Portland Community College Health & Safety Manual	Dept: **Environmental Health & Safety (EH&S)**	
	Topic: **Chapter 13 — Hazardous Building Materials Plan**	
	Board Policy: **B507**	Revised Date: **September 2024**

Authority	**PCC Board Policy—B507**
	Portland Community College is committed to providing a safe and healthy work and educational environment for employees, students and visitors.

Summary	**This plan establishes procedures for the safe and effective identification, inventory, removal of hazardous building materials, as well as work in spaces known to contain such materials.**

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I. PURPOSE

Portland Community College (the College) endeavors to protect the health and safety of its employees. To that end, the College strives to reduce and prevent occupational illnesses due to exposure to asbestos and other recognized hazardous building materials.

II. AUTHORITY

PCC Board Policy – B507
OR OSHA Div 2/Z 1910.1001 Asbestos
OR OSHA Div 3/Z 1926.1101 Asbestos
OR DEQ OAR 340 Div 248
Other References

III. RESPONSIBILITY

Management in Departments with Asbestos-Containing Materials

- Ensure work activities do not result in disturbances to known asbestos containing materials (ACM) or presumed asbestos containing materials (PACM)
- Notify FMS when ACM or PACM are disturbed or damaged
- Communicate ACM hazards with affected faculty, staff, students and visitors
- Coordinate repair and/or disposal of ACM with EH&S
- Assign applicable training to employee working around ACM and PACM

Affected Employees

- Complete required training
- Adhere to established district-wide and departmental work procedures for working around PACM and ACM
- Notify manager and FMS upon discovery of a disturbance of PACM or ACM

Managers & Project Managers (FMS, IT and P&CC)

- Develop, implement and follow standard operating procedures (SOPs) for maintenance work on structures containing PACM or ACM
- Review current and projected work to determine the presence of, and minimize impact to, ACM and/or PACM
- Maintain the Hazardous Building Materials module in AiM and district-wide listing of buildings with PACM
- Access the Hazardous Building Materials module in AiM to review historical records and determine the status of materials potentially impacted by current/future work activities.
- Coordinate with Environmental Health & Safety (EH&S) to test potentially impacted materials when the status of these materials is either PACM or unknown
- Ensure work on potentially impacted materials does not proceed without a determination regarding whether asbestos is present
- Adhere to applicable Oregon Occupational Safety and Health Administration (OR OSHA) and/or Oregon Department of Environmental Quality (OR DEQ) training requirements regarding specific classes of work involving asbestos
- Coordinate with approved vendors when abatement or encapsulation of known ACM is required
- Regularly inspect the condition of pipe insulation and other structures labeled as ACM to the extent possible (FMS Maintenance Managers)
- Assign applicable training to employees working around PACM and ACM

Environmental Health & Safety

- Maintain the Hazardous Building Materials Plan and review the Plan annually
- Obtain written scope and cost estimates from approved contractors for FMS work orders and FMS projects requiring bulk sample collection, testing and determination of presence of asbestos
- Schedule time with approved vendors for onsite collection of bulk samples

Risk Services

- Maintain employee exposure monitoring records

IV. PROCEDURES

A. **Asbestos –** A list of terms used throughout this section of the Plan can be found in *Appendix A, Definitions*.

1. **Background Information –** Asbestos is the generic term for a group of naturally occurring fibrous minerals with high tensile strength, flexibility, and resistance to thermal, chemical and electrical conditions. Asbestos includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophylite asbestos, actinolite asbestos, and any of these materials that have been chemically treated and/or altered.

   Exposure to asbestos can cause disabling or fatal diseases such as asbestosis, an emphysema-like condition; lung cancer; mesothelioma; and gastrointestinal cancer. The symptoms of these diseases may not appear for 20 or more years after exposure.

   Asbestos fibers are too small to be seen with the naked eye and may enter the body by inhalation or ingestion of airborne fibers that become embedded in the tissues of the respiratory or digestive systems. For this reason, OR OSHA has established a permissible exposure limit (PEL) for asbestos of 0.1 fibers per cubic centimeter of air, 0.1 f/cc.

   a. **PCC Potential Exposures –** PCC employees may be potentially exposed to asbestos if PACM and/or ACM is disturbed during the following activities: routine IT upgrade work, FMS Maintenance and/or Custodial activities as well as via the renovation or demolition of building structures associated with FMS Minor Improvement Projects or the P&CC department. Every attempt should be made to ensure PACM and/or ACM remain intact.

