Management of Hazardous Building Materials at City of Phoenix Facilities

I. Policy Statement

Phoenix will comply with the applicable federal, state and local laws and regulations to identify and manage environmental risks when physical modifications are conducted at facilities owned or managed by the city.

II. Scope

At many city of Phoenix facilities hazardous materials were used in construction for a variety of reasons which were acceptable at the time of construction. This policy details the minimum requirements that city of Phoenix staff must use to manage these facilities while protecting health and environmental safety throughout operations, and consistently managing potential liabilities associated with facility repair, remodeling, and demolition.

A. This policy applies to any facility owned or managed by the city where changes are planned or otherwise required. Changes are physical modifications such as demolition, repair, renovation, and expansion of city facilities. These procedures will be followed prior to the implementation of any activity that could result in an exposure to hazardous building materials.

B. Hazardous building materials that may be encountered during changes at city facilities include, but are not limited to, asbestos, lead, mercury, and polychlorinated biphenyls (PCB).

C. Departments that encounter mold issues during changes at city facilities may contact the Human Resources Department Safety Section (Safety) for assistance.

D. Contract specifications for city of Phoenix contractors and consultants will be consistent with this policy.

E. The policy will also enhance compliance with requirements imposed by various funding entities.

III. Regulations

Applicable regulations are included in the policy or attachment for each hazardous building material.
IV. Roles and Responsibilities

The responsibilities defined below are implemented for an effective citywide program that provides a safe environment for facility occupants, identifies unsafe conditions, provides training and protection for employees and contractors, and effectively administers contracts to remove or otherwise remediate hazardous building materials when necessary.

A. Department Responsibilities

1. Appoint a Departmental Representative (DR) to be responsible for maintaining compliance with this policy and all applicable guidelines and regulations.
2. Ensure that staff is familiar with the contents of the HMMP and are aware of resources such as the expertise of appropriately qualified staff for materials that are specifically regulated, such as lead and asbestos. Requirements for these materials are detailed in the attached appendices. Departments that do not employ qualified staff must contact the Public Works Department – Environmental Section (PWES) or Safety for these projects.
3. Implement procedures to conduct or arrange for the identification, management and disposal of known or suspected hazardous building materials when implementing change at a facility. Applicable procedures shall include those specified in the HMMP, and specifications and guidelines developed under section IV.B.
4. Ensure assigned staff implementing change that may disturb hazardous building materials maintains any required certifications.
5. Respond to notification by staff of pending renovation, demolition, or maintenance projects that could disturb hazardous building materials.
6. Ensure compliance with agency notification requirements in situations where exposures to hazardous building materials could meet established threshold criteria.
7. Notify management and affected employees, tenants and contractors of the location of known hazardous building materials and provide guidance in performing routine facility operations in its presence if there is a likelihood of exposure.
8. Communicate information about identified hazardous building materials to city employees and contractors who may disturb or otherwise contact these materials in the course of work at city facilities.
9. Implement procedures and specifications to reduce the inadvertent disturbance of hazardous building materials.
10. Implement procedures and specifications to mitigate the possibility of levels of exposure to hazardous building materials that exceed regulated levels.
11. Complete a training plan to ensure that appropriate city staff are trained to recognize or identify hazardous building materials that staff might encounter in the course of their work.
12. Maintain organized, accessible records of notifications, periodic surveillance activities, training and other related activities. Submit to Public Works Central Records.
B. Public Works Environmental Section (PWES) or other departments approved according to the procedures of this policy to accomplish these responsibilities.

1. Develop and manage annual services contracts for surveys, abatement and demolition of hazardous building materials.
2. Upon departmental request, contract for and coordinate surveys, abatement and demolition of hazardous building materials.
3. Implement guidelines and specifications to ensure that any inspections, surveys, assessments, mitigation, containment and/or removal of hazardous building materials are comprehensive and are performed by qualified personnel with experience in the identification, removal and management of specified materials.
4. Perform oversight of hazardous building materials abatement activities by periodically inspecting contracted work to ensure that contractors are aware of and following required procedures or project specifications.
5. Review contractor bids and reports to ensure work and pricing are compliant with regulatory requirements and industry standards.
6. Develop and manage annual services contracts to provide any of the services listed in this section.
7. It is the policy of PWES to charge fees for their services. Therefore, departments that use PWES to meet the requirements of this policy must provide funding authorization with each request for services.

C. Human Resources Safety Section (Safety)

1. Conduct task-specific industrial hygiene sampling and monitoring at occupied city facilities for hazardous building materials such as asbestos and mold.
2. Respond to employee, contractor or tenant complaints at occupied city facilities regarding inspections, removal or construction activities that may disturb hazardous building materials and potentially expose City employees.
3. Establish and monitor city safety policies.
4. Conduct or coordinate training regarding specific hazardous building materials in city facilities for city of Phoenix staff.
5. Coordinate disposal of hazardous building materials upon request by departments that do not have staff responsible for coordinating disposal with the city hazardous waste contractor.

D. Office of Environmental Programs (OEP)

1. Establish and monitor city policies for hazardous building materials management.
2. Develop training modules and train city employees regarding recognition of hazardous building materials, or review and approve departmental training modules.
3. Research, develop, and maintain information regarding regulatory and city-generated compliance policies. Share information on OEP’s centralized intranet website.
4. Monitor new laws, regulations, or advisories applicable to city operations involving hazardous building materials and determine if changes to city policies and procedures are necessary.
V. Procedure for Hazardous Building Materials

A. When department staff is aware that an activity which could disturb hazardous building materials is being considered at an impacted facility, they shall notify the facility supervisor and/or the DR.

B. Assigned staff may use their discretion to determine whether a minor change must be reviewed using this policy. Staff must be confident that minor changes that are not evaluated will not disturb hazardous building materials.

C. Departmental staff will check the records for the facility which, to the extent they are available, may provide a good source of information regarding dates and materials used for construction, as well as renovations or improvements made at the facility.

D. The supervisor responsible for the activity will, with the assistance of the DR, ensure that potential exposures are identified and evaluated. The Hazardous Building Materials in City of Phoenix Facilities Checklist (Appendix A) may be used to assist in that evaluation. The purpose of the checklist is to direct staff to the correct actions, so additional forms or steps may be required.

E. The DR will ensure that the correct action is taken.

F. All work conducted by city staff or contractors will be done in compliance with HMMP documents in addition to those required by funding or regulatory agencies such as the U.S. Department of Housing and Urban Development (HUD), the Environmental Protection Agency (EPA), the Occupational Safety and Health Administration, Maricopa County, etc.

G. Contractor Selection and Hazard Communication

1. Contractor selection will be based in part on minimum requirements established by PWES. PWES will develop model contract language governing contractor responsibilities to ensure competent contractors with appropriate training are selected for these facilities. Contractor proposals and bids will be evaluated by PWES or staff with equivalent credentials, training and experience.

2. Staff responsible for planned renovation or demolition activities in the vicinity of hazardous building materials or that will directly disturb such materials will notify contractors of the materials during the contract negotiations for the project. This will allow for price and schedule negotiations prior to the start of the project. Staff shall ensure that the contractor(s) hired meet all minimum regulatory requirements.

