ASBESTOS SAFETY

A. REFERENCES:

- WSU Asbestos Management Plan (attached)
- SPPM 2.62 Respiratory Protection Program https://policies.wsu.edu/prf/index/manuals/2-00-contents/2-62-respiratory-protection-program/
- WAC 296-65-001 through 050 – Asbestos Removal and Encapsulation
- WAC 296-62-077 through 07761– *Asbestos, Tremolite, Anthophyllite, and Actinolite*

B. APPENDICES:

a. Appendix A: Asbestos Management Plan
b. Appendix B: Asbestos Work Hazard Assessment

C. PURPOSE AND SCOPE:

The policies and procedures identified herein reduce the potential for employee exposure to asbestos hazards. This chapter establishes requirements for employees that may encounter asbestos containing building materials. The WSU Asbestos Management Plan (Appendix A) is the primary policy document for asbestos management at WSU Tri-Cities and must be followed to meet regulatory safety and disposal requirements.

D. DEFINITIONS:

Asbestos Program Manager: An employee assigned by the EHS department to act as the primary asbestos resource and Competent Person for employees and maintain the WSU Asbestos Management Program.
AHERA Building Inspector: One who has successfully completed the asbestos building inspector training requirements under 40 CFR 763 from an EPA accredited training source.
AHERA Project Designer: One who has successfully completed the asbestos project designer training requirements under 40 CFR 763 from an EPA accredited training source.
Asbestos-containing Material (ACM): any material containing more than 1% asbestos.
Asbestos Project or Asbestos Work: the construction, demolition, repair, remodeling, maintenance or renovation of any public or private building or structure, mechanical piping equipment or system involving the demolition, removal, encapsulation, salvage, or disposal of material or outdoor activity releasing or likely to release asbestos fibers into the air.

Assumed ACM: Assumed asbestos-containing material. Any suspect material that is not wood, metal, glass or structural concrete and has not been characterized by an AHERA Building Inspector.
Competent Person: One who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them as specified in WAC 296-62-07728. For the purpose of this document, the Competent Person for WSU Tri-Cities is the Asbestos Program Manager.

Disturb or Disturbance: activities that disrupt the matrix of ACM or PACM, crumble or pulverize ACM or assumed ACM, or generate visible debris from ACM or assumed ACM. This term includes activities that disrupt the matrix of ACM or assumed ACM, render ACM or assumed ACM friable, or generate visible dust or debris.
Regulated Area: An area established by the employer to demarcate areas where asbestos work is conducted, and any adjoining area where debris and waste from such asbestos work accumulate; and a work area within which airborne concentrations of asbestos, exceed or can reasonably be expected to exceed the permissible exposure limit (PEL)

E. TRAINING:

- Specified employees will receive initial hire asbestos awareness training provided online via Human Resource Services Learning and Organizational Development. More comprehensive training noted in the next bullet point below may be used to fulfill this requirement.
- Additional training is required for employees who may come into contact with non-intact or disturbed ACM or assumed ACM. Supervisors must ensure this training is completed and documented before allowing employees to perform those duties. Refer to Appendix A WSU Asbestos Management Program and the Asbestos Program Manager for more information.

F. GENERAL REQUIREMENTS:

- Refer to the WSU Asbestos Management Plan (attached) for specific WSU policy and procedures regarding asbestos management and safety.
- The EHS Asbestos Program Manager will fulfill Competent Person duties for WSU Tri-Cities personnel or other WSU employees throughout campus from emergencies that may have disturbed asbestos. This person is also responsible for the WSU Asbestos Management Plan and acts the primary resource for employees regarding asbestos safety. The Asbestos Management Plan must be updated, as needed, and meet regulatory requirements.
- All employees must comply with all appropriate safety and health rules and practices on contractor-controlled job sites. This may include additional PPE, safety clothing or areas designated for restricted access. Supervisors are responsible for reviewing these requirements and ensuring employee compliance to perform the work safely.
- All employees that enter an asbestos regulated area where respiratory protection is required must wear the appropriate respiratory protection assigned by a Competent Person. A Competent Person may be the Asbestos Program Manager or qualified person designated as such by a contractor that is approved by the Asbestos Program Manager.

G. TASK SPECIFIC REQUIREMENTS:

Good Faith Asbestos Inspections: Asbestos bulk sampling for the purpose of a good faith inspection or otherwise must be conducted by an employee with a current AHERA Building Inspector certificate. Additional hazards may be present in the work area that must be addressed before collecting bulk samples. Such hazards include but are not limited to hazardous energy (e.g. electricity, radio frequency, mechanical energy) noise, elevated work, penetration (sharp

objects), and compression (pinch points). Employees must conduct a hazard assessment prior to each inspection. Supervisors must review hazard assessments, ensure proper PPE is used and required training is completed and documented before the task commences.

3rd Party Asbestos Abatement Oversight: Oversight of all in-house or contracted abatement work must be conducted by an employee with a current AHERA Building Inspector and/or an AHERA Project Designer training certificate. Since hazards may vary greatly at different job sites, employees must conduct a hazard assessment for each oversight location. Supervisors must review hazard assessments and ensure proper PPE is used and required training is completed and documented before the task commences.

Exposure Monitoring: The Asbestos Program Manager is assigned as the Competent Person to manage exposure air monitoring of employees that is required in WAC 296-62-07709.

Housekeeping/Custodial Procedures: Refer to Section 6.0 of the Asbestos Management Plan.

Asbestos Abatement Work: Refer to Section 7.0 of the Asbestos Management Plan for training and procedures required to perform asbestos abatement work at WSU.

Construction, Demolition, Repair, Remodeling, Maintenance or Renovation Activities: All employees involved in such activities including project managers, supervisors, leads and workers performing the work are responsible for their roles and responsibilities outlined in the attached Asbestos Management Plan.

NOTE: WSU Tri-Cities employees do not perform tasks that meet the definition of asbestos work. If activities are identified which will disturb asbestos-containing material, outside contractors will be hired to complete abatement of that material as the first stage of the project.

Appendix A:

ASBESTOS MANAGEMENT PLAN

Updated May 13, 2024

WASHINGTON STATE UNIVERSITY
ENVIRONMENTAL HEALTH, SAFETY

Asbestos Program Manager
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Campus Safety & Security Director
WSU Tri-Cities, BSEL 129
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APPENDICES

Appendix A – Asbestos Forms for In-House Asbestos Work

1. Shops Pre-Work Asbestos Assessment Form
2. Shops Good Faith Survey Summary Form
3. Asbestos Work Plan
4. Daily Log for Asbestos Work
5. Bulk Sample Collection Form
6. Air Sample Log Form

Appendix B – Asbestos Forms for Capital Work

1. Reasonable Certainty of Non Disturbance of Asbestos Form
2. Pre-Work Contractor Submittal Review Form

Appendix C – Asbestos Mechanical Room Signage

Appendix D – Asbestos Reference Documents

1. NIOSH Method 7400 issue 2 – Asbestos and Other Fibers by PCM
2. ASTM E1368-05 – Standard Practice for Visual Inspection of Asbestos Abatement Projects.

1.0 Purpose

The purpose of this asbestos management plan is to document recommended asbestos management procedures and response actions for employees and contractors working at the Washington State University (WSU) Tri-Cities campus. Procedures set forth herein are to prevent the release of asbestos fibers and comply with local, state and federal regulations.