   b. **Presumed Asbestos-Containing Materials -** OR OSHA rule 1910.1001(j)(2) requires that employers and building operators treat installed thermal system insulation and sprayed-on and troweled-on surfacing materials in buildings as ACM in building constructed prior to 1981. Such products are defined as PACM. OR DEQ requires that all commercial buildings regardless of construction date, and all residential buildings constructed before 2004 have an asbestos survey conducted by an accredited inspector prior to any demolition or renovation activities. PACMs should always be treated as though they contain asbestos. The only way to determine that these building materials are not PACM is to have them sampled and analyzed. Refer to *Appendix B* of this Plan for a District-wide listing of PACM.

   c. **Asbestos-Containing Materials –** Any material containing more than 1% asbestos is considered to be an asbestos-containing material according to OR OSHA. The EPA has classified asbestos-containing materials into three categories:

      - **Thermal system insulation (TSI)** – Insulation used on mechanical systems to prevent heat loss or gain and condensation. Steam and hot water lines, boiler tanks, expansion joints, fittings, and other mechanical systems are commonly

insulated with pre-fabricated asbestos-containing materials. The material is typically gray or off-white in color and encased in a plaster-impregnated canvas wrapping.

- **Surfacing materials** – Asbestos-containing material sprayed or troweled onto surfaces for acoustical, decorative, or fireproofing purposes. Spray-applied structural fireproofing is typically off-white or gray in color and can either be hard and granular in form, or soft and fluffy.
- **Miscellaneous materials** – Products not utilized as TSI or surfacing materials are classified as miscellaneous materials. Examples include: cement (transite) pipes, ceiling tiles, mastic, fire doors, gaskets, vinyl floor covering (9" x 9" floor tiles and linoleum), ductwork flexible connections, electrical wiring insulation, roofing felt, roofing flashing and laboratory fume hood ducting and paneling.

A more extensive list of asbestos-containing materials can be found in *Appendix C – Common Asbestos-Containing Material Categories*. Please note that *Appendix C* is an industry-wide list of ACM and does not constitute a listing of known ACM at PCC.

Asbestos-containing materials can also be classified based on their condition as follows:

- **Friable** – Any ACM that hand pressure can crumble, pulverize, or reduce to powder when dry. Friable ACM must only be removed by contractors licensed through the DEQ.
- **Nonfriable** – ACM that hand pressure cannot crumble, pulverize, or reduce to powder when dry. These materials may be removed by contractors not licensed by the DEQ.

It is a common misconception that all products that contain asbestos have been banned from use in the United States. For a list of products that have been banned in the United States, the reader is referred to *Appendix C*.

d. Work Classification – OR OSHA establishes a classification system for asbestos construction work that includes work practices to reduce worker exposure to asbestos. Construction work activities are classified as follows by OR OSHA:

- **Class I** – involves the removal of asbestos-containing or presumed asbestos-containing thermal insulation and sprayed-on or troweled-on surfacing material. Class I work is the most hazardous class of asbestos-related work.
- **Class II** – involves the removal of other types of asbestos-containing materials that are not thermal insulation, such as flooring and roofing materials.
- **Class III –** involves repair and maintenance operations in which asbestos-containing or presumed asbestos-containing materials are disturbed. The primary purpose of the work is not to remove or disturb asbestos, although some removal or disturbance may occur.
- **Class IV** – involves maintenance and custodial activities in which employees contact but do not disturb asbestos-containing materials. These activities must be related to a construction project, usually resulting from Class I, II, or III activities**.**

The aforementioned classes of work are all associated with construction and/or renovation projects and are regulated by OR OSHA's Construction Asbestos rule,

OAR 437-003-1926.1101.

PCC employees are not authorized to perform work that falls within OR OSHA Classes I through IV. Instead, PCC uses outside asbestos abatement and inspection contractors who have asbestos trained and certified staff to collect samples for analysis and/or properly repair, encapsulate or remove asbestos containing materials. FMS and P&CC management will give serious consideration to any recommendations provided by such contractors with respect to future activities involving affected materials. If abatement or encapsulation options are exercised, these activities will be performed by asbestos certified contractor personnel.

Custodial work that is not related to a construction project or to Class I, II, or III work is covered by OR OSHA's General Industry asbestos rule, OAR 437-002-1910.1001. Work involving brake and/or clutch repair performed by PCC employees would also fall within this rule.

2. **Inventory of PACM & ACM** – FMS Planning Design & Construction maintains a district-wide inventory of PACM by building and an inventory of known ACM in the *Hazardous Building Materials* module in AiM.

