacuumed. (Vacuums without a HEPA filter are prohibited.)

Walls and other surfaces such as tables, desks and chairs will be wiped down.

All rags used for wiping surfaces will be disposed as asbestos containing waste.

Ceiling tiles will be replaced prior to releasing the area for employee and patient occupancy.

EH&S or approved engineering designee will again reassess the area. Only after the completion of these steps will Environmental Service personnel use blowers to dry carpeting.

5.0 TRAINING

All VASDHS employees, vendors (contractors and sub-contractors), and tenants who perform their duties in areas which contain ACM or PACM, or may come in contact with or disturb ACM or PACM shall receive Initial Asbestos Training and subsequent annual Asbestos Refresher Training commensurate to their level of contact or disturbance of ACM or PACM as determined by the Asbestos Program Manager (APM). Supervisors are required to insure that staff have received the proper training, fit testing and, and medical clearance.

5.1 Training requirements

THREE DAY PROJECT DESIGNER/TWO HOUR SITE-SPECIFIC ASBESTOS AWARENESS/HAZARD COMMUNICATION TRAINING

Engineering Staff will receive two hour site specific asbestos awareness and five day Project Designer training and annual Refresher Training. This course will enhance Construction Staff with the ability to understand asbestos abatement project safety, engineering controls, abatement methods, and cost estimating techniques. Training topics include

Identification and location of specific ACM and PACM;

VASDHS policies and procedures specific to asbestos;

Roles and responsibilities of the asbestos management team (organizational structure of the O&M);

Specific personal protective equipment (PPE);

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Respirator training and fit testing;

Health effects of asbestos;

Background information on asbestos;

Proper response to fiber release episodes (Minor and Major).

Legal implications, insurance and bonds;

Designing the asbestos abatement project;

Safety system design specifications;

Budgeting and cost estimation;

Writing abatement specifications; and

Preparing abatement drawings.

FIVE DAY BUILDING INSPECTOR/MANAGEMENT PLANNER/TWO HOUR SITE-SPECIFIC ASBESTOS AWARENESS/HAZARD COMMUNICATION TRAINING

EH&S staff will receive two hour site specific asbestos awareness and five day Building Inspector/Management Planner training and annual Refresher Training. This course is designed to give additional instruction to asbestos bulk sampling, hazard assessment, legal responsibilities, asbestos control options, cost estimating and developing and implementing an O&M program.

Training Topics include:

Identification and location of specific ACM and PACM;

VASDHS policies and procedures specific to asbestos (e.g., Asbestos ESOP);

Roles and responsibilities of the asbestos management team (organizational structure of the O&M);

Specific personal protective equipment (PPE);

Respirator training and fit testing

Health effects of asbestos;

Background information on asbestos;

Proper response to fiber release episodes (Minor and Major).

Physical characteristic, uses and applications;

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Understanding building systems;

Public/employee building occupant relations;

Pre-inspection planning and review of previous inspection records;

Inspection for friable and non-friable ACM;

Bulk sampling techniques;

Evaluation of survey results; and

Implementing the O&M Program.

ASBESTOS PROGRAM MANAGER (APM) - CALIFORNIA CERTIFIED ASBESTOS CONSULTANT (CAC)

An independent Contractor/Consultant has been retained by VASDHS to assist the designated Asbestos Program Manager (APM). The APM shall be trained to respond to fiber release episodes (Minor and Major), and to access the Interstitial Spaces, Basement Utility Tunnel to Building #2 Mechanical Room, and other posted regulated areas. The Contractor/Consultant has the authority to carry out the duties and responsibilities of the APM.

CLASS IV OPERATIONS – TWO HOUR SITE SPECIFIC ASBESTOS AWARENESS/HAZARD COMMUNICATION TRAINING

VASDHS employees, general contractors, sub-contractors, vendors, and tenants who perform their regular duties in areas which contain ACM or PACM, and/or may come in contact with ACM or PACM. At a minimum, the following entities shall receive training:

VASDHS Operating Unit and Service Managers (Supervisors)

Vendors and Tenants {Hired by VASDHS Operating Unit and Service Managers (Supervisors)}

Information Technologies Services (ITS) Staff

Environmental Services Staff

Fleet Management Team

Maintenance & Repair Staff

Biomedical Engineering Staff

Training Topics include:

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Identification and location of specific ACM and PACM;

VASDHS policies and procedures specific to asbestos (e.g., Asbestos ESOP);

Roles and responsibilities of the asbestos management team (organizational structure of the O&M);

Specific personal protective equipment (PPE);

Respirator training and fit testing;

Health effects of asbestos; and

Proper response to fiber release episodes (Minor and Major).

CLASS III OPERATIONS – SIXTEEN HOUR SITE-SPECIFIC OPERATIONS, MAINTENANCE, AND REPAIR TRAINING

VASDHS staff, general contractors, sub-contractors, vendors, and tenants who perform repair and maintenance operations in areas where ACM or PACM is likely to be disturbed. At a minimum, the following entities shall receive training:

Information Technology Service (ITS) Staff

Plant Operations Staff

Operations and Maintenance Staff

Structural Team

Electrical/Electronics Team

Equipment Repair/Pipefitting Team

General Contractors, Sub-Contractors (Contracted by Staff)

Disturbance activities expected under this category would include:

Response to fiber release episodes (Minor and Major);

Clean up of minor fiber release episodes (e.g., less than 6 linear feet (<6 LF) or less than ten square feet (<10 SF) of ACM (e.g., fallen ceiling tile/spray-applied fireproofing debris from the Interstitial Space above into occupied areas);

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Operations and Maintenance removal and repair (e.g., removal of insulation to repair a pipe leak) that generates no more than one (1) 60" x 60" bag of asbestos waste; and

Access to Interstitial Space, Basement Utility Tunnel to Building #2 Mechanical Room, and other posted regulated areas.