2.0 Applicable Regulations

WAC 296-62-077 – *Asbestos, Tremolite, Anthophyllite, and Actinolite*
WAC 296-65 – *Asbestos Removal and Encapsulation*
WAC 296-842 – *Respirators*
40 CFR 763 – *Asbestos Hazard and Emergency Response Act/Asbestos School Hazard Abatement and Reauthorization Act*
40 CFR Part 61, Subpart M – *National Emissions Standards for Hazardous Air Pollutants (NESHAPS) for Asbestos*

3.0 Introduction

Asbestos is a general term applied to a group of naturally occurring silicate minerals that when separated into microscopic fibers can pose serious health risks. Five asbestiform minerals are regulated: amosite, chrysotile, crocidolite, tremolite, anthophylite, and actinolite.

Because of its high tensile strength and resistance to fire, heat, electrical and chemical damage, asbestos has been used in manufactured goods, industrial machinery, friction products (e.g. brake shoes, clutches), heat resistant fabrics, and most commonly used in building materials.

3.1 Health Hazards of Asbestos

The presence of asbestos in building materials does not represent a hazard in and of itself. When left intact and undisturbed, asbestos-containing materials (ACMs) do not pose a health risk to occupants. Only when disturbed or deteriorated (so that asbestos fibers are no longer likely to be bound within the materials' matrix) can ACMs separate into microscopic-size particles and become airborne, presenting a hazard. Asbestos inhalation exposure has been shown to increase the risk of developing lung cancer, mesothelioma (cancer of the lining of the lung and/or abdomen.) and asbestosis (chronic lung disease).
Disturbance occurs most commonly through construction and building maintenance activities.

3.2 Asbestos-Containing Building Materials (ACBMs)

Asbestos-containing building materials (ACBMs) are the most common asbestos products at WSU. Asbestos was incorporated into surfacing materials (e.g. popcorn ceilings, plasters, fireproofing), thermal systems insulation (e.g. pipe insulation, boiler insulation) and other manufactured building products (e.g. floor tiles, mastics, caulks, cement products).

The United States Environmental Protection Agency (EPA) recommends regularly assessing the condition of ACBMs and careful in-place management to reduce the risk of a fiber release. The EPA has also established training requirements for individuals working around or with ACBMs. The United States Occupational Safety and Health Administration (OSHA) and the Washington Department of Safety and Health (DOSH) has established rules for construction or maintenance

projects, such that that proper controls and clean-up procedures are used and documented.

4.0 Roles and Responsibilities

All employees at WSU play a role in maintaining a safe work environment free of asbestos hazards. The following responsibilities are designated to all employees at WSU:

- Complete the appropriate level of asbestos awareness training outlined in Section 5.1.
- Do not clean, damage, disturb, or remove suspect ACMs unless trained per WAC 296-62-07722, WAC 296-65-05 and 296-65-07 and authorized by your supervisor to do so.
- Contact your Supervisor or report damaged suspect ACM to Facilities Services (academic and service buildings) or HDMS (housing and dining buildings).

EHS offers training to all employees to help understand, identify, and report asbestos hazards in their work environment. Any employee who feels they may have been exposed to asbestos at WSU may contact EHS to investigate potential exposures.

Academic Departments

Employees, students, and visitors in academic departments are not normally involved in activities which may disturb ACBMs. Departments must comply with this asbestos management plan and the university business policies and procedures manual (BPPM) for contract work that may disturb building materials. Supervisors must ensure employees that require asbestos awareness attend the appropriate level of training outlined in Section 5.1.

Service Departments

Two service departments most likely to contact ACBMs in their work at WSU Tri-Cities include Facilities Services (FS) and Environmental Health and Safety (EHS). Each of these departments plays a different role in asbestos activities. Facilities Services is responsible for performing small-scale construction, maintenance, and custodial activities in all campus academic and service buildings

<u>Environmental Health and Safety</u>

a) Provides asbestos awareness training to departments at WSU
b) Serves as department consultant for asbestos issues
c) Serves as department liaison to DOSH/Washington Labor and Industries (L&I)
d) Assists departments with the collection of air and bulk samples used to evaluate worker exposures
e) Maintains records of asbestos projects, bulk and air samples
f) Provides quality control/quality assurance on asbestos projects
g) Recommends appropriate engineering controls, work practices and personal protective equipment for asbestos projects
h) Maintains EHS personnel asbestos training and certification records
i) Periodically reviews and updates this Asbestos Management Plan

<u>Facilities Services</u>

a) Supervisors must ensure Good faith surveys are completed prior to commencement of construction activities

b) Supervisors must ensure employees that require asbestos awareness attend the appropriate level of training outlined in Section 5.1.
c) Supervisors must distribute exposure monitoring data to all affected employees
d) Asbestos Competent Persons must notify EHS of asbestos work by submitting Asbestos Work Plans and are responsible for the asbestos project(s)
e) Project Managers, supervisors and employees must ensure this Asbestos Management Plan is followed
f) Maintains personnel asbestos training and certification records
g) Supervisors must request EHS sampling and analysis of suspect asbestos- containing materials prior to disturbance

Other service departments that contract or perform work in buildings have the potential to disturb ACBMs as well. Departments must comply with this asbestos management plan and the university business policies and procedures manual (BPPM) for contract work that may disturb building materials. Supervisors must ensure employees that require asbestos awareness attend the appropriate level of training outlined in Section 5.1.

5.0 Definitions

Asbestos-Containing Material (ACM) – Any material containing more than 1% asbestos (WAC 296-62-07703)

Asbestos Work – Any activity which disturbs ACM.

Assumed Asbestos-Containing Material (Assumed ACM) – Material assumed to contain more than 1% asbestos.

Class I Asbestos Work – Activities involving the removal of TSI or surfacing ACM/assumed ACM

Class II Asbestos Work – Activities involving the removal of ACM which is not TSI or surfacing Material.

Class III Asbestos Work – Repair and maintenance operations where ACM, including TSI and surfacing ACM and assumed ACM, may be disturbed.

Class IV Asbestos Work – Maintenance and custodial activities during which employees contact but do not disturb ACM or assumed ACM and activities to clean up dust, waste and debris resulting from Class I, II, and III activities.

Competent Person – One who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them as specified in WAC 296-62-07728.

This designation varies with the type and quantity of asbestos disturbed. Competent persons are also defined as noted below:

- Certified Asbestos Supervisor
    - Class I and II Work

- Class III and IV work involving ≥3 square feet or 3 linear feet of ACM
- CertifiedAsbestos Supervisors OR Certified Asbestos Workers
  - Class III and IV work involving <3 square feet or 3 linear feet of ACM
  - Unclassified work (materials containing <1% asbestos)

Environmental Health and Safety – EHS Tri-Cities campus

Excursion Limit (EL) – The employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 1.0 fiber per cubic centimeter (f/cc) of air as averaged over a sampling period of thirty minutes. Also see Permissible Exposure Limit.

Permissible Exposure Limit (PEL) – The employer shall assure that no employee is exposed to an airborne concentration of asbestos in excess of 0.1 fiber per cubic centimeter (f/cc) of air as an 8-hour time-weighted average (TWA). Also see Excursion Limit).

Regulated Area – An area established by the employer to demarcate areas where Class I, II, and III asbestos work is conducted, and any adjoining area where debris and waste from such asbestos work accumulate; and a work area within which airborne concentrations of asbestos, exceed or can reasonably be expected to exceed the PEL.

Supervisor – Any university employee with supervisory duties.

Surfacing Material – Any material that is sprayed, troweled-on or otherwise applied to surfaces (such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, and other purposes).

Thermal Systems Insulation (TSI) – ACM applied to pipes, fittings, boilers, breaching, tanks, ducts, or other structural components to prevent heat loss or gain.

Unclassified Asbestos Work – Work which disturbs materials containing <1% asbestos.

6.0 Hazard Communication

The following addresses asbestos workplace hazard communication with respect WSU employees. Hazard communication supporting asbestos management in respect to capital projects and contractors is addressed separately in Section 8.0.