   The PACM Inventory can be found in *Appendix B – PCC Buildings with Presumed Asbestos-Containing Materials*, which lists each building throughout the District by campus/center, by building name and construction date. Materials in these buildings should be treated as though they contain asbestos until or unless they have been sampled and shown to not contain such materials. Until such time that a complete building survey is performed for any building, it is likely to remain on the PACM list due to the variety and magnitude of building materials present.

   An inventory of known ACM has been compiled and is available upon request from the FMS department. Building materials confirmed by microscopic analysis to contain asbestos are listed in the Assetworks Hazardous Building Materials module of AiM by campus/center, building, floor, room number and material type. Wherever possible and where warranted, labels and signs are used supplement the ACM inventory and to convey the necessary hazard information to employees. See section IV.A.3. *Communication of Hazards* for more information about labeling of known ACM.

   As materials are tested in preparation for building maintenance, upgrades and/or demolition, the Assetworks *Hazardous Building Materials* module is updated whenever there is a change in ACM inventory either due to microscopic analysis or abatement.

3. **Communication of Hazards**

   a. Labels – Materials, such as pipe insulation, that have been tested and determined to contain asbestos and containers of these materials shall be labeled as follows:

   PACM is not required to be labeled.

   b. FMS Inventory of ACM – FMS personnel maintain a database which lists by campus/center, building, floor, room and structure where ACM is present within the

District. Project Managers from both P&CC and FMS Minor Improvement Projects, as well as FMS Maintenance Managers should access this database prior to initiating any work that involves the removal, renovation and disposal of materials containing PACM and/or ACM. This inventory is maintained in the *Hazardous Building Materials* module of AiM.

If a structure is affected by a maintenance operation/project and no records exist of any prior testing, the FMS Maintenance/Project Manager shall contact EH&S to arrange for the collection of bulk samples of all affected materials. Upon receipt of written laboratory analyses regarding the presence or absence of ACM in the tested structures, records shall be generated to ammend the inventory with the new information.

In the event that affected structures do not have a corresponding inventory component in the *Hazardous Building Materials* module, the FMS Maintenance/Project Manager may opt to treat all affected materials as though they were ACM if the affected materials are PACM.

c. Safety Data Sheets – Materials and chemicals used by PCC may contain asbestos. In such cases, a Safety Data Sheet should be maintained by the department(s) using or storing the material that contains asbestos. Safety Data Sheets are governed by Chapter 8 of the Health & Safety Manual, *Hazard Communication*, and are accessible via *MSDSonline*.

d. Waste materials – Waste materials containing ACM shall be appropriately labeled and placed in suitable containers meeting the requirements of the U.S. Department of Transportation and/or OR DEQ. For more information on wastes containing asbestos, the reader is referred to Chapter 22 of the Health & Safety Manual, *Regulated Wastes.*

e. Training & Awareness – EH&S and/or its contractors conduct asbestos awareness training to convey information on the hazards of asbestos to those employees that may inspect and/or routinely impact PACM or ACM. Attending one of these training classes does not result in the abiltiy to perform work that PCC employees are prohibited from performing, e.g., Class I – IV work.

4. **Inspections** – There are several types of inspections associated with asbestos that are part of PCC's *Hazardous Building Materials Plan*:

Proactive – Regular, scheduled preventative maintenance inspections may be performed by FMS Maintenance personnel to assess the integrity of known building materials containing ACM and determine whether any of these materials have been disturbed or negatively impacted in such a way as to render the ACM friable. These assessments involve a physical inspection in which photographs are collected and compared to baseline inspection data. FMS may opt to utilize trained and certified asbestos contractors to perform this work.

Reactive – The condition of wallboard systems, ceiling tiles, insulation and flooring materials is inspected by FMS, P&CC, IT and/or other PCC employees when entering or accessing District spaces as part of their routine activities. When obvious changes that affect the integrity of PACM and/or ACM are noted, such as cracking, fraying or other damage, the observing personnel shall contact the Service Request Center (SRC) via phone, email or ReADY to request the collection and microscopic analysis of bulk samples for ACM determination:

- Phone: (971) 722-4890

- Email: src@pcc.edu
- ReADY: https://www.pcc.edu/facilities-management/requests/

Follow-up work resulting from a reactive inspection may include amending the *Hazardous Building Materials* module in AiM.