CLASS I AND II OPERATIONS – FOUR DAY WORKER AND FIVE (5) DAY SUPERVISOR TRAINING

VASDHS P&H, General Contractors (asbestos abatement Sub-Contractors), and asbestos abatement contractors, who perform their regular duties in areas which contain ACM or PACM, and may engage in activities to remove TSI, surfacing, miscellaneous, and other ACM or PACM.

VASDHS contracts Class 1 (e.g., removal of Thermal Systems Pipe Insulation (TSI) and Surfacing ACM) and Class II (e.g., removal of vinyl floor tiles/mastic) ACM removal to licensed asbestos abatement contractors using negative pressure enclosures for planned demolition and renovation projects.

Clean up of major fiber release episodes (e.g., >6 LF or >10 square feet of ACM (e.g., fallen ceiling tile, spray-applied fireproofing debris from Interstitial Space into occupied areas); and

Operations and Maintenance removal and repair (e.g., removal of insulation to repair a pipe leak) that will generate more than one (1) 60" x 60" bag of asbestos waste.

6.0 RESPONSIBILITIES

Implementation of this O&M Program will require involvement from all levels of VASDHS staff and management. The Asbestos Program Manager (APM) with assistance from Environment, Health & Safety (EH&S) Office and Chief of Engineering Service, shall be responsible for carrying out day-to-day functions since he/she is on-site and cognizant of site activities. VASDHS staff and management shall rely upon the services of the designated Asbestos Consultant and designated Hazardous Materials Contractor to conduct clean up of fiber release episodes, O&M Program removal, and removal of known ACM in conjunction with planned demolition/renovation projects. An overall Organizational Structure is described in Figure 1.

Director, Engineering Service

The Director, Engineering Service is responsible for establishing VASDHS asbestos O&M Program policies that shall be adhered to in the building.

Environment, Health & Safety (EH&S)

EH&S Safety Office and Engineering Service are responsible for the following:

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Implementing VASDHS O&M Program policies;

Assisting the APM with periodic and three year AHERA asbestos inspections;

Responding to employee reports of alleged unsafe or unhealthful working conditions (GEMS - Appendix A, Checklist 4), and

Responding to asbestos fiber release episodes (Major and Minor).

Asbestos Disposal: VASDHS Hazardous Waste Manager/Asbestos Program Manager -

Hazardous Waste Manager: Responsible for tracking the disposal of all asbestos waste generated by VASDHS. (SDAPCD Rule 361.145)

Hazardous Waste Manager: Responsible for ensuring that asbestos is properly bagged and labeled for disposal in VASDHS asbestos container (Building 19). ((29 CFR 1910.1001(j) & (k))

Hazardous Waste Manager: Responsible for ensuring the proper completion of the manifest and landfill disposal documentation. (SDAPCD Rule 361.145) for the asbestos waste in Building 19.

If a project generates less than 30 cubic yards of friable asbestos total, then the Project Manager or the asbestos contractor should contact the Hazardous Waste Manager (ext. 1052 or 858-967-6356) 24 hours in advance to dispose of “friable” asbestos in the VASDHS asbestos container (Building 19).

If the “friable” asbestos project generates **more than 30 cubic yards of asbestos**, the asbestos contractor is responsible for the temporary on-site storage of the waste in an asbestos bin, which is properly prepared with a plastic lining.

The friable asbestos must be removed every 90 days. The asbestos contractor must contact the Hazardous Waste Manager for the inspection of the contractor’s asbestos bin prior to transport.

The Hazardous Waste Manager (ext. 1052 or 858-642-1052) will sign the manifest as the “Generator” and provide the required copies to the contractor and transporter.

If the shipment of friable asbestos is going to a California landfill, a “Land Disposal Restriction” certification is also required.

The “friable” asbestos should be doubled bagged (6 mil), properly labeled, taped and the top of the bag “goosed necked” to provide adequate closure.

California Code of Regulations, Title 22, section 66262.32 requires that hazardous waste containers with a capacity of 110 gallons or less be marked with the following words and

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information in accordance with the requirements of 49 Code of Federal Regulations section 172.304:

Hazardous Waste - State and Federal Law Prohibit Improper Disposal. If found, contact the nearest police or public safety authority or the California Department of Toxic Substances Control.

Generator's Name

Address

Manifest Document Number

“Friable” asbestos that cannot be enclosed in an asbestos bag, should be doubled wrapped in 6 mil. plastic, sealed with duct tape, and properly labeled.

“Non-Friable” asbestos should be disposed as a “special waste” and the Contractor is required to follow the proper procedures for disposal and provide the disposal document to the VASDHS Hazardous Waste Manager.

Asbestos waste (friable or non-friable) shall not be disposed in any VASDHS trash cart or container or at the Medical Waste Facility – Building 18. As per the contract and California regulation, all friable asbestos waste generated during the project must be properly disposed in the contractor’s asbestos bin or the VASDHS asbestos bin – Building 19. Building 19 is only used for projects which generate less than 30 cubic yards of friable asbestos total.

Please review the following links for additional information about asbestos management.

Asbestos Regulations: <http://www.dir.ca.gov/title8/1529.html>

Asbestos Fact Sheet and Managing Asbestos:

http://www.dtsc.ca.gov/PublicationsForms/prog_pubs.cfm?prog=Managing%20Waste

Asbestos Program Manager

The Asbestos Program Manager (APM) will be located at VASDHS and will be the on-site contact person and coordinator for all asbestos related activities in the building. His/her responsibilities include:

VASDHS Asbestos Management Plan (written plan) annual review & update;

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Conduct AHERA inspection as required;

Conduct AHERA re-inspection every three years

Conduct informal visual inspection every six (6) months that can coincide with the Environment of Care Rounds

VASDHS Asbestos abatement specification & contract development and approval;

Audit of Engineering Department asbestos abatement projects to include attendance at project kickoff meetings and progress meetings, conduct and document routine inspections of work sites and interstitial spaces:

Authorize to stop work in the event of non-compliance with VA directives or contractual agreement specific to asbestos or safety hazard at project site;

Insure that vendors, general contractors, and sub-contractors working in the building participate in, or comply with VASDHS asbestos training, respiratory program, and air monitoring requirements;

APM to be included as a Medical Surveillance project team member to communicate between VASDHS EH&S Office and Employee Health department issues specific to asbestos, including respirators and employee exposure to asbestos. This recommendation is supported by Dr. Jennifer Javors, Medical Director of Employee Health;

OSHA air monitoring compliance with PEL of 0.1f/cc and Short Term Exposure Limit (STEL) monitoring of 1.0 f/cc, as averaged over a 30 minute sampling period. (VASDHS personnel working in the Interstitial Spaces should be assessed for OSHA Asbestos PEL/STEL compliance);

Respiratory protection program compliance specific to asbestos, to include written respiratory protection plan, training, recordkeeping, and fit testing;

Respiratory protective equipment and PPE compliance auditing (e.g. interstitial space);

Asbestos waste management oversight and recordkeeping;

Asbestos training development;

Attendance at industry-specific seminars, trade shows, etc. to keep current with asbestos abatement best management practices, personal protective equipment, and industrial hygiene methods specific to asbestos;

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Annual audit of laboratories providing asbestos analytical services to VASDHS (e.g. Phase Contrast Microscopy (PCM), Polarized Light Microscopy (PLM), and (Transparent Electron Microscope) analysis);

Annual audit of asbestos consultant firms providing testing, analysis and/or consultation services to VASDHS;

Annual audit of asbestos abatement contractors providing removal, encapsulation, and/or encasement services to VASDHS;

Annual audit of asbestos waste transportation and disposal facilities “cradle to grave”;

Coordination of all emergency response to asbestos fiber release episodes (major and minor), (e.g., air monitoring for asbestos fibers, bulk sampling of suspect asbestos containing debris;

Communication with Collective Bargaining Unit through HRMS;

Asbestos safety bulletins and letters; and

Communication with employee health, employees and leadership.

The Asbestos Program Manager is Chae Kim, at extension 1229 or 858-232-5598.

Engineering Office Staff

The Engineering Office Staff are responsible for adhering to the policies and procedures described in this policy. Furthermore, the Engineering Office Staff shall report any visible disturbance or deterioration of known ACM to their Supervisor, EH&S, or APM. The Engineering Office Staff shall:

Notify the APM and EH&S of any demolition and renovation projects and other construction activities in the building that may impact ACM or PACM (Checklist 5);

Notify vendors, contractors, sub-contractors, and tenants of VASDHS asbestos O&M plan requirements (Checklist 3);

Insure that vendors, contractors, sub-contractors, and tenants asbestos Supervisor/Worker documentation (e.g., training, medical exam, and respiratory fit test) are current, and

Correct submittal of notifications/permits to regulatory agencies {e.g., San Diego Air Pollution Control District (SDAPCD)} has been completed. See attachment 1 or download document at:

<http://www.sdapcd.org/comply/asb/asbestos.html>

VASDHS Operating Unit and Service Managers (Supervisors)

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The VASDHS Operating Unit and Service Manager (Supervisors) are responsible for adhering to the policies and procedures described in this policy. Furthermore, the VASDHS Operating Unit and Service Manager (Supervisors) shall report any visible disturbance or deterioration of known ACM to their Supervisor, EH&S, or APM. The VASDHS Operating Unit and Service Manager (Supervisors) shall also notify the APM and EH&S of any demolition and renovation projects and other construction activities in the building that may impact ACM or PACM (Checklist 5), and notify vendors of VASDHS asbestos O&M plan requirements (Checklist 3).

Environmental Services Staff

The Environmental Services Staff is responsible for adhering to the policies and procedures described in this policy. Furthermore, the Environmental Services staff shall report any visible disturbance or deterioration of known ACM to their Supervisor, EH&S, or APM.

Fleet Management Team

The Fleet Management staff is responsible for adhering to the policies and procedures described in this policy. Furthermore, the Fleet Management staff shall report any visible disturbance or deterioration of known ACM to their Supervisor, EH&S, or APM.

Maintenance & Repair Staff

The Maintenance & Repair staff is responsible for adhering to the policies and procedures described in this policy. Furthermore, the Maintenance & Repair staff shall report any visible disturbance or deterioration of known ACM to their Supervisor, EH&S, or APM.

Biomedical Engineering Staff

The Biomedical Engineering staff is responsible for adhering to the policies and procedures described in this policy. Furthermore, the Biomedical Engineering staff shall report any visible disturbance or deterioration of known ACM to their Supervisor, EH&S, or APM. This staff is barred from the interstitial spaces.

Information Technologies Service (ITS) Staff

The Information Technologies Service (ITS) staff are responsible for adhering to the policies and procedures described in this policy. Furthermore, ITS staff shall report any visible disturbance or deterioration of known ACM to their Supervisor, EH&S, or APM. The ITS staff are also responsible for performing their regular duties in areas which contain ACM or PACM and performing limited disturbance activities defined as accessing above-ceiling plenums and the interstitial spaces to pull data cables and wires.

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Plant Operations Staff

The Plant Operations staff in Building 2 are responsible for adhering to the policies and procedures described in this policy. Furthermore, Plant Operations staff shall report any visible disturbance or deterioration of known ACM to their Supervisor, EH&S, or APM. The Plant Operations staff are responsible for performing their regular duties in areas which contain ACM or PACM. Plant Operations Staff are also responsible for:

Accessing above-ceiling plenums the Interstitial Spaces, Basement Utility Tunnel to Building #2 Mechanical Room, and other posted regulated areas;

Responding to fiber release episodes (Minor and Major);

Clean up of minor fiber release episodes (e.g., less than 6 linear feet (<6 LF) or less than ten square feet (<10 SF) of ACM (e.g., fallen ceiling tile/spray-applied fireproofing debris from Interstitial Space in a patient care area.