- *Awareness Training*

EHS provides asbestos awareness training to any employees who may be exposed to asbestos fibers on an incidental basis. Three areas of risk and corresponding training have been identified for WSU employees:

Academic and Office Staff – Low Risk

Most university employees perform office duties or are employed in academic departments. These persons normally do not disturb building materials as part of their work. Since asbestos is not disturbed, office and academic personnel are considered to be at low risk for asbestos exposure. WSU EHS has developed an on-line training program for all low risk employees to satisfy the requirements of WAC 296-62-07722 (6). This training is required at the start of employment and annually thereafter for all low risk employees working in a building with ACM or presumed ACM.

Online Training Link: https://hrs.wsu.edu/training/

Construction, Maintenance and Custodial Staff – Higher Risk

Required for employees performing or supervising construction, maintenance, and custodial tasks on buildings at WSU. This includes all employees who enter mechanical spaces, the internet technology technicians, surplus staff, waste management staff, and all other employees that may disturb asbestos-containing building materials in their line of work. WSU has developed a classroom instructed 2-hour awareness class to satisfy the requirements of WAC 296-62-07722 (4). WSU employees and departments can request this training by contacting EHS. This training must be completed annually.

Training components include the following:

- Available information concerning the location of assumed ACM, ACM, asbestos- containing flooring and ceiling materials where the absence of asbestos has not been certified,
- Instruction on how to recognize damaged, deteriorated, and delaminated asbestos containing building materials,
- The health effects associated with asbestos exposure,
- The relationship between smoking and exposure to asbestos producing lung cancer,
- Methods of recognizing asbestos and quantity, location, manner of use, release, and storage of asbestos and the specific nature of operations which could result in exposure to asbestos,
- Engineering controls and work practices associated with the employee's job assignment,
- Specific procedures implemented to protect employees from exposure to asbestos,
- Purpose, proper use and limitations or protective clothing,
- Purpose and a description of the medical surveillance program required by L&I rules,
- Content of the L&I standard and its appendices,
- Identification of organizations which conduct programs concerning smoking cessation,
- Requirements for posting signs and affixing labels, and the meaning of such signs and labels, and
- Purpose, proper use, limitations and other training requirements for respiratory protection

Asbestos Removal Workers – Highest Risk

WSU Tri-Cities employees will not perform asbestos removal tasks. Outside contractors will be employed to perform any asbestos removal activity. Requirements relating to asbestos work by outside contractors are outlined in Section 8.

- **Good Faith Inspections (Asbestos Surveys) for In-House Work**

Before authorizing or allowing any construction, renovation, remodeling, maintenance, repair or demolition project, WSU is required to perform a good faith inspection for asbestos (WAC 296-62-07721(2)(b)).

All personnel collecting samples for the purpose of a Good Faith survey must be an EPA- accredited Asbestos Building Inspector approved by EHS. The Bulk Sample Collection Form found in Appendix A, or similar, must be completed and submitted to the laboratory for all samples collected. All Good Faith survey documents must be available on-site during construction activities.

At WSU Tri-Cities, EHS performs all Good Faith surveys. Departments must contact EHS prior to disturbing any suspect asbestos-containing material to request an inspection, and may not proceed with

any activity which may disturb asbestos until the inspection is completed and EHS has provided guidance based on laboratory results.

- Room Labeling

EHS has established a room asbestos signage program to fulfill the requirements of WAC 296-62-07721(4). Rooms with ACM and assumed ACM are labeled at each entrance throughout campus. This signage is used to supplement asbestos awareness training which covers how to avoid disturbing ACM or assumed ACM during maintenance or construction activities in these areas. Examples of university signage are found in Appendix D.

- Asbestos Sampling Database

EHS maintains asbestos bulk sampling records for all buildings on WSU properties. Information is publicly available upon request from EHS.

- Abatement Signage (Regulated Areas)

Signs must be posted outside of all Class I, Class II and Class III asbestos work areas. The legend shall be:

Danger Asbestos
Cancer and Lung Disease Hazard Authorized
Personnel Only
Respirators and Protective Clothing are Required in this Area

Signage shall demarcate all entrances to the regulated asbestos work area. In work areas where critical barriers are not required, visual barriers or temporary construction walls shall be considered to prevent unauthorized access. Cones, warning tape, and or signage directing the public to alternative foot routes should also be considered. Signage may only be removed by the competent person in charge of the project.

7.0 Housekeeping

Custodial or housekeeping staff who work in a building with ACM or assumed ACM must complete the 2-hour asbestos awareness course offered by EHS (see Section 5.1 B). All staff should assume all building materials contain asbestos unless otherwise determined by EHS. Employees should be careful not to damage walls, ceilings or floors when moving furniture or equipment. Specific housekeeping procedures are noted below:

Flooring

Asbestos-containing flooring is found in many forms at WSU, most commonly in vinyl composite tiles and sheet vinyl. The following restrictions apply to asbestos-containing flooring:

- Sanding is not permitted.
- Stripping shall be conducted using low abrasion pads at speeds lower than 300 rpm with wet methods
- Burnishing or dry buffing may be performed only on flooring with established wax coats where the pad is not in contact with the flooring material.
- Broken or otherwise damaged floor tiles shall only be removed and cleaned by properly trained personnel.
- Chair casters must be appropriate to the type of floor application to prevent damage caused by excess wear. Damaged asbestos-containing flooring must be reported to EHS to evaluate

potential asbestos health hazards.

Ceilings and Walls

Do not brush, sweep, vacuum or otherwise disturb textured ceilings, walls and ceiling tiles. Caution should be used when working above suspended ceiling systems. Other building materials above suspended ceilings (i.e. fireproofing or pipe insulation) may also contain asbestos. For this reason, ceiling tiles should not be moved or replaced unless the ceiling tiles or materials above the suspended ceiling are determined to free of asbestos. Only trained personnel can replace, decontaminate, or otherwise disturb ceiling tiles contaminated from materials above.

Damaged Building Materials

Immediately report any damaged or deteriorated ACM or assumed ACM to your supervisor. Employees should not attempt to clean, move, or otherwise disturb the damaged materials. If possible, inform other occupants by posting signs and/or lock doors to prevent access until trained personnel can evaluate the damage. For larger emergency issues such as water leaks, Facilities Services and EHS should be contacted to evaluate potential asbestos issues.

8.0 In-House Abatement Activities

WSU Tri-Cities is not equipped to perform in-house asbestos abatement work at this time.

The following outlines specific regulatory and WSU requirements associated with in-house asbestos work which does not constitute abatement.

8.1 Training

Required training courses and training providers for asbestos work must be approved by EHS. EHS recommends using Labor and Industries certified Supervisors and Workers for all asbestos work; however, additional non-certified options are available for some work as stated below:

Class I Asbestos Work – Shall not be performed by in-house staff.

Class II Asbestos Work - Shall not be performed by in-house staff.

Class III Asbestos Work – Shall not be performed by in-house staff.

Class IV Asbestos Work – Employees that perform maintenance or custodial activities during which the employee comes in contact with but does not disturb ACM or assumed ACM fall into this category. At WSU, custodial, construction, maintenance and service staff may perform Class IV asbestos work. Annual 2-hour awareness training outlined in Section 5.1 must be completed as soon as practical. Departments must identify employees that perform Class IV work and arrange training with EHS.

Unclassified Asbestos Work – Workers must complete the 2-hour awareness training provided by EHS. A competent person must oversee unclassified work and ensure hands-on training specific to the operation is documented for all 2-hour awareness trained employees involved.

8.2 Project Documentation

Prior to beginning any asbestos work, departments must complete a work plan and submit it to EH&&S for approval. A work plan template is attached in the Appendix.