H. Emergencies

1. Employees must adhere to the requirements of this policy even if situations such as major leaks or building damage may call for immediate corrective action. City of Phoenix employees or contractors are NOT to commence work that potentially subjects them to exposure to known or untested hazardous building materials. The city maintains contracts with professionals who can provide immediate response such as testing for hazardous building materials, or working safely in
contaminated areas. Department planning for emergency response should include provisions to prevent against employee or contractor exposure to hazardous building materials.

2. If an employee becomes aware that hazardous building materials have been disturbed and may pose an exposure hazard, he or she will stop work and direct others to leave the immediate area and take action to limit access. The employee will immediately contact his or her supervisor, who will then contact the DR, Safety, or PWES.

VI. Recordkeeping

A. Public Works Central Records maintains detailed records of city properties, including environmental testing. Departments can access these records by contacting Central Records.

B. The completed “Hazardous Building Materials in City of Phoenix Facilities Checklist” (Appendix A) or equivalent will be retained within the department, with a copy of any testing reports and laboratory analyses that are obtained. Testing reports and laboratory analyses will also be provided to Central Records.

C. All training of staff will be tracked through the e-CHRIS system.

VII. Training

A. Departments are to ensure that staff are trained on the contents of this procedure as it relates to their job functions. Employees must be trained both before performing duties in which it is possible that they will disturb hazardous building materials, and every three years thereafter.

B. Departmental Representatives and Facility Supervisors will be trained in:

1. Basic recognition of potential hazardous building materials.
2. Tasks which are exempt from the requirement of this policy.
3. Completion of forms and notifications.
4. Required actions upon completion of Hazardous Building Materials in City of Phoenix Facilities Checklist or equivalent forms.
5. Notification that employees may be required to attend hazard-specific courses such as those specified by Asbestos or Lead regulations. The Human Resources Safety Section can provide basic Asbestos Recognition courses and assist departments in identifying qualified trainers.

C. Departmental staff who have the potential to disturb hazardous building materials which could result in exposure to themselves or others will be trained in:

1. Basic recognition of potential hazardous building materials, including identification and/or awareness of areas where exposure might take place, or where regulation might mandate a certain course of action.
2. Tasks which are exempt from the checklist requirement.
3. Process to notify supervisor and initiate completion of the checklist and form.
DEFINITIONS

**Affected** means reasonably likely to come into contact with or otherwise be exposed to a hazardous building material.

**Change** means any physical modification at a facility such as repair, renovation, expansion or demolition. It does not mean removal of an intact structure.

**CFR** is the Code of Federal Regulations

**DR (COP)** means Department Representative and is the person designated to be responsible for compliance with hazardous building materials policies and applicable guidelines and regulations.

**Emergency** is any sudden, unexpected event.

**Facility** is any structure that is designed, built, installed, etc., to serve a specific function affording a convenience or service. This includes, but is not limited to, buildings, roads, sheds, bridges, etc.

**Facility Occupant** is one who occupies a space in or at a city of Phoenix facility, including employees, visitors, customers and the public.

**Facility Supervisor** is one responsible to supervise and coordinate activities that may include change at a city of Phoenix facility. There may be multiple facility supervisors at a single facility.

**Hazardous Building Material (HBM)** means a facility component that may pose a health hazard when disturbed or otherwise mobilized through wear or deterioration. Most HBMs are stable and are contained or encapsulated during normal use.

**Managed** means that change is performed by city staff or by any person or entity that contracts with the city for these activities, which may include change at facilities that the city does not own.

**Risk** means a measure of the probability that damage to life, health, property, and/or the environment will occur as a result of a given hazard.
APPENDIX A

HAZARDOUS BUILDING MATERIALS IN CITY OF PHOENIX FACILITIES CHECKLIST

Complete this form **before** making changes that might **disturb** hazardous building materials (HBM) at a facility. Changes include physical modifications such as repair, renovation, demolition or expansion of city facilities or operations. Contact your supervisor or HBM Departmental Representative for assistance if you are unsure as to whether or not this form must be completed.

Department___________________________ Facility Address__________________________________

Description of Planned Change

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Anticipated Start Date______________ Employee Completing form _____________________________

<table>
<thead>
<tr>
<th>DOES THE ACTIVITY:</th>
<th>YES, NO, or Don't Know</th>
<th>IF ANSWER IS &quot;YES OR DON'T KNOW:&quot;</th>
<th>CONTACT</th>
<th>DOCUMENT(S)</th>
</tr>
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<tbody>
<tr>
<td>Require renovation or destruction of any building materials (including paint),</td>
<td>PWES</td>
<td>Request for Environmental Services</td>
<td>PWES</td>
<td>Request for Environmental Services Form</td>
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<td>(including paint), with the exception of unpainted wood, metal or glass?</td>
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<td>Require the disturbance or relocation of any building materials, with</td>
<td>PWES, or departmental</td>
<td>Request for Environmental Services</td>
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<td>the exception of wood, metal, or glass? (i.e., to gain access for required</td>
<td>equivalent</td>
<td>Form</td>
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<td>maintenance or repair)</td>
<td></td>
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<tr>
<td>Result in changes in air emissions that might be permitted?</td>
<td>OEP, or departmental</td>
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<td>Contact OEP or Air Quality staff for assistance in determining whether an existing</td>
<td>equivalent</td>
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<td>permit is affected or a new one is required.</td>
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<tr>
<td>Involve new facility construction or improvements?</td>
<td>Public Works Design and</td>
<td>PW Design and Construction Management, or departmental equivalent</td>
<td>Public Works Design and Construction Management, or departmental equivalent</td>
<td>Environmental Review Checklist</td>
</tr>
<tr>
<td>Involve facility or equipment decommission or demolition?</td>
<td>PWES</td>
<td>Request for Environmental Services</td>
<td>PWES</td>
<td>Request for Environmental Services Form</td>
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<td>Have the potential to generate significant quantities of dust?</td>
<td>OEP, or departmental</td>
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<td>equivalent</td>
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<tr>
<td>Require a new maintenance or operational procedure to avoid employee exposure to</td>
<td>DR works with facility</td>
<td>HMMP Policies, if applicable - Mercury Containing Equipment, Mercury Lamps, Oil or PCB policies</td>
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<td>hazardous building materials?</td>
<td>staff to develop</td>
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<td>procedure. Submit to OEP or HR Safety for review.</td>
<td>procedure. Submit to</td>
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<td>OEP or HR Safety for review.</td>
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Send copy of completed form to Departmental Representative and the contact designated on the checklist. Keep original on file at facility.
City of Phoenix Hazardous Building Materials Policy

APPENDIX B: Asbestos Containing Material

I. Policy Statement: The City of Phoenix shall comply with applicable City, State, County, and Federal regulations pertaining to asbestos containing material (ACM). The city has developed comprehensive procedures to address the identification, in-place management, and abatement of ACM.

II. Scope

A. These procedures apply to city of Phoenix employees and contractors who will repair, renovate, demolish or otherwise alter building materials in any way. This procedure is an appendix to the Hazardous Building Materials (HBM) Policy and is to be used after departments complete the checklist from that document. Any part of a facility, component of a facility, or facility component that is not bare wood, glass, or metal is Presumed ACM (PACM). Materials are presumed to be asbestos containing materials (PACM), unless tested and determined by laboratory analysis to be non-ACM (1% or less).