Operations & Maintenance Staff

The Operations & Maintenance staff are responsible for adhering to the policies and procedures described in this policy. Furthermore, Operations & Maintenance staff shall report any visible disturbance or deterioration of known ACM to their Supervisor, EH&S, or APM. The Operations & Maintenance staff are also responsible for performing their regular duties in areas which contain ACM or PACM and perform limited disturbance activities defined as accessing above-ceiling plenums and the Interstitial Spaces.

Structural Team

The Structural Team staff are responsible for adhering to the policies and procedures described in this policy. Furthermore, Structural Team staff shall report any visible disturbance or deterioration of known ACM to their Supervisor, EH&S, or APM. The Structural Team staff are also responsible for performing their regular duties in areas which contain ACM or PACM. The Structural Team Staff are also responsible for:

Accessing above-ceiling plenums and the Interstitial Spaces, Basement Utility Tunnel to Building #2 Mechanical Room, and other posted regulated areas;

Responding to fiber release episodes (Minor and Major);

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Clean up of minor fiber release episodes (e.g., less than 6 linear feet (<6 LF) or less than ten square feet (<10 SF) of ACM (e.g., fallen ceiling tile/spray-applied fireproofing debris from Interstitial Space into occupied areas); and

Operations and Maintenance removal and repair (e.g., removal of insulation to repair a pipe leak) that generates no more than one (1) 60" x 60" bag of asbestos waste. This team will contract out abatement to a certified contractor and have the area cleared by a consultant.

Electrical/Electronics Team

The Electrical/Electronics Team staff are responsible for adhering to the policies and procedures described in this policy. Furthermore, Electrical/Electronics Team staff shall report any visible disturbance or deterioration of known ACM to their Supervisor, EH&S, or APM. The Electrical/Electronics Team staff are also responsible for performing their regular duties in areas which contain ACM or PACM. The Electrical/Electronics Team staff are also responsible for:

Accessing above-ceiling plenums and the Interstitial Spaces, Basement Utility Tunnel to Building #2 Mechanical Room, and other posted regulated areas.

Equipment Repair/Pipefitting Team

The Equipment Repair/Pipe Fitting Team are responsible for adhering to the policies and procedures described in this policy. Furthermore, Equipment Repair/Pipe Fitting Team shall report any visible disturbance or deterioration of known ACM to their Supervisor, EH&S, or APM. The Equipment Repair/Pipe Fitting Team are also responsible for performing their regular duties in areas which contain ACM or PACM. The Equipment Repair/Pipe Fitting Team are also responsible for:

Accessing above-ceiling plenums and the Interstitial Spaces, Basement Utility Tunnel to Building #2 Mechanical Room, and other posted regulated areas.;

Responding to fiber release episodes (Minor and Major);

ACM and PACM Abatement, Removal, and Repair activities are prohibited by unauthorized VASDHS employees, medical staff, vendors (contractors and sub-contractors), patients, tenants, and guests. All work must be performed by designated Hazardous Materials Contractors with oversight by the APM or designated Asbestos Consultants. ACM disturbance activities by designated engineering staff are limited to accessing above-ceiling plenums and the Interstitial Spaces, clean up of minor fiber release episodes, and operations and maintenance removal and repair that generates no more than one (1) 60" x 60" bag of asbestos waste, as outlined in the O & M.

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Designated Asbestos Consultant

VASDHS will retain qualified and experienced Asbestos Consultants to assist the VASDHS, EH&S, and the APM, and other company representatives, as needed. The designated Asbestos Consultant will, in conjunction with planned demolition and renovation projects, be available to perform building surveys, assess conditions of ACM, test and monitor airborne fiber concentration levels, and provide asbestos abatement design and monitoring services, as required.

Patriot Environmental Laboratory Services, Inc.

Designated Hazardous Materials Contractor

The Designated Hazardous Materials Contractor shall be responsible for certain asbestos-related response actions including response to, and clean up of, major fiber release episodes, abatement of disturbed materials, repair of damaged materials, and abatement of known ACM during renovation and construction projects on behalf of VASDHS (Class I and II Operations). The threshold for contracting outside support is the disturbance to or damage of >6 LF or >10 square feet of ACM. In-house activities related to the disturbance or removal of ACM is limited to that by the Engineering Staff who are trained to isolate areas of damaged ACM where fiber release episodes (Minor and Major) have occurred, limited disturbance activities such as accessing above-ceiling plenums and the Interstitial Spaces, Clean up of minor fiber release episodes (<6 LF and <10 SF) of ACM (e.g., fallen ceiling tile/spray-applied fireproofing debris from Interstitial Space into occupied areas); and the Asbestos Program Manager will determine whether the “Designated Hazardous Materials Contractor” should be contacted for the clean up of the asbestos-related release.

Employee Health

The Medical Surveillance Program is administered by the VASDHS Employee Health Department. Safety Management Plan (Checklist 2).

7.0 AREAS OF KNOWN CONTAINING ASBESTOS-CONTAINING MATERIALS

Building materials such as 9” x 9” vinyl floor tiles, 12” x 12” vinyl floor tiles and associated mastics, vinyl sheet floorings, spray-applied fireproofing in the above-ceiling plenum/Interstitial Spaces, pipe/fitting insulation in the above-ceiling plenum and Interstitial Spaces, wall joint compound associated with wall sheetrock (drywall) wall systems, laboratory countertops, fume hood liners, and roofing materials have been determined to be asbestos-containing. These ACMs are located in select areas throughout the building.

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The ACM's identified in this O&M program are in good condition, intact and should not pose a health risk to the building occupants if left undisturbed and managed in place. Please note, Patriot's investigation found several areas of un-encapsulated spray-applied fireproofing in the interstitial spaces, for which Patriot recommends applying an encapsulant immediately.