8.3 Project Notifications

Building Occupants

As with any construction or renovation project, asbestos abatement activities can impact building occupants through the use of solvents and lockdown products which generate odors, as well as noise and access restrictions. To minimize the disruptions, FS should notify building occupants of upcoming abatement projects using the most effective means available. Verbally communicating with affected building occupants and/or tenants to discuss access restrictions and other impacts to their environment during abatement work is encouraged.

Labor and Industries (L&I)

L&I requires a 10 calendar-day notification of all asbestos projects ≥48 square feet or ≥ 10 linear feet of pipe insulation or duct insulation (WAC 296-62-020). This will be applicable to abatement activities which are conducted by outside contractors, but Facilities and EHS must confirm that proper notification has been completed.

This requirement is exempted for emergencies; however, L&I must still be notified within 3 working days of the start.

Environmental Protection Agency (EPA)

The Washington Department of Ecology (DOE) and local clean air agencies administer the EPA NESHAPS regulation for the WSU campus locations https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Dangerous-waste-guidance/Common-dangerous-waste/Asbestos. DOE and/or clean air agencies must be notified of all demolition or renovation projects that remove the following amount of Regulated Asbestos-Containing Materials (RACM):

- 260 linear feet on pipes
- 160 square feet on other facility components, or
- 35 cubic feet of facility components where the length or area could not be measured previously

Competent persons assigned to the task can fulfill this requirement by completing paper form found in Appendix A or online at:

https://archive.epa.gov/region02/capp/web/pdf/asbestosnotificationformff.pdf

Completed forms must be sent to the local Ecology office or Clean Air Agency https://ecology.wa.gov/About-us/Accountability-transparency/Partnerships-committees/Clean-air-agencies.

8.4 Air Monitoring

Pre-abatement, clearance, personal, and area air monitoring required by WAC 296-62-07709 must be conducted in accordance with the procedures outlined in WAC 296-62- 07735. Completion of all air monitoring duties are the responsibility of the outside contractor performing the work, and must be verified by EHS. EHS may opt to collect additional QA/QC air samples on any project.

8.4.1 Pre-abatement Sampling

Pre-abatement (baseline) air sampling must be completed prior to commencement of all asbestos work.

8.4.2 Personal Sampling

Personal breathing-zone air monitoring shall be collected to evaluate occupational exposures to asbestos during abatement activities. The abatement supervisor is responsible for distributing the sampling results to all affected employees within 24-hours after receiving results.

Initial Exposure Assessments

The purpose of an initial exposure assessment is to identify work where employees are likely to be exposed above the PEL and/or EL. To determine respiratory protection, necessary engineering controls and work practices for each asbestos project, the competent persons should research similar operations with available historical exposure information. In the absence of negative exposure air monitoring data within the past 12 months for a specific task, initial exposure air monitoring should be completed. This consists of personal breathing-zone air monitoring which represents a full 8-hour shift and a 30-minute "worst case" excursion sample. Air samples should represent exposure for (e.g. collected from the breathing zone of) at least 25% of the work force.

If air monitoring results indicate exposures above the PEL, appropriate respiratory protection, engineering controls, work practices, and exposure monitoring must continue. EHS will assist competent persons during the work plan review process to ensure the initial exposure assessment was adequate for the work proposed.

Negative Exposure Assessments (NEA)

When exposure assessments have determined exposures below the PEL and EL, or negative exposure, air sampling may be discontinued. However, in order to apply an existing NEA to a current job, the NEA must be documented within the previous 12 months and the following practices must be similar:

a) Current process
b) Type of material, including % of asbestos content
c) Control methods/engineering controls
d) Work practices
e) Environmental conditions (i.e. interior/exterior, air flow)
f) Training levels of workers

Whenever there has been a change noted in the practices or conditions above that may result in additional asbestos exposure above the PEL or EL, the exposure assessment must be repeated. EHS recommends continuous personal air monitoring on all asbestos jobs regardless of NEA status. EHS will assist departments in maintaining current NEAs and exposure monitoring data. A NEA may not be used to support or justify prohibited practices (e.g. dry sweeping, use of compressed air).

Area Air Sampling

Asbestos work that includes negative pressure enclosures must include air sampling of the negative air machine (NAM) HEPA exhaust and entrance to the decontamination area at least every other day. If NAMs are exhausted inside a building, the exhaust must be monitored daily. In addition, EHS recommends air monitoring inside and outside regulated areas to further evaluate the effectiveness of work practices, engineering controls, and critical barriers.

Final Visual Inspection and Air Clearance Sampling

At the completion of all asbestos removal projects, final air clearance sampling must be conducted by EHS. Prior to air clearance sampling, EHS must conduct a thorough post abatement visual inspection consistent with the ASTM standard E1368-05 (or newer).

EHS' visual and air clearance sampling duties may be delegated verbally to 3rd party competent persons at the discretion of the EHS Asbestos Program Manager.

8.5 Respiratory Protection

All personnel using respirators must be enrolled in WSU's respiratory protection program. Respirators are to be worn under the following situations:

- During any activities which disturb asbestos-containing material, unless EHS has accepted a negative exposure assessment
- During any work activity in which asbestos fibers are released at a concentration above the PEL or EL.
- Whenever additional non-asbestos environmental exposures or conditions warrant respiratory protection, EHS must be consulted to evaluate appropriate protection.

A competent person is required to be present for each project in which a respirator is required under the asbestos rules. The competent person will ensure that the proper respirator is worn by the asbestos worker per the requirements of WAC 296-62-07715. Employees are responsible to use any and all PPE as directed by the supervisor. Full-face powered air purifying respirators (PAPRs) must be offered to all employees if required to wear a respirator, even if exposure monitoring supports selecting less respiratory protection.

Certified asbestos supervisors or workers that do not enter regulated areas (e.g. estimators) may opt-out of the respiratory protection program and medical surveillance program by signing a release. Releases must be arranged through EHS.

8.6 Protective Clothing and Equipment

Protective clothing is required for the following asbestos work:

- All Class I work
- Class II work for which a negative exposure assessment has not been approved by EHS
- Any asbestos work performed above the PEL
- Where the possibility of eye or skin irritation exists

Protective clothing consists of coveralls or similar full-body work clothing; gloves, head coverings and foot coverings. Protective face shields and vented goggles should be available as appropriate, especially if there is a possibility of eye irritation. All safety and health provisions for personal protective equipment (PPE) required by WAC 296-155 apply to abatement crews. The competent person on the project must periodically inspect protective clothing to evaluate its integrity.
The use of disposable Tyvek® type protective suits with built-in head and foot coverings are recommended by EHS. Re-usable protective clothing is an option; however, contaminated clothing must be placed in impermeable containers inside the clean room, labeled for asbestos content, and properly laundered.

8.7 Medical Surveillance

All employees who are either certified asbestos workers, certified asbestos supervisors, or 8-hour trained for Class II work shall receive initial, annual and termination medical surveillance exams. It is the responsibility of the employee's department to schedule and pay for exams. Departments must contact EHS (372-7163) prior to sending employees for medical surveillance to coordinate recordkeeping and examination requirements.

The exam shall be administered before the employee starts Class I-III asbestos work or is assigned to an area where s/he may be exposed to airborne asbestos fibers above the PEL or where respirators are required. Exams shall be conducted by a physician and shall include a medical and work history, assessment of the employee's ability to wear a respirator, completion of the appropriate questionnaire in Appendix D of WAC 296-62-077 and a chest x-ray, if needed. Chest X-rays shall be given following the schedule outlined in Table 2 of WAC 296-62-07725 and interpreted by a certified B-reader.