Asbestos regulations are complex. This policy establishes minimum standards for departments to implement the following procedures:

1. Identification of ACM in facilities owned or managed by the city.
2. Written Program requirements
3. Training plans
4. Notification requirements
5. Response Actions
6. Disposal requirements
7. Recordkeeping

B. Each department must choose and document one of the two programs used to ensure compliance.

1. Option 1: Adopt a recognition-only policy and utilize either of the two departments that act as city contacts to assist in all facets of compliance:
   - Human Resources – Safety Section (Safety): 262-7555. Only for small-scale projects performed by city employees.
   - Public Works – Environmental Section (PWES): 495-7274

2. Option 2: Develop a written program and designate a departmental Asbestos Program Manager (APM) to coordinate the requirements of this procedure. These departments may request assistance from PWES and Safety.

Departments must contact the Office of Environmental Programs (OEP) to coordinate with PWES and Safety to obtain program approval. OEP, PWES and
Safety will meet with departments that are proposing to use their own Asbestos Program Manager to oversee the responsibilities detailed in this document to determine if the proposed program meets the requirements of this policy and the applicable regulations, and whether the experience of the proposed Asbestos Program Manager meets the minimum requirements. (Contact OEP for information.) Approval may be granted upon mutual agreement of OEP, PWES, and Safety and may be removed if the designated Competent Person leaves the employment of the department.

Note: The department’s Designated Representative (DR) may also be the Asbestos Program Manager, provided he or she meets the position requirements. Departmental DRs must be trained to the function they will assume with hazardous materials (i.e. if the department does not perform any changes to facilities, recognition and notification training is appropriate).

C. CITY OF PHOENIX EMPLOYEES SHALL NOT PERFORM CLASS I OR II OSHA-DEFINED ASBESTOS ACTIVITIES (See definitions). These projects are abatement (removal) of ACM, and the requirements for these activities are beyond the scope of this policy.

D. City of Phoenix employees WHO ARE TRAINED, QUALIFIED, AND WORKING IN CONSULTATION WITH A COMPETENT PERSON may conduct some Class III work. This includes repair and maintenance operations where ACM is likely to be disturbed.

E. City of Phoenix employees WHO ARE TRAINED perform Class IV work which is maintenance and custodial activities during which they contact but do not disturb ACM.

III. Background

Asbestos fibers can cause serious health problems. If asbestos fibers are inhaled, the tiny microscopic fibers can cause normal functions of the lungs to be disturbed. Exposure increases the risk of developing lung cancer, mesothelioma, or asbestosis, which is a scarring of the lungs that leads to breathing problems. It could take anywhere from 15 to 30 years after the first exposure for symptoms to occur. Medical investigations have shown that inhalation is the principal route of entry that leads to asbestos-related diseases. There is no known safe exposure level to asbestos. To control these risks, OSHA and EPA have developed acceptable practices for each phase of asbestos management.

Common Uses: Some typical industrial and commercial uses for asbestos include, but are not limited to, fireproofing, thermal and acoustical insulation, condensate controls, and decorative finishes. Typical ACM building materials in city facilities include, but are not limited to, mastic adhesives, floor tile, drywall, and drywall mud. These materials may be covered by modern finishes.

IV. Applicable Regulations

The specific asbestos regulations the city of Phoenix must comply with during building maintenance, renovation, and demolition include:
A. Occupational Safety and Health Administration (OSHA):

- 29 CFR Part 1926.1101 – Asbestos Standard for the Construction Industry
- 29 CFR Part 1910.1020 – Access to Employee Exposure and Medical Records

B. Environmental Protection Agency (EPA):

- 40 CFR Part 763, Subpart E – Asbestos Hazard Emergency Response Act (AHERA) – Inspections and sampling
- 40 CFR Part 763 Appendix C – Model Accreditation Plan (MAP)

C. Maricopa County (MCAQD) Air Pollution Control Regulation III, Rule 370, Section 301.8

Each of these regulations pertains to a different aspect of ACM work, which might require departments to comply with additional regulations, such as those for respiratory protection.

V. Roles and Responsibilities

A. All departments shall:

1. Refer to the *Hazardous Building Materials Policy* for detailed roles and responsibilities.
2. Use Scope of Work specifications for contracted abatement and renovation projects that are consistent with the general guidelines and specifications prepared by PWES.
3. Ensure that facility employees who perform custodial or maintenance activities in the vicinity of ACM have the required training in accordance with section VIII of this plan.

B. Departments that are approved to meet the requirements of this policy by choosing Option 2 under Section II.B shall:

1. Develop a written plan that outlines how the requirements of this policy will be met.
2. Ensure that any ACM inspections, asbestos abatement oversight, and maintenance of ACM are performed by personnel with experience in the identification, removal and management of ACM. Certifications and licenses shall be commensurate with federal, state and local regulations concerning the identification, oversight, and handling of ACM.
3. Ensure compliance with *MCAQD NESHAP* notification requirements in situations where ACM meets the criteria of Regulated Asbestos Containing Material (RACM) and exceeds the threshold amounts of 160 square feet, 260 linear feet or 35 cubic feet of RACM.
4. Monitor and document the condition of known installed ACM on a routine basis to identify damage or deterioration.
5. Respond to employee, contractor, or tenant complaints or questions regarding ACM concerns including construction, inspections, or removal activities.
6. Maintain records of notifications, periodic surveillance activities, training, and other ACM related activities.

VI. Procedure

A. Identification of Asbestos. Prior to any repair, renovation or demolition, departments must test for the presence of asbestos. For repairs and renovations, only the building materials that will be disturbed need to be tested. For demolitions, all PACM must be tested. No facility or its components shall be considered exempt from asbestos requirements based on construction or renovation date. Departments have three options for testing asbestos before beginning work:

1. Records Check
   a. Contact Public Works Central Records at 602-262-4935 to request any asbestos records they might have. Department staff will also check within their departments to locate records of asbestos surveys and abatement projects. If survey was performed by a currently certified AHERA Accredited Asbestos Building Inspector within the previous 12 months and includes all building materials that will be affected by the renovation, it is considered valid to support renovation activities.
   b. If no records are found, the survey was performed more than 12 months prior to the renovation or demolition, or the survey does not include all building materials that will be affected by the renovation, data must be collected, renewed or supplemented.
   c. If existing data is located, a currently certified AHERA inspector must review it to determine if it remains accurate and includes all materials that may be affected by the renovation. The inspector will approve the existing data or require additional sampling. The inspector must document the review, and the department must file in-house and with PW Central Records.