Additional information can be found in the *Comprehensive Asbestos Management Survey Report, Veterans Administration San Diego Healthcare System, Buildings #1 and #2, San Diego, California*, Prepared by RORE, Inc. under contract with Potomac-Hudson Engineering, Inc., Subcontract No. C80392-01, January 14, 2009, Contract No. GS-10F-0045K.

8.0 GENERAL REQUIREMENTS

The general requirements for managing ACM in the buildings can be broken down into functions classified as either: 1) administrative, 2) surveillance, monitoring and inspections, 3) Class I and II Operations, and 4) Class III and IV Operations as shown in Figure 2 – General Requirements. There are Checklists and Instructions contained in GEMS - Appendix A which apply to each function.

Although certain functions are carried out by the Safety Management Sub-Committee, EH&S, Engineering, Environmental Services, IT Staff, and the VASDHS Employee Health Department, the APM is responsible for coordination of all activities.

9.0 RESPONSE PROCEDURES FOR MAJOR AND MINOR FIBER RELEASE EPISODES

As long as ACM remains in the building, a fiber release episode could occur if the ACM and PACM is inadvertently disturbed by operational, maintenance, or construction activities.

Fiber release episodes, which are defined as “the uncontrolled or unintentional disturbance of ACM or PACM which results in a visible emission,” are divided into two (2) categories:

Minor Fiber Release Episodes: Disturbance and release of less than 6 linear feet (<6 LF) or less than ten square feet (<10 SF) of ACM or PACM (e.g., fallen ceiling tile/spray-applied fireproofing debris from the Interstitial Spaces above, into occupied areas, or debris generated as the result of a pipe leak) that will generate no more than one (1) 60” x 60” bag of asbestos waste.; and

Major Fiber Release Episodes: Disturbance and release of >6 LF or >10 SF of ACM or PACM (e.g., fallen ceiling tile, spray-applied fireproofing debris from the Interstitial Space into occupied areas, or debris generated as the result of a pipe leak) that will generate more than one (1) 60” x 60” bag of asbestos waste;.

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The disturbance area is determined by measuring the damage on the substrate from where the ACM or PACM was released from, not the area of debris on the floor or other receiving surface.

VASDMC employees, medical staff, vendors and, tenants, should immediately report to their Operating Unit or Service Managers (Supervisors) or EH&S (Checklist 4 in GEMS - Appendix A), of the presence of suspect asbestos-containing debris on the floor, water or physical damage to the ACM or PACMS, or any other evidence of a fiber release. VASDMC Engineering Staff, IT Staff, and (contractors and sub-contractors) should immediately report to the APM or EH&S the presence of suspect asbestos-containing debris on the floor, water or physical damage to the ACM or PACMS, or any other evidence of a fiber release. The APM must notify EH&S of fiber release episodes.

Trained EH&S, Engineering and Maintenance Staff, or the designated Hazardous Materials Contractor may then take the following steps, with assistance from EH&S and the APM:

Remove personnel from the fiber release episode (spill) area;

Evaluate the extent of ACM or PACM damage;

Barricade contaminated areas against entry by unauthorized personnel;

Isolate the contaminated area by sealing doors and vents with polyethylene sheeting and duct tape and shutting off or modifying air handling system(s), or any other notification appropriate to restrict access or prevent exposure in other areas of the facility;

Post a warning sign in English and Spanish outside the contaminated area.

The APM may then take the following steps:

Minor Fiber Release Episodes

The area should be isolated (full containment is not required) and cleared of unnecessary personnel;

Workers should wear respirators with HEPA filters, for which they have been trained and medically cleared to wear;

The debris should be thoroughly wetted with water, using a fine spray. The area affected should be kept as small as possible, and care must be taken to prevent water runoff which may spread asbestos contamination;

Area should be cleaned with wet cloths or a mop. Alternately, the debris may be collected with a HEPA vacuum;

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Debris should be placed in labeled, 6-mil. plastic bags, ultimately double bagged and properly sealed for disposal;

The damaged area should be repaired with an asbestos-free material (e.g., install a new ceiling tile), or sealed with an encapsulant; and

Workers should then follow proper personal decontamination procedures as defined in the previous sections.

Major Fiber Release Episodes

The area should be isolated as soon as possible after the ACM debris is discovered. Where the area may be sealed by doors, they should be locked from the inside, but fire exit corridors must remain in operation. Appropriate signs must be posted to prevent unauthorized personnel from entering the work area.

The air handling system should be shut off or temporarily modified to prevent the distribution of fibers from the work area into other areas of the building. If possible, doors, windows, and Heating Ventilation Air Condition registers should be sealed with 6-mil plastic sheeting and duct tape.

The cleanup should be treated as a Class I or Class II removal project, performed by the designated Hazardous Materials Contractor. This includes construction of negative pressure enclosure, decontamination facilities, and air monitoring.

If significant damage or delamination of ACM has occurred, consider total removal of the ACM by the designated Hazardous Materials Contractor in the affected areas and replacement with a non-asbestos-containing substitute.

Keep all records associated with the fiber release episode, including asbestos abatement contractor submittals (medical information, waste shipment records, etc.), designated Asbestos Consultant's reports (air sampling data), and a fiber release episode report.

NOTE: The designated APM and the Asbestos Consultant will secure and maintain all necessary documentation and records associated with the work.

To respond to fiber release episodes, the following materials will be available at each facility and accessible to Trained Engineering Staff for the purpose of isolating areas of damaged ACM.