Additionally, when warranted, responding personnel can cover damaged building materials in plastic and seal them with tape to prevent any potential fibers from being further disturbed until such time that a determination is made as to the ACM content of the material and/or further actions, e.g., repair or abatement.

All work involving the removal of dust and/or fibers from PACM or ACM should be performed with a vacuum equipped with the high efficiency particulate air (HEPA) filter.

Should responding personnel and/or their management observe what they believe is an asbestos emergency as described in Section 6. *Modifications to Building Structures*, they should consult with EH&S as soon as possible.

5. **Care When Performing Routine Activities -** Handling PACM or ACM improperly can potentially result in both employee exposures to airborne asbestos fibers and to building and surface contamination. It is PCC's practice that PACM and ACM will only be handled or removed by certified asbestos contractors with proper equipment and controls. All reasonable attempts should be made to prevent the disturbance of these materials to ensure their integrity.

   FMS Maintenance and Custodial personnel, IT personnel, FMS/IT contractors shall exercise care when working around PACM and ACM. Personnel in departments in which PACM and/or ACM is present shall also exercise care.

   The following activities should be avoided in order to ensure PACM and ACM are not disturbed:

   - Drilling holes in either PACM or ACM.
   - Sanding floor tiles containing asbestos
   - Dusting surfaces that may contain asbestos with dry brushes or brooms
   - Using vacuum cleaners that are not equipped with HEPA filters to collect asbestos dust or debris
   - Handling or removing PACM or ACM without proper personal protective equipment including suitable, approved respiratory protection
   - Damaging PACM or ACM when moving objects or conducting general maintenance
   - Installing curtains, drapes, or other dividers into PACM or ACM
   - Mounting equipment to surfaces that are PACM or ACM
   - Routing wiring through surfaces that are PACM or ACM

   In those situations where work on PACM and/or ACM cannot be avoided, EH&S should be contacted to have approved contractors collect and analyze bulk samples of materials. Work described above should not take place unless the sampling results show no asbestos detected or some level of abatement activity takes place by certified asbestos contractors.

   Employees having questions regarding these activities and their potential to disturb PACM or ACM are advised to contact their supervisor/manager or EH&S.

6. **Modifications to Building Structures**

   Planned – Maintenance/Project Managers should consult with the *Hazardous Building*

Materials module in AiM prior to commencing work on structures affected by either maintenance activities or project work. This step of the process is further detailed in Section 3.b. of *Communication of Hazards*.

EH&S should be consulted early with details on the maintenance/project work and provided a detailed description of the tasks involved with the work and the anticipated completion date so as to obtain a written proposal and cost estimate from a trained and certified asbestos contractor prior to sampling. Requests for EH&S to perform/initiate the functions described in this section shall be made via ReADY or a work order generated in AiM through the SRC. When P&CC or IT projects involve the collection and analysis of bulk samples and/or abatement activities, EH&S will provide these departments with the names of approved contractors that can provide such services.

The coordination of bulk sample collection and analysis will be conducted by EH&S when the work supports an FMS project or activity or an emergency building modification. P&CC and/or IT will coordinate scheduling with approved vendors for their own projects.

EH&S will provide the FMS Maintenance/Project Manager with written laboratory analyses for sample collection and analysis activities involving approved contractors. P&CC and/or IT will provide these same written documents to EH&S.

Contractors working for EH&S and/or FMS Maintenance/Project Managers provide EH&S with a written report containing observations and recommendations that should be followed by the Maintenance/Project Manager. EH&S will document its findings and recommendations via the Notes and Related Documents section of AiM. EH&S will often have recommendations that go beyond what the asbestos contractor initially recommends. The EH&S Manager and asbestos certified contractor supervisor will determine interim measures necessary to protect personnel that may be exposed to the material. P&CC and IT will provide EH&S with copies of written reports from their vendors.

The College's ACM Inventory in the *Hazardous Building Material* module will be amended by the applicable Maintenance/Project Manager upon receipt of the approved vendor's final report.