2. Sampling
   a. Conduct a MCAQD NESHAP compliant inspection using AHERA sampling protocol where applicable. The MCAQD requires that bulk samples of suspect building materials be collected and analyzed for asbestos and that the inspections be dated within one year of the beginning of the planned demolition or renovation project.
   b. Inspections and sample collections must be performed by a currently certified AHERA Asbestos Building Inspector to meet regulatory standards.
   c. The city and its consultants and contractors shall use only laboratories that are accredited with the National Voluntary Laboratory Accreditation Program (NVLAP). The current testing method is EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples.
   d. All AHERA-certified inspectors must pass medical evaluation and fit testing. They must be issued respirators in order to collect bulk samples. All reports must include certification documentation for the certified inspector.
3. Presume Materials Contain Asbestos

Prepare a written document stating that all suspect asbestos-containing materials that will be affected by the planned renovation or demolition project are presumed to contain greater than 1% asbestos and must be treated as asbestos and removed as asbestos and removed prior to disturbance where applicable. **Note:** This will substantially increase project costs!

B. Positive Results

1. Typically, the least burdensome approach is to remove ACM. However, a positive asbestos test does not mean that all asbestos must be removed. Asbestos that is intact and in good condition is often best managed by leaving it undisturbed and in place. When materials are determined to be ACM, departments must ensure that it is kept in good condition and is not disturbed.

2. If materials are not intact and in good condition, contact HR Safety, PWES or department APM for assistance. Contact PWES or departmental APM for assistance with abatement options.

C. Notification – Hazard Communication

1. Departments are responsible for notifying affected employees, contractors, and building occupants of the location of ACM.

2. Project managers responsible for repairs of small areas, planned renovation, or demolition activities in the vicinity of ACM or that will directly disturb ACM will notify contractors of the asbestos hazard during the contract negotiations for the project. For abatement, renovation and demolition projects, the Asbestos Program Manager, project manager, or other responsible party will share renovation plans and drawings with the asbestos inspector/consultant to ensure the scope of the survey is accurately determined and complete to address all areas scheduled to be disturbed.

3. All intentional disturbance of ACM will be completed by licensed and certified asbestos removal and oversight personnel contracted through the PWES contracting process or other approved City contracting processes.

D. Medical Surveillance

Respirators may be required for Class III work. Departments must ensure that they follow the requirements of the city’s [Respiratory Protection Program](#).

E. Demolition

Departments that use contractor’s services to demolish a building must comply with the additional requirements detailed in the [Asbestos Demolitions Requirements](#) document.

F. Disposal Requirements for ACM.

All asbestos-containing waste material will be handled, transported, and disposed of according to the applicable local, state, and federal regulations.
VII. Training

A. Various levels of OSHA training are required, depending on the type of involvement with asbestos materials.

1. Each department is responsible for ensuring employees are trained for their level of asbestos involvement. Safety can assist departments in identifying the level of required training.
2. Class IV Awareness Training. Two-hour basic level training, required for custodial and maintenance employees within 30 days of initial assignment to a building containing ACM. Safety provides this training, through catalog courses or departmental request.
3. Class III Maintenance and Repair Activities. This is a 16-hour course, to allow employees to work directly on small scale projects which generate no more than one bag of ACM waste. Training will also include overview of respiratory protection requirements. Employees must be included in their department’s Respiratory Protection Program prior to beginning work. This training can be provided by OSHA-approved accredited training programs.
4. Building Inspector Training. This is a 24-hour course designed for a “Competent Person” with responsibilities for assessing and identifying ACM in a facility to ensure employee safety. This training can be provided by OSHA-approved accredited training programs.

VIII. Recordkeeping

A. Because significant amounts of ACM are prevalent throughout city facilities, it is imperative that city departments maintain a well-documented program for identifying ACM, recording both positive and negative sampling results, abatement, and other asbestos-related work.

B. All facility-specific asbestos information such as inspections, removal oversight information and waste manifests shall be retained in Public Works Central Records indefinitely.

C. Records for employees exposed to toxic substances such as asbestos shall be retained for the length of employment plus 30 years in accordance with 29 CFR 1910.1020. This includes training information, medical evaluations, fit test information, respirator training and use information and worker certifications. In addition, copies of all initial inspections documents will be maintained within the department.

D. All training information will be tracked in e-CHRIS.
DEFINITIONS

Asbestos means the asbestiform varieties of Serpentine (chrysotile), and Amphibole, which includes: riebeckite (crocidolite), cummingtonite-grunerite, anthophyllite, and actinolite-tremolite.

Asbestos Containing Materials (ACM) means any material containing greater than 1% asbestos as determined by laboratory analysis, or presumed to be asbestos containing materials (PACM), unless tested and proven to be non-ACM.

Asbestos Program Manager is one who is qualified to assess and identify ACM. Required training is 24 hours AHERA Building Inspector, with a 4 hour annual refresher course.

Class I asbestos work means activities involving the removal of Thermal Systems Insulation (TSI) and surfacing ACM and PACM.

Class II asbestos work means activities involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

Class III asbestos work means repair and maintenance operations, where "ACM", including TSI and surfacing ACM and PACM, is likely to be disturbed.

Class IV asbestos work means maintenance and custodial activities during which employees contact but do not disturb ACM or PACM and activities to clean up dust, waste and debris resulting from Class I, II, and III activities.

Demolition means the wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

Facility means, for purposes of NESHAP compliance, all public, private, commercial and industrial buildings excluding single private residences and apartment complexes of four (4) units or less.

Friable asbestos material means any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy, that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. If the asbestos content is less than 1 percent as determined by a method other than point counting by polarized light microscopy (PLM), verify the asbestos content by point counting using PLM.

Installation means any building or structure or any group of buildings or structures at a single demolition or renovation site that are under the control of the same owner or operator (or owner or operator under common control).

Owner or operator of a demolition or renovation activity means any person who owns, leases, operates, controls, or supervises the facility being demolished or renovated or any person who owns, leases, operates, controls, or supervises the demolition or renovation operation, or both.
Physical Assessment means the evaluation of the physical condition and potential for damage of all friable asbestos containing materials and thermal insulation systems.

PLM: Polarized light microscopy means an examination that permits the identification of pigments and fibers for possible asbestos content. Pigment particles used for PLM are typically in the size range of 1–20 microns, or less than a thousandth of an inch.

Regulated asbestos-containing material (RACM) means (a) Friable asbestos material, (b) Category I nonfriable ACM that has become friable, (c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart.

Removal means to take out RACM or facility components that contain or are covered with RACM from any facility.

Renovation means altering a facility or one or more facility components in any way, including the stripping or removal of RACM from a facility component. Operations in which load-supporting structural members are wrecked or taken out are demolitions.

Repair means returning damaged ACM to an undamaged condition, or intact state, so as to prevent the release of asbestos fibers.

Response Action means a method, including removal, encapsulation, enclosure, repair, operations and maintenance, which protects human health and the environment from friable ACBM.

Structural member means any load-supporting member of a facility, such as beams and load supporting walls; or any nonload-supporting member integral to the structure, such as ceilings and nonload-supporting walls.

Surfacting Material means 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 System Insulation (TSI) means ACM applied to pipes, fittings, boilers, breeching, tanks, ducts, or structural components to prevent heat loss or gain.
# ASBESTOS REFERENCE CHART

Any part of a facility that is not bare wood, bare glass, or bare metal is considered Suspect ACM!