SECTION D - CONTRACT DOCUMENTS, EXHIBITS, OR ATTACHMENTS**FIBER RELEASE EPISODE SUPPLIES**

| Item | Recommended Quantity |
|---|-----------------------------|
| Respirator (half-face) | 2 |
| Barricade Tape (3 inches x 1,000 feet) | 1 roll |
| Duct Tape (3 inch x 60 yard/roll) | 3 rolls |
| Polyethylene Sheet (6-mil) sheet (20 feet x 100 feet) | 1 roll |
| Sign - DANGER (14 inches x 20 inches) | 5 |
| Sign - KEEP OUT | 5 |
| Surfactant | 1 gallon |
| Hudson Sprayer | 1 each |
| Disposable Gloves (Latex) | 1 box |
| Disposable Suits (Tyvek) | 2 boxes |
| Utility Knife | 2 each |
| Waste Disposal Bags (Pre-labeled) (6-mil) | 1 roll |
| Spray Adhesive | 1 box (12 cans) |
| Rags, Towels | 1 box |
| Respirator Filter Cartridges | 2 boxes (12 sets) |

Any additional response actions for fiber release episodes will be determined by the APM, EH&S, the designated Asbestos Consultant and conducted by the designated Hazardous Materials Contractor.

Note: If ceiling tiles are damaged, they must be replaced with Parkland Plastics Repertorie Ceiling Tiles.

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10.0 ACCESSING ABOVE CEILING PLENUMS

Accessing above ceiling plenums by trained Engineering Staff to perform routine maintenance activities is limited to that which will not disturb and release >6 LF or >10 SF (approximately two (2) ceiling tiles) of ACM or PACM.

Mobilize Control Cube (s) and supplies to the work area (s).

Post bilingual warning signs on Control Cube door and place safety cones around Control Cube.

Don personal protective equipment (PPE) (e.g., disposable suit, respirator, gloves, etc.)

Enter Control Cube with HEPA vacuum and required tools and supplies.

Mist Control Cube interior with airless sprayer and carefully remove ceiling tiles trying to minimize dust and debris falling in to the Control Cube.

Carefully lift up ceiling tile. Keep the ceiling tile as flat as possible while lifting. Lift tile slightly above grid system and slowly slide tile to one side, leaving tile on top of an adjacent tile.

After tiles have been removed, enter into the ceiling plenum and mist immediate area around the opening and HEPA vacuum debris within arms length around the opening.

Perform required maintenance or data/cable pull, etc.

Reinstall ceiling tiles or temporarily seal ceiling opening with plastic sheeting and duct tape.

HEPA vacuum the interior of the Control Cube.

Remove disposable suit, turn inside out and place in waste disposal bag.

Exit Control Cube and remove respirator.

Dispose of polyethylene sheeting, cleaning rags and any PPE clothing as asbestos-containing waste.

Demobilize from the work area and proceed to restroom to rinse respirator and waste hands and face.

Store waste bag (s) a designated temporary storage area.

The following materials will be available to Trained Engineering Staff for the purpose of accessing above ceiling plenums.

SECTION D - CONTRACT DOCUMENTS, EXHIBITS, OR ATTACHMENTS**ACCESSING ABOVE CEILING PLENUMS SUPPLIES**

| Item | Recommended Quantity |
|---|-----------------------------|
| Respirator (half-face) | 2 |
| Barricade Tape (3 inches x 1,000 feet) | 1 roll |
| Duct Tape (3 inch x 60 yard/roll) | 3 rolls |
| Polyethylene Sheet (6-mil) sheet (20 feet x 100 feet) | 1 roll |
| Sign - DANGER (14 inches x 20 inches) | 5 |
| Sign - KEEP OUT | 5 |
| Surfactant | 1 gallon |
| Hudson Sprayer | 1 each |
| Control Cube | 1-2 |
| HEPA Vacuum | 1 |
| Disposable Gloves (Latex) | 1 box |
| Disposable Suits (Tyvek) | 2 boxes |
| Utility Knife | 2 each |
| Waste Disposal Bags (Pre-labeled) (6 mil) | 1 roll |
| Spray Adhesive | 1 box (12 cans) |
| Rags, Towels | 1 box |
| Respirator Filter Cartridges | 2 Boxes (12 sets) |

11.0 Operations and Maintenance Removal and Repair

Procedures can be found in Safety Management Plan and Comprehensive Asbestos Management Survey Report.

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12.0 Accessing Interstitial Spaces and Any other Posted Regulated Areas

In order to prevent the migration of asbestos fibers from one area to another it is important to adhere to comprehensive decontamination procedures. The following general procedures will help minimize the potential of spreading asbestos contamination:

Equipment

Clean all visible debris from equipment by wiping with wet cloths or HEPA vacuuming;

Vacuum off any loose debris from disposable clothing;

Hands, face and outside of respirators will then be wiped with a wet cloth and respirators removed;

Equipment with porous surfaces, i.e. wood ladders or wood handle tools, should be avoided. However, if equipment with porous surfaces must be used, it should be placed in a plastic bag or wrapped in polyethylene sheeting in the work/regulated area. Prior to removing equipment from the work area polyethylene bags/sheeting will be wet wiped until all visible debris is removed; and

Equipment that cannot be decontaminated or sealed in polyethylene for use in a future regulated area will be disposed of as asbestos-contaminated waste.

Area

In order to minimize the potential of asbestos fibers migrating from the regulated area, the following tasks shall be performed:

The work/regulated areas or catwalks will be cleaned of all visible debris by wet wiping or HEPA vacuuming methods;

Polyethylene drop cloths or containment will be removed and disposed of as asbestos-containing waste.

Personal

After working in a regulated area, workers will decontaminate themselves prior to leaving regulated areas and entering occupied areas of the VASDHS by performing the following tasks:

While still wearing a respirator, workers will HEPA vacuum off any loose debris from disposable clothing;

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Disposable clothing will then be removed by slowly rolling down and turning inside out;

Disposable clothing will be placed in asbestos waste bags;

Hands, face and outside of respirators will then be wiped with a wet cloth. Respirators will be removed after leaving regulated area;

It is recommended that workers wash their hands after performing the above decontamination procedures. In addition, workers wanting to shower at the end of the work shift may do so in the men's or women's locker room located on the basement floor.

HEPA vacuums and wash stations at the entrances to the Interstitial clean rooms leading to the elevators should be made available.