8.8 Waste

Asbestos waste generated on projects must be disposed of by the contractor performing the work. At minimum, waste should be placed in a labeled, sealed, leak-tight container while wet. Pre-labeled double 6-mil polyethylene plastic bags are recommended on most projects. For larger bulk materials such as drywall or roofing, dumpsters, metal drums, or megaboxes should be used. Other odd sized materials such as cut and wrap pipe sections or countertops should be double wrapped in sheet plastic and labeled.

Under no circumstances may visible emissions be observed coming from asbestos waste during transportation. The Asbestos Waste Shipment Record Form found in Appendix A must be completed and given to the landfill upon disposal. A copy of the form must be submitted to EHS as well.

8.9 Unclassified Asbestos Work

Includes the disturbance of materials containing <1% asbestos. Although materials containing <1% asbestos are not regulated as ACM, WSU must ensure employee exposures are below the PEL and EL. All unclassified work performed in-house shall use the same procedures as classified work. EHS 2-hour awareness trained personnel may be used on unclassified work; however, additional hands-on training specific to the operation must be documented and approved by EHS prior to the work.

9.0 Contractors

9.1 Good Faith Inspections

WSU must provide all contractors submitting a bid to undertake any construction, renovation, remodeling, maintenance, repair, or demolition project, either a 1) a good faith inspection report, or 2) a “Reasonable Certainty of Non Disturbance Form” found in Appendix B prior to bid.

Good Faith surveys must be completed by WSU Tri-Cities EHS or by a consultant approved by EHS to perform good faith inspections. If projects will only disturb wood, metal, glass and/or structural concrete, the “Reasonable Certainty of Non-Disturbance Form” can be used as noted; however, the presence of lead and/or other regulated materials must also be evaluated and may require hazard communication and regulated disposal considerations.

<u>Responsibilities of Persons/Consultants Performing Good Faith Inspections for WSU</u>

Any person sampling materials for asbestos, or performing good faith inspections for asbestos, shall meet the accreditation requirements of the Federal Toxic Substances Control Act, Section 206(a)(1) and (3), 15 U.S.C. 2646(a)(1) and (3). Any person sampling materials for asbestos, or performing good faith inspections for asbestos must also be approved by EHS.

Good faith inspections shall produce information for a specified project which will result in WSU's compliance with WAC 296-62-07721(2). Any person performing a good faith inspection at WSU must perform the inspection in compliance with EPA and Washington State Department of Labor and Industry (L&I) rules, as specified in WAC 296-62-077 to 07755. All sampling must conform to NESHAP, AHERA and Washington State sampling protocols. Appropriate numbers of samples must be collected for materials to be designated "non-asbestos" or "asbestos-free".

Good-faith surveys shall contain the following:

- An executive summary
- Purpose of the survey
- Scope of the survey
- Contact person (who requested the survey?)
- Project #
- Date(s) of sampling
- Date of report submittal
- Building name and building number
- Use of building (lab, classroom, storage, etc.)
- Age of building
- Description of building and building systems
- Specific exclusions or limitations
- Name and signature of building inspector, report writer(s) and reviewer(s)
- AHERA accreditation information
- Laboratory AIHA certification information
- Survey and sample Methodology (must comply with the sampling protocol in 40 CFR 763.86)

Sample methodology in WISHA Regional Directive 23.30 – Asbestos-containing Joint compound in Wallboard Systems shall be used to classify wallboard systems

- Quality control samples shall be submitted to a second laboratory (20% of all samples when 50 or more samples are collected)
- Inventory lists of samples and homogeneous areas
- Location where each bulk sample was collected (sample map)
- Point counting must be used to classify materials containing asbestos as <1% asbestos
- Inventory of identified ACM and assumed ACM
- ACM Quantities
- Description of homogeneous materials (surfacing material, thermal system insulation, or miscellaneous material)
- Note: Descriptions of homogeneous materials must be clear. There must be no question so all materials identified as ACM or non-ACM can be located by WSU representatives and/or by any contractor in the work area
- Friability assessment,
- Include ALL field data sheets, field notes and photographs in appendices
- An electronic data-table of sample results in an EHS approved format must be provided

for inclusion into the EHS asbestos management databases
- The material description must be clear so that a person inspecting the site after abatement can readily determine that all materials have been abated
- Completed chain of custody forms
- Final laboratory analytical result forms (for final reports)
- The written report must be in a typewritten or printed form, with the information legible and clear
- Pictures of materials identified as positive for asbestos are requested, but not required
-

Survey Limitations

Surveys may exclude areas of the building which were inaccessible (e.g. inside wall cavities, above hard-lid ceilings, energized systems) or exclude materials which would cause unnecessary damage to the building if sampled. These conditions, materials, and/or areas should be clearly outlined in the report. Every attempt should be made to sample and/or access these areas before construction. Suspect materials observed in these areas must be assumed to contain asbestos until characterized.

9.2 3rd Party Abatement Oversight

If asbestos abatement is needed for the project, 3rd party abatement oversight is required. Facilities Services Project Managers must choose EHS or a consultant approved by EHS to perform the 3rd party oversight.

Requirements and Responsibilities of 3rd Party Representatives

Any person performing third party oversight for asbestos abatement projects at Washington State University (WSU) must be accredited by EPA as a building inspector, approved by the EHS, and the person must also be certified as:

- An EPA project designer, or
- Certified by the State of Washington as an asbestos supervisor.

Any person performing third party oversight at WSU must perform the oversight duties in compliance with EPA, Ecology and Washington State Department of Labor and Industry (L&I) rules, as specified in WAC 296-62-077 to 07755. The 3rd party overseer may not be affiliated by any means with the asbestos abatement contractor.

The person performing third party oversight is responsible for six primary tasks:

- Reviewing the asbestos abatement contractor contract submittal documents identified in the asbestos abatement specification, including the abatement contractor's work plan
- Collecting pre-abatement samples in the abatement area (this may be accomplished on site with a certified NIOSH 582 analyst, if pre-approved by EHS),
- Inspecting the abatement area for contractor compliance to asbestos regulations and to WSU contract specifications
- Collecting environmental samples during abatement (e.g. outside containment/regulated area) if required to evaluate contractor performance
- Conducting a post-abatement visual inspection consistent with the ASTM Standard Practice for Visual Inspection of Asbestos Abatement Projects E 1368-05 (or newer).
- Collecting post-abatement samples in the abatement area (this may be accomplished on site with a certified NIOSH 582 analyst, if pre-approved by EHS),
- Informing the WSU Project Manager of compliance issues as soon as possible, and
- Preparing a final report which includes clearance information for the abatement project.

The final report must include at a minimum the following:

- 3rd Party representative observations in relation to Contractor's daily activities, work methods and compliance,
- Certification that abatement of subject ACM and/or assumed ACM conformed to the project contract and amendments,
- Certification of final visual inspection,
- A map or drawing identifying asbestos-containing materials remaining in the work area,
- Map(s) showing the location(s) of abated materials,
- An accurate description of the materials removed,
- An accurate description of the quantity(ies) of material(s) removed,
- A list of any deviations from the work plan, rules or specifications,
- Waste manifests for asbestos materials removed from the project,
- Worker documentation (e.g. current certifications, fit tests, medical clearances)
- Abatement contractor field notes,
- Regulatory notifications and amendments that were filed,
- Contractor certifications,
- 3rd Party representative certifications

The final report must be in Word or PDF format, with the information legible and clear. All closeout documentation will be transmitted to the project officer and EHS archive.

9.3 Asbestos Abatement Work

Contractors performing asbestos abatement for WSU must be an L&I certified abatement contractor with certified asbestos supervisors and workers. Activities must comply with federal, state and local regulations and project specifications.

Contractors must work cooperatively with the WSU 3rd party representative for submittal review, pre-abatement air sampling, visual clearances, clearance air sampling, and general oversight during abatement activities.