<table>
<thead>
<tr>
<th>If your Department....</th>
<th>The Basics</th>
<th>Training</th>
<th>Sampling</th>
<th>Written Requirements</th>
<th>Notification</th>
<th>You must also......</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is a tenant at a facility</td>
<td>Do not cut into walls, move acoustical ceiling tiles, or make any changes to facility – contact landlord first!</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has workers that might need to clean or maintain a facility, but will not disturb ACM.</td>
<td>There are no exemptions for “small” areas. Either test or presume ACM</td>
<td>2 hour Awareness training (OSHA Class IV)</td>
<td>Required if any suspect ACM will be disturbed; must be conducted by AHERA insp.</td>
<td>Statement of policy, specific procedures to ensure ACM not disturbed</td>
<td></td>
<td>Wait for sampling results/ clearance from Competent Person before proceeding with repairs.</td>
</tr>
<tr>
<td>Has workers that make minor repairs to ACM</td>
<td>Must know level of exposure before proceeding.</td>
<td>16 hours (OSHA Class III)</td>
<td>Required for any employee exposures; work over NESHAPS min. requirements</td>
<td>Operations and Maintenance Program</td>
<td>Contact H. R. Safety Section to determine requirements prior to sample collection by AHERA Inspector.</td>
<td>Medical Surveillance and respiratory/ personal protective equipment may be required</td>
</tr>
<tr>
<td>Is in control of a facility that must be renovated or demolished.</td>
<td>Major renovations are managed by Public Works Engineering and Architectural Services or Asbestos Competent Person.</td>
<td>Competent Person must be trained to coordinate contract.</td>
<td>Per contract requirements</td>
<td></td>
<td>Must notify county of all ACM disturbances above threshold amounts, all demolitions. Must notify 10 days prior to start.</td>
<td>Ensure contracts either written or approved by PW EAS. ACM must be removed from structures prior to demolition.</td>
</tr>
<tr>
<td>Contacts Public Works Department Environmental and Architectural Services or the Human Resources Safety Section to coordinate Asbestos issues</td>
<td>Do not cut into walls, move acoustical ceiling tiles, or make any changes to facility – contact landlord first!</td>
<td>2 hour Awareness training may be required for employees that clean or maintain facility</td>
<td></td>
<td>Statement of policy, specific procedures to ensure ACM not disturbed</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1/2012
**ASBESTOS REFERENCE CHART**

Any part of a facility that is not bare wood, bare glass, or bare metal is considered Suspect ACM!

<table>
<thead>
<tr>
<th>Has a departmental Asbestos Program Manager/Competent Person</th>
<th>Must meet OSHA requirements for Competent Person.</th>
<th>2 hour Awareness training may be required for employees that are assigned to clean or maintain facility</th>
<th>Coordinated by Competent Person</th>
<th>Written departmental plan</th>
<th>Coordinated by Competent Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employs contractors for electrical, computer installation or related projects that might disturb ACM.</td>
<td></td>
<td>Project Managers must have 2 hour Awareness Training</td>
<td>Coordinated by Competent Person</td>
<td></td>
<td>Coordinated by Competent Person</td>
</tr>
<tr>
<td>Employs contractors that are working in areas with known or suspect ACM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Must notify contractors for activities in the vicinity of ACM.</td>
</tr>
</tbody>
</table>
CITY OF PHOENIX HAZARDOUS BUILDING MATERIALS POLICY

APPENDIX C: LEAD IN PAINT AND COATINGS

I Policy Statement

The city of Phoenix shall comply with applicable City, State, County, and Federal regulations pertaining to lead in paint and coatings. Phoenix has developed guidelines to address the identification, in-place management, and abatement of lead coatings in city facilities and on city projects.

II Scope

A. This policy applies to all facilities owned or managed by the city of Phoenix with paint or other surface coatings including, but not limited to, paint, lacquer, glaze, varnish, putties, caulks and patching materials. The policy distinguishes between “lead-based paint” and “lead-containing paint” as defined herein.

B. These procedures apply to city of Phoenix employees and contractors that may encounter lead in surface coatings when repairing, renovating, demolishing or in any way disturbing building materials at city facilities or during a city-funded project. This procedure is an appendix to the Hazardous Building Materials (HBM) Policy and is to be used after departments complete the requirements of that document. These procedures provide guidance on who to contact for lead paint-related services and the regulations that govern testing, removal, and disposal of lead coated materials. This policy establishes minimum standards for departments to do the following:

1. Identify lead-based paint in city owned or operated facilities that may be encountered during facility change or projects.
2. Notify contractors and affected employees of the results of all testing for lead in paint and coatings.
3. Establish a training plan.
4. Dispose of waste materials that contain lead in compliance with applicable regulations.
5. Implement a recordkeeping system.

C. Each department must choose and document one of the two programs they will use to ensure compliance.

1. Utilize the Public Works Environmental Section (PWES) (495-7274) to assist in all facets of compliance. PWES will coordinate applicable testing prior to any facility work where lead-based paint may be disturbed. PWES administers on-call contracts for lead consultants and contractors for both testing and removal (if needed) of lead-based paint. They can be mobilized quickly under these contracts to assist with project needs.

2. Employ a departmental Lead Program Manager who has the experience and expertise to coordinate the requirements of this procedure. After receiving
program approval, these departments may implement these procedures with assistance as requested from PWES. Departments must contact the Office of Environmental Programs (OEP) to coordinate with PWES and Safety to obtain program approval. OEP, PWES and Safety will meet with departments that are proposing to use their own Lead Program Manager to oversee the responsibilities detailed in this document to determine if the proposed program meets the requirements of this policy and the applicable regulations, and whether the experience of the proposed Lead Program Manager meets the minimum requirements. Approval may be granted upon mutual agreement of OEP, PWES, and Safety and may be reconsidered if the designated lead program manager leaves the employment of the department.

D. PWES has procedures for the testing and removal of lead-based paint when PWES-contracted on-call consultants and contractors are utilized on a project. The scope of services and technical specifications drafted by PWES will help to ensure proper compliance with all regulations and city policies pertaining to lead in coatings. These documents can only be enforced when the consultant/contractors work under the PWES on-call contract. Work not performed under this contract will not be subject to enforcement or protected under the requirements of the PWES on-call contract.

III Background

Chronic overexposure to lead results in damage to the kidneys, the gastrointestinal tract, the nervous system, the reproductive system, and the blood-forming organs. In adults, occupational exposure through uncontrolled building renovation is the leading contributor to elevated blood lead levels.

The exposure effects are most harmful in children under six (6) years of age and unborn children, whose bodies and nervous systems are still developing. Exposure to high concentrations of lead can cause development issues, convulsions, coma and death even at low levels. There is no truly safe concentration of blood lead level for children less than six years of age.

IV Applicable Regulations

Lead regulations are complex and vary according to the type of application. Three federal agencies – OSHA, EPA, and HUD – have developed regulations and/or guidance to address lead-based paint and lead-containing paint. Before implementing facility change departments must determine which of the following regulations apply to their specific project and prepare to comply with all of the associated requirements. PWES, Safety, and if necessary the Law Department will assist Departmental Representatives in making these determinations.