13.0 Respiratory Protection

The VASDHS Respiratory Protection Program is presented in the VASDHS Safety Management Plan.

14.0 MEDICAL SURVEILLANCE

The VASDHS Medical Surveillance Program is presented in the VASDHS Safety Management Plan.

15.0 BACKGROUND INFORMATION

Background information is presented in the Safety Management Plan and the Comprehensive Asbestos Management and Survey Report to help users understand the historical uses of ACM, health effects associated with exposure, and applicable laws and regulations.

16.0 Responsibilities

The Chief of EH&S is responsible for the overall monitoring of the program and will ensure all personnel involved in the program perform their assigned functions and operate in compliance with these instructions and applicable regulation.

ATTACHMENT-1



APCD Form.doc

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ATTACHMENT-2



Asbestos
Summary.doc

17.0 Building description

The VASDHS Buildings #1 and #2 (Buildings) were reportedly constructed between 1968 and 1972, and occupy approximately 1,045,000 square feet within the VASDHS complex. Building #1 is a six-story medical facility, which includes a Penthouse and a Basement, and Interstitial Spaces above the suspended ceilings that houses building utilities such as electrical and communications systems, medical gases, and the HVAC mechanical systems. Building #2 is the two-story power plant for the VASDHS complex.

Building #1 is a concrete and steel frame truss structure insulated with asbestos containing spray-on fireproofing. The interior walls are constructed of sheetrock seamed together with joint compound, troweled-on plaster over welded wire mesh, and unfinished concrete. Wall ceramic tile is present in the Restrooms. Ceiling finishes include various types of mineral fiber-type lay-in ceiling panels, sheetrock seamed together with joint compound, troweled-on plaster over welded wire mesh, spray-applied acoustical finishes ("popcorn ceilings"), and unfinished concrete. Floor finishes include vinyl floor tile (VFT) and vinyl sheet flooring (VSF) adhered with latex adhesives and cutback mastics (FTM), carpeting adhered with latex adhesives, concrete, ceramic tiles, and stone/composite tiles. Vinyl baseboards adhered with latex adhesives are also present in select locations of the building. The exterior finish consists of stucco over welded wire mesh. Roof finishes include rolled felt field membranes and asbestos-containing mastic at penetrations.

Building #2 is a concrete and steel frame structure which houses the mechanical systems such as the boiler and chiller units which service the VASDMC complex. In Patriot Environmental Laboratory Services, Inc.'s 2010 Report, it indicates that asbestos-containing TSI has been removed from pipes, tanks and vessels in Building #2. As indicated in Patriot Environmental Laboratory Services, Inc.'s 2010 Report, verbal communication from VASDHS personnel has also confirmed that ACMs were removed from Building #2. Limited bulk sampling of accessible TSI (e.g., TSI not enclosed with metal jackets) was conducted by and asbestos was not detected in the bulk samples.

High pressure steam (HPS), condensate, and chilled water (CW) pipe systems were observed to originate in Building #2 at the entrance to the Utility Tunnel and are then routed

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through the Utility Tunnel which connects to Building #1 into Room B251, "Jungle Room". The HPS lines were previously insulated with pre-fabricated, asbestos-containing composition silicates wrapped with canvas jackets and metal jacketing. The associated fittings were packed with asbestos-containing mud" compounds wrapped with canvas jackets⁸. The HPS line had continued into Room B251 for approximately ten (10) linear feet and was then insulated with non-asbestos containing fiberglass and canvas/foil jackets under metal jacketing. The condensate and CW lines and associated fittings in the Tunnel were insulated with fiberglass and canvas/foil jackets under metal jacketing.⁹ The CW lines at the entrance to the Utility Tunnel from Room B251 were insulated with pre-fabricated, asbestos-containing composition silicates wrapped with canvas jackets and metal jacketing. The associated fittings were previously packed with asbestos-containing "mud" compounds wrapped with canvas jackets. According to VASDHS personnel, asbestos abatement activities have since been conducted in the Utility Tunnel and Room B251, "Jungle Room". Furthermore, all pipes in Room B251 were observed to have "asbestos-free" signs mounted on them. According to VASDHS personnel, all asbestos-containing pipes and associated fittings in the Utility Tunnel have been abated, and thus the Utility Tunnel is no longer considered a regulated area.

Heating, Ventilation, and Air Conditioning (HVAC) in Building #1 is provided by ducted supply and return air systems connected to the building mechanical systems located in the Interstitial Spaces above each floor. Access to the mechanical systems in the Interstitial Spaces is provided by steel catwalks suspended over the lay-in ceiling systems. HVAC ductwork seams are sealed with an asbestos-containing sealant. Plumbing systems observed in the Interstitial Spaces included Heating Hot Water Supply and Return (HHWS&R), and domestic hot and cold water (DHW/DCW), which are insulated with pre-fabricated, non-asbestos-containing fiberglass wrapped with canvas or foil jackets. The associated fittings are packed with asbestos-containing "mud" compounds wrapped with canvas jackets. Sanitary waste/vent and storm drain piping was observed to be uninsulated (black cast iron).

18.0 DEFINITIONS

Accessible material - any material to which access can be gained by any means other than significant destruction of building components; or, for the purposes of describing building occupant activities, a material subject to disturbance by routine use or maintenance activities.

Asbestos - the general name given to a number of naturally occurring hydrated mineral silicates, each of which possess a specific crystalline structure, is incombustible in air, and is separable into fibers. Asbestos includes the asbestiform varieties of Chrysotile (serpentine), Crocidolite (riebeckite), Amosite (cummingtonite-grunerite), Anthophyllite, and Actinolite.

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Asbestos-Containing Material (PACM) - may be defined, as by the EPA, as any friable material or product containing greater than one percent asbestos or, by convention, as any material or product which contains >1% asbestos.