Asbestos project submittals must be in compliance with the project asbestos abatement specifications. Pre-work submittals must be approved by the WSU 3rd party representative prior to the commencement of work. The Submittal review comment form provided in Appendix B should be used to communicate deficiencies and comments.

Post-work submittals must also be provided to the 3rd party representative for review. When the 3rd party and owner concur that post-work submittals are complete, the 3rd party will forward post-abatement submittals to the project officer and EHS archive. Submission of incomplete or inadequate post-work submittals may be cause for WSU to withhold payment. Submittals must be in a typewritten or printed form, with the information legible and clear.

9.4 General Requirements

Facilities Services Project Managers must use an EHS approved asbestos abatement specification for use on capital projects involving contractors. Boilerplate specifications are available on EHS' Sharepoint website. Any modifications to the specification or additional asbestos abatement related drawings must be completed and/or approved by an EPA accredited Asbestos Project Designer. The designated 3rd party representative for the project may perform this duty if accredited as an EPA Asbestos Project Designer.

Contractors and subcontractors performing non-abatement/asbestos work construction, renovation

and/or demolition work on WSU properties which contain ACM or assumed ACM must receive asbestos awareness training in compliance with WAC 296-62-07722 (4). This includes all contractors that enter the WSU steam tunnel system.

Contractors and subcontractors must post good faith inspections at the project site. Any new suspect ACM, ACM or assumed ACM discovered on a work site must communicated to WSU and other employers on the job site within 24-hours (WAC 296-62-07721 (2)(d). Work which disturbs the newly discovered material must stop until WSU responds to the discovery.

Contractors shall certify that all materials newly installed on/in WSU facilities do not contain asbestos.

9.5 Contractor Approval

Contractors and consultants must be approved by EHS to perform good faith inspections, 3rd party oversight, and asbestos abatement at WSU. Approved firms will be placed on the contractor roster administered by Facilities Services.

10.0 Recordkeeping

The table below outlines asbestos-related documents WSU is required to maintain. Documents associated with asbestos work and attached to this Asbestos Management Plan have been published by EHS to comply with applicable regulations. Departments and competent persons assigned to perform asbestos work must transmit fully completed paperwork to EHS to comply with record keeping requirements of WAC 296-62-07727.

Record	Responsible parties	Contains	Minimum Retention
Asbestos Medical Exam	EHS, Department, Employees	Employee name, SSN, physician written opinion, employee medical complaints that relate to asbestos exposure, asbestos questionnaire (WAC 296-62-07725(6), medical exam results	30 years after last day of employment
Awareness Training	EHS, Departments	Department, employee name, SSN, type of training, trainer	1-year after last date of employment
Air Monitoring Data	EHS and Competent Persons	Department, person taking sample, date, location, description of activity, type of sample, employee name, SSN, exposure level, PPE, name and address of analytical lab, sample number, rotometer calibration date, flow rate, sample duration, volume sampled, sample results, analytical method used	30-years after last date of employment
Bulk Sampling	EHS and Facilities Services	Sampler name, sample location, material sampled, date, name and address of analytical lab, analytical method, sample results	Duration of structure

Asbestos Abatement Records (in-house)	EHS and Competent Persons	Project close-out reports (daily logs, waste documentation, regulatory agency notifications, removal dates, location, amount of asbestos removed, names of removal personnel, name of competent person)	Duration of structure
Asbestos Abatement Records (Capital Projects)	EHS, Contractors, Facilities Services	Project close-out reports; abatement records, regulatory agency notifications, worker documentation, waste disposal documentation, air monitoring data, contractor training, other compliance information etc.	Duration of the structure plus 3 years
Asbestos Certificatio n Records	EHS and Departments	Labor and Industries Asbestos Supervisor and Worker Certification cards and training certificates, Class II worker training certificates	1-year after last date of employment

APPENDIX A

Asbestos Forms for In-House Asbestos Work

ASBESTOS WORK PLAN

PROJECT CLOSEOUT RECORD FOR NON-EMERGENCY ASBESTOS PROJECTS AT WASHINGTON STATE UNIVERSITY

Competent Person Acknowledgement

On_____, I,_____, acknowledge that I am the
Date Name

Competent Person in charge of this project per WAC 296-62. I certify that to the best of my knowledge the following Work Plan meets all applicable local, state, and federal requirements. I will endeavor to ensure all work methods comply with WAC 296-62-77. I have checked all items and added information appropriate for this job.

There are 2 parts to this document. A photocopy of the prework section must be forwarded to EHS for review prior to the work. After the work is completed forward both the PREWORK and the POSTWORK attachments to EHS.

Project Name: _____

Work Order No: _____

Facility: _____

Purpose of work: _____

PREWORK SECTION

GENERAL DESCRIPTION OF WORK *(Attach an R-sheet(s) with the following)*

- ☐ proposed work area,
- ☐ proposed location(s) of containment(s) or regulated area(s),
- ☐ proposed regulated area signage/demarcation location(s),
- ☐ proposed location(s) of HEPA exhaust,
- ☐ proposed area air sample locations,

ASBESTOS TO BE REMOVED

The work consists of removing the following asbestos-containing materials:

Material	Location	Friable?	Quantity

(quantity in linear feet, square feet or cubic feet as appropriate)

NOTIFICATION(S): (attach a copy of each required notification)

- ☐ Required; 10-day L&I notification ≥48 SF or ≥10 LF of pipe
- ☐ Required; 10-day EPA notification ≥160 SF or ≥260 LF of friable ACM
- ☐ myFacilities notification
- ☐ None required

PROJECT SCHEDULE:

□ Pre-abatement sampling date: _____

□ ACM removal start date: _____

□ ACM removal completion date: _____

□ Schedule attached (If warranted)

VISUAL INSPECTION(S)

Pre-Abatement Visual Inspection(s) is to be completed and recorded by:

☐ Certified Supervisor

☐ EHS

Post Abatement or Clearance Inspections will be completed and recorded by:

☐ Certified Supervisor

☐ EHS

Note: Request for EHS visual inspections must be made and approved in writing. EHS charges will apply. Inspections must be noted in daily log.

CLASS OF WORK:

☐ Class 1

☐ Class 2

☐ Class 3

AIR MONITORING STRATEGY

☐ Negative Exposure Assessment (NEA) completed for prior work "closely resembling" this work?

☐ Personal Monitoring (TWA)

☐ Personal Monitoring (STEL)

☐ Outside work area monitoring

☐ HEPA monitoring

☐ Other (specify): _____

HVAC:

☐ HVAC air flow characteristics of the space will be determined pre-abatement

☐ HVAC to area will be shut-down and locked out prior to work

☐ Not required (specify why not): _____

REMOVAL TOOLS AND EQUIPMENT:

☐ Hand tools

☐ Power Tools

☐ Mechanical (i.e., blast-track, roof cutter, etc.)

☐ Other (specify): _____

REGULATED AREA DEMARCATION

☐ Barrier tape

☐ Signage

☐ Fencing/construction barrier

☐ Other (describe): _____

ENGINEERING CONTROLS

- ☐ Plastic drop under removal
- ☐ Mini-enclosure
- ☐ Glove bag
- ☐ Negative pressure enclosure
- ☐ HEPA Vacuum
- ☐ Critical barriers
- ☐ HEPA Machine
- ☐ Other (describe): _____

PERSONAL PROTECTIVE EQUIPMENT

Appropriate PPE for this project is:

- ☐ Disposable suit
- ☐ Coveralls Steel-toe boots Full-face APR Half-face APR Tight-fitting PAPR Hard hat
- ☐ Chemical resistant rubber gloves
- ☐ Leather gloves
- ☐ Cloth gloves
- ☐ Safety glasses
- ☐ Safety goggles
- ☐ Other (specify): _____

ASBESTOS WASTE LOCATION

- ☐ Log and dispose in McCluskey asbestos waste storage room
- ☐ Disposed at Whitman County Landfill (attach waste manifest)

DECONTAMINATION METHODS:

Methods for personnel decontamination

- ☐ On-site shower
- ☐ Remote shower (McCluskey)
- ☐ HEPA vacuum
- ☐ Wet methods
- ☐ Other (specify): _____

Methods for equipment decontamination

- ☐ On-site
- ☐ Remote
- ☐ HEPA vacuum
- ☐ Wet methods
- ☐ Other (specify): _____

DAILY INSPECTIONS WILL CONSIST OF:

- ☐ Smoke testing
- ☐ Integrity of containments recorded in log

SITE SECURITY

- ☐ No additional site security required, less than 1 shift of work.
- ☐ People can be locked out of the work area during non-work hours by existing doors.