The following regulations and their various subparts may apply:

2. EPA: 40 CFR Part 745 (Includes the Lead Renovation, Repair and Painting Program Rule)
3. EPA: Toxic Substances Control Act (TSCA). Several sections pertain to lead-based paint hazards
4. HUD and EPA: Residential Lead-Based Paint Hazard Reduction Act of 1992 (referred to as Title X).
5. HUD: Lead Safe Housing Rule (24 CFR 35)
6. HUD: Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing developed in 1995, revised 1997

V Procedures

A. General Requirements: All departments shall:

1. Refer to the Hazardous Building Materials Policy for detailed roles and responsibilities for all HBM.
2. Develop written departmental procedures that outline how the requirements of this Appendix will be met.
3. Use the lead in paint scope of work language consistent with that developed by PWES.

B. Identification: Testing for lead must be conducted and the results considered before performing the tasks listed below on painted or coated surfaces.

1. Facility change at interior and exterior surfaces of target housing and child-occupied facilities, or,
2. Facility change at exterior surfaces of any non-residential building or building component including equipment and other structures regardless of the date of construction or,
3. Work that involves the direct disturbance of any painted or coated surfaces using techniques such as grinding, sanding, power-washing, dry scraping, sandblasting or dry (particulate) blasting, or open-flame burning /torching of painted components. An exception may be made if the disturbance will be less than 2 square feet and the work practices specified in section VIII are followed.

C. Sampling: Lead in paint is analyzed by only two commonly recognized methods: X Ray Fluorescence (XRF) sampling and paint chip sampling. XRF sampling is a non-destructive means of sampling with utilizes a portable device to provide a direct reading of lead in paint. Paint chip sampling is the physical removal of paint from the substrate for laboratory analysis. Paint chip sampling is the most accurate and most accepted form of lead testing and is the only form of lead testing accepted by OSHA.

1. Sampling must be conducted by an EPA-certified lead paint inspector or risk assessor.
2. The laboratory used for analysis must be certified by the National Lead Laboratory Accreditation Program (NLLAP).
3. If XRF is used, the sampling report must document that the required instrument calibration was performed at appropriate times.

D. Management of Lead-Based Paint: If a painted or coated surface is tested and found to contain a lead concentration equal to or above 5000 ppm (1.0 mg/cm²), departments may either:
1. Manage the lead-based paint in place. Removal /abatement is not required on paints that are in an intact position and not located on a friction point, with potential to become a hazard.

2. Remove the lead-based paint. If minor amounts of the paint are to be removed or disturbed, departments must consult with PWES or Safety and act to limit occupational and secondary exposure to lead dust by following the work practices listed in Section VIII. All removal projects in excess of 2 square feet must be conducted by certified lead renovation firms or lead abatement contractors.

Before making a decision to manage the lead-based paint in place, departments doing work pursuant to a federal grant should evaluate whether the grant conditions require removal.

VI Lead Management Strategies

Departments shall follow the applicable procedures for the work scenarios listed below when lead-based paint is known or reasonably assumed to be present and will likely be disturbed during renovation.

A. If the work consists of abatement or disturbance of lead-based paint over an area in excess of 2 square feet, departments must contact PWES to obtain the services of an appropriately trained and licensed renovator or lead abatement firm. City employees shall not engage in the disturbance of more than 2 square feet of lead-based paint.

B. If the work is to be done at target housing or a child-occupied facility and exceeds the threshold for minor maintenance and repair, departments must follow the EPA Lead Renovation, Repair and Painting rules using appropriately-trained city staff or contact PWES to obtain the services of an appropriately trained and licensed renovator.

C. If the work will occur at a housing unit that receives federal assistance, both EPA and HUD regulations and guidelines are potentially applicable and a lead-based paint inspection, risk assessment, or full abatement may be required. Departments shall follow HUD regulations relating to occupant protection, lead-safe work practices, worksite cleanup, and a clearance exam intended to ensure that the work area meets HUD standards after completion and before re-occupancy. Contact PWES or the departmental Lead Program Manager for assistance in preparing the scope of services.

D. If the work involves tasks such as grinding, sandblasting or dry (particulate) blasting, or open flame burning/torching on more than two square feet of painted or coated surfaces, contact PWES to obtain the services of an appropriately trained and licensed renovator.

VII Oversight of Regulated Lead Abatement or Disturbance at Regulated Facilities

A. Departments shall employ a consultant to conduct third party oversight for lead abatement to ensure compliance with regulations, engineering controls, and air monitoring.

B. Following lead abatement and/or renovation that results in a disturbance of lead-based paint at child-occupied facilities and target housing, departments shall employ a
consultant to conduct third party clearance sampling. Depending on the scope of work and the applicable regulatory requirements, clearance sampling will vary but may include soil and wipe sampling.

VIII Work Practices for Employees Performing Minor Maintenance

The EPA Lead Renovation, Repair and Painting Rule and resultant HUD guidelines require contractors working in target housing to be trained in the use of lead-safe work practices and receive certification. Lead-safe work practices are designed to provide occupant protection, minimize worker exposure, achieve containment of lead dust and debris, clean up the work area, and in some cases provide formal clearance to document that the work area has been restored and is suitable for resumed occupancy. Federal rules exempt workers performing minor maintenance in target housing and child-occupied facilities from these training requirements and practices. However, the following work practices are recommended when city workers perform minor maintenance in target housing, child-occupied facilities, or other locations where materials known or assumed to be lead-based paint could be disturbed. Modifications to these suggestions or use of other products may be made as appropriate, although review by PWES or Safety is encouraged.

A. For localized work that has the potential to generate negligible quantities of lead contaminated dust but not debris, such as placing nails or fasteners into walls.

- Place a plastic drop cloth under the immediate work area
- Use strong tape for the removal of dust and fragments
- Mist the work area prior to sanding if sanding is necessary
- Conduct the work
- Wash the immediate work area and tools with a light detergent/water solution
- Rinse the area with clean water
- Clean shoes and clothing with a damp wipe before leaving the immediate work area.
- Gently roll the drop cloth inward from the outside edges to the center
- Dispose of the tape, drop cloth, and used items into a plastic bag labeled “Lead Contaminated Waste”.
- Dispose of all plastic bags inside appropriately sealed and labeled containers.
- Make arrangements for proper disposal of the containers.

B. For work activities that have the potential to generate moderate quantities of lead contaminated dust and debris, such as sanding of small areas, cutting small openings into walls, or other types of minor maintenance.

- Move equipment and furnishings away from the area of work
- Place a plastic drop cloth over fixed equipment or furnishings
- Place a plastic drop cloth on the floor under the working area and extending at least five feet from all areas of work
- Overlap and seal additional drop cloths as necessary with duct tape
- Turn the drop cloth up the walls within the work area and seal to wall with duct tape
- Limit access through the work area to workers utilizing barricade tape across the door.
Mist the work area
Conduct the work; use a putty knife or scraper to scrape loose paint flakes and deteriorated subsurface
Chip or wet sand all edges until no loose paint remains on the surface
Wash the immediate work area and tools with a light detergent/water solution
Rinse the area with clean water
Dispose of booties and Tyvek outer coverings, if used, or clean shoes and clothing with a damp wipe before leaving the immediate work area.
Gently roll the drop cloth inward from the outside edges to the center
Dispose of the tape, drop cloth, personal protective equipment, and used items into a plastic bag labeled “Lead Contaminated Waste”.
Immediately wash hands and face thoroughly
All work areas shall be visually inspected after cleanup procedures to ensure no visible dust is left in the work area
Dispose of all plastic bags inside appropriately sealed and labeled containers.
Make arrangements for proper disposal of the containers.