Asbestos debris - pieces of material which can reasonably be identified by color, texture, or composition as being traceable to a known asbestos-containing application. May mean dust, if the dust is determined by analysis to be PACM.

Bulk samples - samples of bulk material; in the case of asbestos, suspect asbestos-containing material.

Chain-of-custody - formal procedures for tracking samples and ensuring their integrity.

Chatfield “Standard Operating Procedure” - a sample preparation procedure for materials other than friable insulation in which, by means of acid digestion and ashing, it is possible to separate asbestos fibers from hard-to-analyze matrices. This preparation technique is used most often in conjunction with Electron Microscopy (EM) and is considered state-of-the-art for materials such as floor tile, plaster, and textured ceiling material.

Encapsulation - treatment of PACM with a material that surrounds or embeds asbestos fibers in an adhesive or cementitious matrix to inhibit the release of fibers. The encapsulant creates a membrane over the surface of the material (bridging encapsulant), or penetrates the material or binds its components together (penetrating encapsulant).

Enclosure - an airtight, impermeable, permanent barrier around PACM to prevent the release of asbestos fibers into the air.

EPA - United States Environmental Protection Agency.

Fair - as used to describe material condition, damage is more prevalent or severe than on materials rated as good.

Fiber release episode - any uncontrolled or unintentional disturbance of PACM resulting in airborne asbestos fiber emission.

Friability - the physical characteristic of any solid that describes its ability to be broken down to a powder or dust. A highly friable material is one that can be easily crumbled by hand pressure. A moderately friable material is one that can be crumbled with some difficulty by hand pressure or by mechanical means. A low friability material is one that may require mechanical means to crumble. While the condition of a material does not constitute a measure of its friability, weathering and deterioration can increase the friability of a material.

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Glovebag - a plastic enclosure with built-in gloves which is placed with an airtight seal around asbestos-containing pipe lagging or other materials such that they may be removed or repaired without generating airborne fibers.

Good - as used in the context of material condition, integrity of the material is generally complete, with possible small areas of delamination or indications of limited contact or water damage. The mechanism to retain the insulation in its original position (e.g. cloth wrapping over pipe insulation) is still present.

Heating Ventilation and Air Conditioning (HVAC) system - the system of pipes, ducts, and equipment, (air conditioners, chillers, heaters, boilers, pumps, fans) used to heat, cool, and filter air and move it through a building. The HVAC system is one of several mechanical systems found in most buildings.

High-Efficiency Particulate Air (HEPA) filter - a filtering system capable of trapping and retaining at least 99.97 percent of all particles 0.3 micrometers in diameter or larger.

Homogeneous application - an application of surfacing material, thermal system insulation material, or miscellaneous material that is uniform in color, texture, and vintage of application.

Lock-down - application of a sealing material to ensure that any residual microscopic fibers remaining following asbestos removal are prevented from becoming airborne.

Mechanical system - a building component system: can include the plumbing system, elevator system, and others (see Heating Ventilation and Air Conditioning system [HVAC]).

NIOSH - United States National Institute of Occupational Safety and Health.

Operations and Maintenance (O&M) Program - a program of work practices and training and management procedures designed to maintain PACM in good condition. An O&M program ensures clean-up of asbestos fibers previously released and prevention of further release by minimizing and controlling PACM disturbance or damage. An O&M program should be implemented at all buildings with PACM.

Optical microscope - a microscope which uses the transmission of light through lenses to magnify a specimen for examination. Capable of resolution of fibers or other materials down to approximately 0.25 micrometers in diameter.

OSHA - United States Occupational Safety and Health Administration.

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Phase Contrast Microscopy (PCM) - an optical microscopic technique used for counting fibers in air samples. PCM does not distinguish between asbestos and non-asbestos fiber types. The PCM method currently recognized is referred to as NIOSH 7400.

Physical assessment - evaluating asbestos-containing material to determine its current condition and potential for future disturbance.

Plenum - a space in a building, other than a duct or shaft, designed to transport air. Plenums are commonly the space between a suspended ceiling and the floor above.

Polarized Light Microscopy (PLM) - an optical microscopic method for the identification of asbestos in bulk samples in which the sample is illuminated with polarized light.

Poor - as used in the context of material condition, material is obviously damaged with evidence of de-lamination or inadequate adhesion of the material to its substrate.

Presumed Asbestos Containing Materials (PACM) – material presumed to be asbestos containing until verified using AHERA sampling and analysis by PLM.

Quality Assurance (QA) - a process designed to provide confidence that the quality control program is being applied effectively. The process includes an auditing procedure designed to evaluate all known policies and procedures that affect the quality of results.

Quality Control (QC) - a program comprised of the operational procedures to ensure that data are of known and acceptable precision and accuracy.

Response action - any method, including removal, encapsulation, enclosure, repair, or Operations and Maintenance program, that minimizes harm to human health and the environment from the hazards and effects of PACM.

Scanning Electron Microscopy (SEM) - magnification 450-15,000x. Analytical technique used for air and bulk sample analysis. May use Energy Dispersive Spectroscopy (EDS) to positively identify chemical elements present in the sample. Method involves counting fibers (discriminating between fibers less than and greater than 5.0 microns length) in a known surface area of a filter or bulk material.

Specifications - a written set of standards, procedures, and materials for the abatement of asbestos. Includes contract documents detailing the Scope of Work of the project and defining Contractor, Building Owner, and Consultant responsibilities.

Transite - a trade name for asbestos cement wallboard or pipe.

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Transmission Electron Microscopy (TEM) - State-of-the-art analytical method for air and bulk sample analysis. Uses high magnification (typically 15,000x) to identify asbestos fibers. May utilize Energy Dispersive Spectroscopy (EDS) and/or Selected Area Electron Diffraction (SAED) to confirm asbestos and to identify the type of asbestos present. Recommended for final clearance air samples and for bulk analysis of samples with difficult-to-analyze matrices (e.g., plaster, vinyl tile). Provides the most definitive analysis of asbestos currently available.