☐ A person will be tasked with monitoring the work area
☐ A temporary fence, barricade or wall will be built around the work area.
☐ Other (specify): _____

STANDARD WORK AREA PROCEDURES:

1. All persons and equipment entering the work area will do so at controlled entrance points.
2. All persons entering the work area will be equipped with the appropriate level of PPE as noted above.
3. Smoking, drinking, and eating are strictly prohibited in the Work Area.
4. All persons and equipment exiting the Work Area will do so at controlled exit points and will undergo decontamination.

WET WORK METHODS

Thoroughly wet ACM to be removed to reduce fiber dispersal into the air.

1. A fine spray (mist) of amended water or removal encapsulant sufficient to wet to the substrate without causing excess dripping will be used
2. Wetting of the material will be repeated during the work process to maintain a continuously wet condition
3. Work area will be continuously misted, or whenever necessary to reduce airborne fiber levels
4. Saturated ACM will be removed in small sections. As removed wet it will be placed in disposal bags. Bag necks will be bent over and sealed with minimum three wraps of duct tape. The moved adjacent to load out for wipe down.
5. Air will be evacuated from disposal bags with HEPA filtered vacuum cleaner before sealing.

TEMPORARY PRESSURE DIFFERENTIAL AND AIR CIRCULATION SYSTEM REQUIREMENTS (CONTAINMENTS and GLOVEBAGS)

□ HEPA filter equipped fan units. Filters will bear a UL586 label to indicate ability to perform under specified conditions.

□ Pre-filters (prolong the operating life of the HEPA filter)

□ Number of units required to maintain a pressure differential of 0.02 inches of water in NPE. Calculate # of HEPA units needed here:

□ All HEPA filtered units will vent to outside of building.

□ Glove bag. Install glove bags only as they are designed to be used.

□ Mini-Enclosure(s): is a small walk-in enclosure which accommodates no more than two persons. Enclosure will be made of two layers of clear fire-retardant 6 mil. (0.15 mm) plastic or equivalent. Place the enclosure under negative pressure.

1. Temporary Pressure Differential & Air Circulation System: HEPA filtered vacuum cleaner with the vacuum outside.

2. All waste is to be transported in clean sealed containers that have never been in the asbestos Mini-Enclosure.
3. Smoke tested at least daily
4. All electrical circuits will be deactivated and locked out, if not provided with ground-fault circuit interrupters.

□ A full enclosure is a walk-in enclosure in accordance with local, state, and/or federal regulations. Enclosures are made of 2 layers of clear fire-retardant 6 mil. (0.15 mm) plastic or equivalent. Place the enclosure under negative pressure.

1. The pressure differential when measured across any physical or critical barrier must equal or exceed a static pressure of: -0.02 inches (0.50 mm) of water.
2. All waste is to be transported in clean sealed containers that have never been in the asbestos work area or decontamination unit.
3. Smoke tested at least daily
4. All electrical circuits will be deactivated and locked out, if not provided with ground-fault circuit interrupters.
5. If the pressure differential drops below a static pressure of -0.02 inches (0.50 mm) of water work will stop and the cause of low negative pressure will be corrected. Abatement will not restart until negative pressure has been restored.

POST WORK CHECKLIST

Attach to this Work Plan following completion

- R-sheet drawing of work area
- Any Notifications filed with regulatory agencies
- Map of asbestos removal locations with information about the quantity of asbestos removed
- Asbestos Daily Logs filled out by the asbestos supervisor
- Record of post-abatement visual inspection (can be logged in Asbestos Daily Log)
- Air monitoring data
- Waste disposal manifests (if necessary)

This packet will be returned to the competent person for completion if it is incomplete.

Air Sample Log Form **Washington State University**

Project Name: _____ Project/WO Number: _____

Location: _____ Page Number: _____ Of _____

Project Manager: _____ Sample Collection Date: _____

Air Sample			Date	Start		End		Total Time	Total Volume	Laboratory	
Number	Location or Person and Activity	Type		Time	Flow	Time	Flow			f/field	f/cc

Sample Types:

HEPA = HEPA Exhaust
OA = Outside Work Area
IA = Inside Work Area
DE = Decon Clean Room
Pers. = Personal
C = Clearance
FB = Field Bank
LB = Lot Blank
PRE. = Pre Abatement
Other = _____

Sampling Completed By:

_____(Printed Name)

_____(Signature/Date)

Notes or Conditions _____

_____

_____

_____

Rotometer: _____

Employee Exposure Monitoring Form

Part 1

Employee Name:	Name of person conducting monitoring:	Date of monitoring:
Site of activity monitored:	Description of activity involving exposure:	
Work Order #:	Type of Material Involved in Task:_____* % of Asbestos:_____*	
Name of person monitored:	WSU ID #, or Social Security Number of person monitored:	
Assumed exposure level during activity monitored:	Pump calibration date:	
Types of personal protective devices/equipment worn during monitoring:		
Pump flow rate:	Total volume of air sampled:	

Env. Controls: Mark X Exhaust Hood _____ Circulation Fan _____ Other _____ None _____	Env. Conditions: Mark X Rain / Snow _____ Dry _____ Humid _____ Temp: <u><50F</u> <u>58-80F</u> <u>>80F</u>	Work Practices: Mark X Wet Methods _____ HEPA Vac _____ Other _____

Part 2

Name and address of analytical laboratory:		
Duration of monitoring:	Sample result:	Date of analysis:
Sample and analytic method used:		

Directions: Prepare a form for each personal sample taken. Fill out Part 1 of the form at the time of monitoring. Fill out Part 2 of the form after analytical results are received. Make a copy of the form. Send the original to EHS. Keep the copy at the worksite until the project is completed. After the project is completed, give the copy to the employee monitored, (or make a second copy to be given to the employee if the first copy is to be kept with project records).

* ATTACH BULK SAMPLE REPORT FOR THIS MATERIAL.

Asbestos Project Daily Log

Date			
Asbestos Supervisor		**Signature:**	
Project /Work Order #			
Building			
Room(s)		**PPE**	
ACM Being Removed			
Description of Regulated			
Smoke Check Completed?			
Date/Time Regulated Area			
Daily inspection of Regulated Area (note condition, deficiencies and			
Engineering Controls			

Work Description (i.e. prep, removal, cleanup):	**Times (i.e. 7am-noon):**

Notes:	
Visitors to Site:	

Regulated Area Sign-in:

Employee Name	Time of	Time of	Time of	Time of	Time of	Time of	Time of	Time of

Washington State University • Asbestos Management Program

Shops Good Faith Survey Summary

Building Name:_____
Building Number:_____
Project #/Work Order #:_____
Project Manager/Project Officer: _____
AHERA Certified Building Inspector: _____
Certification # and Expiration: _____

A limited "Good Faith" asbestos survey to identify the presence, location, and quantity of asbestos-containing materials (ACM) and presumed asbestos-containing material (PACM) that may be impacted by the project was performed. Use of this form is limited to WSU projects where only WSU employees will perform work.