C. For the removal of windows. Removal of windows from the exterior of a building should not be done on windy days when, in the judgment of the supervisor in charge of the job, it is likely that chips, dust, and other debris could blow off of the plastic sheeting.

All adjacent and surrounding area windows shall be kept closed.
If accessing the window from the inside,
  o Tape plastic over the entire outside window opening
  o Seal off the work area by covering entryways with secured plastic sheeting and use barrier tape to restrict access.
If accessing the window from the outside, put plywood on the inside of the window and tape plastic sheeting over and extending 12 inches past the plywood.
Cover the floor inside the window with plastic sheeting (drop cloth).
Cover bare soil and vegetation with plastic sheeting extending at least five feet from the base and an additional three feet for every story where the windows are located.
Mist the window and frame with water
Remove the window unit from the outside, if possible
Completely wet-scrape the frame with water; use a HEPA vacuum to clean debris and wash the window opening before removing the plastic seal inside.
Collect all dust and paint chips as the window is disassembled
Gently roll the drop cloth inward from the outside edges to the center
Dispose of the plastic sheeting and other materials and debris into a plastic bag labeled “Lead Contaminated Waste”.
Thoroughly wash hands and face
Visually inspect all work areas after cleanup procedures to ensure that no visible dust or debris is left in the work area
Dispose of all plastic bags inside drums provided at a designated location
Make arrangements for proper disposal of the containers.
D. Demolition: For pre-1978 structures, testing for lead shall be done concurrent with the asbestos testing required by Appendix B of the Hazardous Building Materials Policy. Testing shall at a minimum consist of the Toxicity Characteristic Leaching Procedure (TCLP) of a composite of the materials to be demolished in order to evaluate if the materials must be disposed of as a hazardous waste.

IX Lead Containing Coatings Disturbance/Removal

A. Workers performing tasks on lead-based paint must be trained under OSHA Lead in construction standard (29 CFR 1926.62). Guidance for worker protection is also found in the HUD Guidelines Chapter 9: Worker Protection.

B. If city workers or contractors performing work on lead-based paint are unable to meet the requirements of OSHA 29 CFR 1926.62 & the HUD Guidelines, they must defer to a licensed lead abatement firm to perform activities involving lead containing coatings.

X Notification – Hazard Communication

A. Departments are responsible for notifying affected employees, contractors, and other building occupants of the location of lead-based paint. Notification to some regulatory agencies may also be required. Note that for renovations, repair and painting at target housing and child-occupied facilities the Pre-Renovation Lead Information Rule (TSCA 406(b) requires distribution of a specific lead hazard information pamphlet to owners and affected parents.

B. Project managers responsible for repairs of small areas, planned renovation, or demolition activities in the vicinity of lead-based paint or that will directly disturb lead-based paint will notify contractors of the lead hazard during the contract negotiations for the project. For abatement, renovation and demolition projects, the Lead Program Manager, project manager, or other responsible party will share renovation plans and drawings with the lead inspector/consultant to ensure the scope of the survey is accurately determined and complete to address all areas scheduled to be disturbed.

XI Disposal Requirements

Disposal shall be performed by the lead contractor in accordance with project specifications. It is the responsibility of the contract manager to review documentation provided by the contractor to ensure that all applicable disposal regulations and specifications have been satisfied.

A. Testing: Prior to disposal of materials coated with lead-based paint, abatement waste/debris or demolition debris, a Lead Toxicity Characteristic Leaching Procedure (TCLP) test must be performed on the waste stream that is being disposed to ensure that it is not hazardous waste.

1. The regulatory threshold for lead is 5 ppm and/or 5.0mg/L. TCLP laboratory results below 5 ppm and/or 5.0mg/L may be disposed of as non-hazardous waste.
2. Proper disposal of lead waste that is above the hazardous waste threshold is regulated by the EPA and the Arizona Department of Environmental Quality (ADEQ). Requirements for shipment and disposal are detailed in the Hazardous Waste Procedure in the HMMP.
B. Storage of these materials prior to testing and disposal must be in compliance with the HMMP. Contact OEP for guidance.

XII Recordkeeping

Because lead-based paint and lead-containing paint may be present throughout city of Phoenix facilities, it is imperative that city operations maintain a well documented program for identifying lead, recording both positive and negative sampling results, abatement and other lead-related work.

A. Departments will forward lead survey information to Public Works Central Records.

B. Departments will maintain records of lead surveys in a manner that allows them to be easily retrievable by building maintenance personnel. Departmental staff will check with PWES and within their departments to locate records of lead surveys and work.

C. If lead survey information is not available: A lead survey of the proposed renovation area may be required. All painted or coated building materials within the renovation area must be inspected and sampled for lead before the start of work.
DEFINITIONS

1. Lead Based Paint Hazards means
   a. Any condition that causes an exposure to lead and that would affect human health.
   b. Exposures from lead contaminated dust.
   c. Exposures from lead contaminated soil.
   d. Deteriorating lead-based paint, and lead-containing paint that is found on friction points.

   Intact lead based paint, which is not on a friction point, is not considered a lead paint hazard.

2. Lead-Based Paint - Paint or other surface coatings that contain concentrations of lead equal to or above 5000 parts per million (ppm), 0.5%/weight, or 1.0 milligrams per centimeter squared (mg/cm²).

3. Lead-Containing Paint - Paint or other surface coatings that contain concentrations of lead below the Lead-Based Paint thresholds. OSHA regulates any known quantity of lead in paint for worker protection requirements.

4. Friction Point - an interior or exterior surface that is subject to abrasion or friction as it operates. e.g. doors/door frames. Lead dust is likely to occur around such surfaces.

5. Lead Program Manager - is one who is qualified to assess and identify lead in city facilities.

6. Lead Paint Assessment - Lead Paint Risk Assessments can only be performed by an EPA certified lead paint risk assessor. Risk assessments are more in depth inspections that not only include a surface by surface paint inspection but identify lead paint hazards as well as possible solutions to correct the hazards.

7. Minor Maintenance and Repair Activities – Activities including minor heating, ventilation or air conditioning work, electrical work, and plumbing, that disrupt 6 square feet or less of coated surface per room for interior activities or 20 square feet or less of painted surface for exterior activities and where the work does not involve window replacement, demolition of coated surface areas, or the use of prohibited work practices.

8. Renovation – the modification of any existing structure, or portion thereof, that results in the disturbance of coated surfaces (excluding abatement). It includes but is not limited to the removal, modification, or repair of coated surfaces or components including cutting, surface preparation such as sanding, planing or scraping, and other activities that may generate dust.