Emergencies – Result from the discovery or awareness of damage to labeled and/or confirmed ACM. Damage may result from willful activities of District personnel or the public, or from maintenance or custodial activities associated with ACM. Awareness of an asbestos-related emergency will require:

- The immediate notification of department or area supervision as well as FMS
- The containment and/or sealing off of the area by FMS personnel
- The prominent placement and display of proper danger/warning signs
- The implementation of effective area security measures and the coordination of such measures with Public Safety

All clean up, repair or removal of affected ACM shall only be performed by a licensed asbestos abatement contractor with whom FMS maintains an agreement for emergency services. (See Section 7 – *Abatement Activities*)

7. **Abatement Activities -** Maintenance and/or Project Managers will often be provided with information from trained, certified asbestos contractors regarding the decision to either leave intact ACM in place, encapsulate disturbed ACM or abate it. Asbestos abatement is a heavily regulated activity by both OR OSHA and OR DEQ. Class I through IV asbestos work is covered under Division 3/Z of the OR OSHA Construction

Safety Standard and routine maintenance and custodial activities performed by FMS and/or IT personnel are covered under Division 2/Z of the OR OSHA General Safety Standard as well as the requirements of Oregon Administrative Code (OAR) PCC employees are not permitted to perform any asbestos abatement activities.

PCC shall hire only certified and trained asbestos contractors to conduct abatement activities in full compliance with OR OSHA Div 2/Z and/or 3/Z regulations. Additionally, all applicable OR DEQ regulations found in OAR 340 Division 248 will also be followed by PCC's contractors performing asbestos abatement (see reference document i - *DEQ Asbestos Survey Requirements Fact Sheet).*

Asbestos abatement contractors shall use equipment and controls that ensure the safety and wellbeing of PCC employees and visitors not associated with the abatement activities.

B. Other Hazardous Building Materials - Other hazardous building materials such as radon, silica, lead paint, formaldehyde and mold-impacted cellulose are handled similarly to asbestos with respect their testing, identification, inventory and controls.

Project managers working on projects that may potentially impact structures where other hazardous building materials are suspected to be present should notify EH&S of their project's scope and timelines. EH&S will follow procedures similar to those described in Section IV.A.6 of this plan and work with licensed contractors to collect and analyze samples. The *Hazardous Building Materials* module also serves as a repository of test results of not only asbestos containing materials but also other hazardous building materials. When hazardous building materials have been identified and represent a workplace hazard, effective controls will be established, including the placement of signs, to reduce exposure to such hazardous building materials. Employees working in areas where other hazardous building materials are known to be present should take precautions similar to those described in Section IV.A.5 to prevent exposures.

V. TRAINING

A. Asbestos

Asbestos Awareness Training - General asbestos awareness training will be provided to all FMS Maintenance, Custodial and Minor Improvement Project staff, IT staff, P&CC staff and others who may come into contact with asbestos or act as project managers, ensuring that the outside asbestos abatement contractors follow applicable PCC, OR-OSHA, and DEQ procedures. This training should be repeated as needed.

Training Associated with Construction Activities – Each of the four classes of OR OSHA construction activities involving asbestos has its own training requirements to ensure the safety of personnel:

1. **Class I** - Employees performing Class I activities must attend a four-day training course in accordance with the EPA's Model Accreditation Plan (MAP) for asbestos abatement workers. An eight-hour refresher training is required annually to maintain this level of training.
2. **Class II** – Employees performing Class II work must receive at least eight hours of training and attend annual refresher training. No specific time duration is established for refresher training.

3. **Class III** - Employees performing Class II work must receive at least sixteen hours of training and attend annual refresher training. No specific time duration is established for refresher training.
4. **Class IV** – At least two hours of awareness training is required to perform Custodial or Maintenance work after Class I, II, or III work. Annual refresher trainings are required but no duration is specified.

VI. RECORDKEEPING

A. Asbestos

1. **Risk** – Maintains employee exposure monitoring records for 30 years. These records must include:
    - Date of measurements
    - Operation(s) tested
    - Sampling and analytical method(s) used
    - Number, duration and results of sampling
    - Type of protective devices worn
    - Names and exposures of employees tested or represented
2. **FMS** – Maintains records regarding the testing and analysis of the following types of materials:
    - Pipe insulation materials
    - Floor tiles and mastic (tiles, mastic for molding, mastic for tiles or carpeting)
    - Sprayed on asbestos containing ceiling materials
    - Asbestos containing pipe
    - Other hazardous building materials

    These records are kept in AiM in the *Hazardous Building Materials* module and are to be kept for a minimum of 30 years.
3. **PSEC** – maintains employee medical surveillance records for the duration of employment plus 30 years. These records must include:
    - Employee names
    - Copy of the medical exam results
    - Physician's written opinion
    - Any medical complaints which relate to asbestos exposure
    - Copy of information supplied to the physician

    PSEC also maintains copies of employee training records in their Learning Management System found on the MyCareer@PCC website.

Availability - Records are to be made available to OR OSHA, OR DEQ, affected employee(s), former employee(s), and designated representatives upon request.