- A copy of this form shall accompany all sample results and be filed with the project records.
- A copy of this form and all sample results must be provided to EHS
- This form must be posted on site during all demolition/renovation activities.

If suspect ACM not identified in this form are found during demolition/renovation, stop work that may impact these materials and contact a project officer. A list of inaccessible areas is below.

Project Title/Description: _____

Room # (s)/Area (attach r-sheet): _____

☐ **No ACM Identified**

☐ **Asbestos-Containing Materials Identified**

Asbestos-Containing Material	Location	Estimated

Inaccessible Areas* (not sampled):_____

*Suspect materials in these locations must be evaluated by a certified building inspector or treated as ACM when accessible.

Notes:

Certification (Completed by Certified Building Inspector)

I certify that to the best of my knowledge, the above-provided information is correct.

Name (print): _____

Position: _____

Phone: _____

Signature: _____

Date: _____

Washington State University • Asbestos Management Program

Pre-work asbestos assessment for shops work

Building Name:_____
Building Number:_____Projec
t #/Work Order #:_____Project
Manager/Project Officer: _____
Scope Area Description (attach r-sheet): _____

For any WSU shops project, the Project Manager responsible for the project must complete this form.

☐ **1)** Only wood, metal, glass and/or structural concrete (i.e. slabs, columns, foundations) will be impacted or no building materials will be disturbed

2) Potential Asbestos-Containing Materials Identified

☐ EHS Determination (must make a selection)

☐ Order GFS from Shops Existing
☐ Survey Data Attached

Box 1) This project only involves materials made of wood, metal and/or glass or does not impact building materials (i.e. painting). No good-faith survey is required.

- A copy of this form shall be filed with the project records.
- A copy of this form should be sent to EHS (Asbestos Program 1172)
- This form must be posted on site during all demolition/renovation activities if no asbestos impacts will occur due to the project.
- If suspect ACM not identified in this form are found during demolition/renovation, stop work that may impact these materials and contact a project officer.

Box 2) This project involves impacts to materials in addition to wood, metal and/or glass. Send a copy of this form to EHS with the scope of work to determine if existing sampling data meets GFS survey requirements. If sampling is required, EHS will check the "Order GFS from Shops" box. If existing sampling is adequate, EHS will attach sufficient data to be used as a GFS for the project.

Certification (Completed by project manager/project officer/estimator)

I certify that to the best of my knowledge, the above-provided information is correct.

Name (print): _____

Position: _____

Phone:_____

APPENDIX B

Asbestos Forms for Capital Work

Reasonable Certainty
of Non-Disturbance of Asbestos

For any WSU public works project, the Project Officer, Architect, Engineer, Project Leader or Construction Supervisor primarily responsible must complete and sign a form which contains the above title and specifically states that asbestos disturbance is not expected to occur. Alternatively, this form can be used. If no suspect materials will be disturbed, check "No Asbestos Disturbed" in Item 1 below, sign the form, and provide a copy of the signed form to all bidders on the project. Otherwise, check the items listed below in Item 2 which may be disturbed, sign and place this form in the project file, and arrange for a good faith inspection of the project. A copy of the good faith inspection report must then be made available to all bidders on the project as well as to any employer whose employees are in the immediate vicinity of abatement work associated with this project.

1. The project only involves materials made of metal, glass, wood, structural concrete, or else, if the project involves any material listed below, the material will not be disturbed by project activity.

❑ No Asbestos Disturbance

2. The project involves one or more of the following materials, which may be disturbed by project activity (check each item).

☐	☐	☐	☐
☐ Linoleum	☐ Vinyl Floor Tile	☐ Flooring Mastic	☐ Baseboard Mastic
☐ Drywall	☐ Wall Plaster	☐ Wall Texture	☐ Loose Insulation
Ceiling Tile	Popcorn Ceiling	Textured Ceiling	Siding Shingles
☐ Roofing Tar	☐ Roofing Shingles	☐ Pipe Insulation	☐ Pipe Gaskets
☐ Boiler Insulation	☐ Tank Insulation	☐ Woven Gaskets	☐ Fireproofing
☐ Fume Hood	☐ Oven	☐ Furnace	☐ Transite Panels
☐ Panel Adhesive	☐ Transite Water Pipe	☐ Transite Steam Pipe	☐ Underground Panels

3. Certification

I certify that to the best of my knowledge, the above-provided information is correct.

Signature:

Typed/Printed Name, Address and Telephone Number of Person Signing This Form:

_____

_____

_____

_____

APPENDIX C

Asbestos Mechanical Room Signage

APPENDIX D

Asbestos Reference Documents

WORKPLACE HAZARD ASSESSMENT CERTIFICATION FORM

Instructions: Complete form using Personal Protective Equipment Hazard Assessment Guidelines. Completed form is to be retained for departmental records.

Person conducting the hazard assessment: Matt McKibbin | **Date of hazard assessment: 2/19/16**

Work Activity Assessed	Hazard(s) Identified	PPE Selected (Make & Model #)	Training
Good Faith Asbestos/Lead Surveys and 3rd party oversight (throughout campus)	Falls	Flat/low pitched roofs with parapets <39" - Use safety watch system. One person will act as a safety watch while the other conducts required sampling	Acting safety watch: Competent Person (fall protection) Others: Fall protection user/awareness training
		High pitched roofs and scissor lifts: Fall restraint or fall arrest system – SALA 1231106 harness	Fall protection Competent Person when work plan is required. Fall protection user/awareness training otherwise.
			Ladder safety
	Penetration	Nitrile coated work gloves or similar	Hands-on for correct use and maintenance
		Boots with slip and puncture resistant soles and/or safety toes.	Hands-on for correct use and maintenance
	Trenches and Shoring	Possible fall protection considerations (personnel will not enter trenches>/=4')	Trench and excavation Competent Person
	Noise (e.g. mechanical rooms, server rooms)	Wear appropriate hearing protection needed to reduce exposure below 85dB.	Annual hearing conservation training
	Asbestos	Assigned by Competent Person. Half-face tight fitting APR or full-face APR with HEPA filter	Annual fit test, medical approval and respirator training. AHERA Building Inspector.
	Confined spaces	(personnel will not enter permit required confined spaces)	Confined Space Competent Person
	Overhead	Hard hat – meets ANSI Z89.1	Hands-on for correct use and

WORKPLACE HAZARD ASSESSMENT CERTIFICATION FORM

Instructions: Complete form using Personal Protective Equipment Hazard Assessment Guidelines. Completed form is to be retained for departmental records.

Person conducting the hazard assessment: Matt McKibbin | **Date of hazard assessment: 2/19/16**

Work Activity Assessed	Hazard(s) Identified	PPE Selected (Make & Model #)	Training
Good Faith Asbestos/Lead Surveys and 3rd party oversight (throughout campus)			maintenance
	Impact	Eye protection – Meets ANSI Z87+ standard for impact and D standard for dust protection	Hands-on for correct use and maintenance
	Ergonomics		Hands-on task specific training
	Laboratory hazards: Biological/Chemical/Radiation	Varies by laboratory. Read lab signage for appropriate PPE and contact PI and/or department for access restrictions	
	Non-ionizing radiation		Contact Facilities Services for list of NI radiation zones on roofs. Follow safety protocols and signage for each location
	Electrical	Use equipment with GFCI protection in abatement areas.	Lockout/tagout
	Lead	Assigned by Competent Person. Half-face tight fitting APR or full-face APR with HEPA filter	Lead Awareness with hands-on training Annual fit test, medical approval and respirator training.

I, _____ , certify that the assessment of the identified work activities has been performed. **Date:**

Signature