9. Removal – the removal and disposal of surface coatings from an area of a facility.

10. Abatement – the permanent elimination of lead-based paint hazards from a facility.

11. Target Housing – Any housing constructed prior to 1978, except housing for the elderly or persons with disabilities (unless any child under age 6 resides or is expected to reside in such housing) or any 0-bedroom dwelling.
12. Child-occupied facility means a building constructed prior to 1978 that could be visited regularly by the same child, under 6 years of age, on at least two different days within and week, provided that each day’s visit lasts at least 3 hours and the combined weekly visits last at least 6 hours, and the combined annual visits last at least 60 hours. Child-occupied facilities may be located in target housing or in public or commercial buildings and may include, but are not limited to, day care centers, preschools, kindergarten classrooms, homeless shelters, family service centers, etc.
City of Phoenix Hazardous Building Materials Policy

APPENDIX D: Polychlorinated Biphenyls

I. Policy Statement

The city of Phoenix shall manage and dispose of Polychlorinated Biphenyls (PCB) encountered at facilities and projects in accordance with the Toxic Substances Control Act (TSCA).

II. Scope and Applicability

These procedures apply to city of Phoenix employees and contractors who encounter building materials and fixtures that may contain PCBs during their work. Of primary concern are building materials and fixtures manufactured between 1950 and 1978, including electrical equipment such as transformers, capacitors, and ballasts.

Any department responsible for the ownership, maintenance, removal and disposal of PCB-containing items not specifically described in this policy, including PCB wastes, shall consult with the Office of Environmental Programs (OEP) and/or the Public Works Department Environmental Section (PWES) before disturbing, removing or disposing of those items.

Section V identifies a pilot program for testing caulk for PCBs to be done as departments renovate or demolish buildings constructed prior to 1979.

III. Background

PCBs are a class of complex man-made compounds that were manufactured between approximately 1930 and 1976 as oily liquids or solids. They are chemically stable with many useful properties including heat resistance, water insolubility, and electrical insulation.

The chemical stability of PCBs causes them to persist in the environment and bioaccumulate in the food chain. They adversely affect the immune, reproductive, nervous and endocrine systems and are a potential human carcinogen.

PCBs were used in electrical equipment such as transformers and capacitors, as well as in lubricants, inks, plasticizers, fluorescent light ballasts, carbonless copy paper, and many other manufactured items. Building materials that may contain PCBs include light ballasts, paint, electrical equipment, and masonry caulk. In particular, commercial and industrial buildings constructed or renovated between 1950 and 1978 may contain significant levels of PCBs in the caulk around windows, door frames, and masonry joints, although this may be much less prevalent in warmer climates such as the Phoenix area. Electrical equipment manufactured prior to 1979 that contains oils or tarry materials also is likely to contain PCBs.

IV. Applicable Regulations

The Toxic Substances Control Act (TSCA) enacted by Congress in 1976 banned the manufacture of PCBs and most of their former common uses. Some uses, such as in electrical transformers, were allowed to continue until the PCB-containing equipment was no longer
In Arizona, TSCA and its accompanying regulations (40 CFR Part 761) are administered by EPA. These regulations are complex and departments should not rely upon this appendix in lieu of a complete TSCA regulatory analysis. In some cases it may be necessary to consult with the Law Department to obtain regulatory interpretation to assist with the goal of compliance with TSCA.

V. Procedures for Identification

Because they have not been used in manufacturing over 30 years, PCBs are only a concern at older buildings and structures that the city owns or is considering acquiring. For many years the city actively removed PCB-containing equipment from its buildings so that today the presence of PCB electrical equipment at city facilities is unlikely.

A. Sampling Procedures and Analytical Methods

Appropriate techniques for sampling different materials vary; the sampling procedure should be that which is consistent with standard industry practice and applicable EPA guidance. The analytical method to use for potential PCB-containing materials is EPA Method 8082.

B. Real Estate Acquisitions

Phoenix occasionally acquires older buildings, and customarily PWES performs a hazardous building materials assessment during or shortly after the acquisition process. If the building was constructed prior to 1979, the assessment shall include identification of any remaining potentially PCB-contaminated electrical equipment and may include identification and testing of masonry caulk, at the acquiring department’s discretion. Test results shall be reported to the acquiring department so that appropriate actions can be taken.

C. Electrical Equipment

Electrical equipment that contains PCBs is required to be labeled as such. Should a city employee become aware of or receive a report of older, unlabeled or otherwise suspect electrical equipment, or electrical equipment labeled as containing PCBs, at a city-owned facility, immediately contact Safety and the Departmental Representative (DR).

1. Transformers are devices that transfer electrical energy between circuits. In the past, transformers often contained oil contaminated with PCBs. Regulations now require labeling to disclose whether a transformer contains PCBs. Any unlabeled oil-filled transformer shall be considered a PCB-contaminated transformer and reported to the DR. If the manufacturer provides documentation that it is non-PCB, no additional action is required. Similarly, both APS and SRP have long-standing programs to replace PCB transformers or refill them with non-PCB oil. Either company may be contacted for information if the transformer is believed to be the property of the utility. Transformers confirmed to contain PCBs must be registered
with the USEPA, and other requirements also apply. Contact OEP or Safety for compliance assistance.

2. **Ballasts and capacitors** are devices that limit current. Ballasts are commonly located in metal containers behind the lamps in light fixtures. A ballast contains a resistor or capacitor embedded in a tar-like substance, which may or may not contain PCBs. After 1979, ballasts were labeled “NO PCBs.” Ballasts that are not labeled shall be reported to the DR for consultation prior to removal and disposal.

D. PCB-containing Caulk

Departments that manage and/or occupy masonry buildings that were constructed prior to 1979 are encouraged to consider the EPA guidance to building owners and contractors including material testing and best management practices to minimize the potential exposure to PCBs that may be present in caulk. A summary of those recommended practices is available from OEP.

The city will conduct a limited pilot study to assess the presence of PCBs in caulk in city buildings built prior to 1979 that are being renovated or demolished. Testing will be coordinated between OEP, PWES, and the department that owns the structure. Results of this pilot study will be used to evaluate whether caulk should continue to be a focus of this policy, and used in developing comments to the EPA regarding future regulatory proposals concerning PCB-containing caulk.

VI. Procedures for Management of PCBs

A. Electrical Equipment

Employees shall not work with electrical equipment unless they are confident, based on labeling or the age of manufacture, that the product is not PCB-contaminated. If there is uncertainty, contact the equipment manufacturer or Safety prior to beginning the task.

VII. Requirements for PCB Disposal

A. Electrical Equipment. In the unexpected event that a city employee encounters PCB-containing electrical equipment, they will immediately contact their supervisor who will contact Safety for guidance concerning removal and disposal.

B. Departments shall coordinate with OEP or PWES for assistance in arranging for the testing and disposal of any PCB-containing material. OEP and the Law Department shall be consulted before selecting methods for analysis and disposal or preparing written notices and plans to the US EPA.

For disposal purposes, TSCA classifies materials that were manufactured to contain PCBs and at the time of removal contain PCB concentrations equal to or greater than 50 ppm as PCB bulk product waste. Materials that contain PCBs as a result of chemical transfer from other PCB-containing materials, such as concrete in contact with PCB-containing caulk, and which at the time of removal contain PCBs in excess of 1 ppm, are classified as PCB remediation wastes. The reporting and disposal
requirements are different for each class of material. All known or suspected bulk product wastes and remediation wastes shall be placed in secure, appropriately labeled containers. Copies of waste manifests and other disposal documentation shall be retained by the department.

Reference Materials

✓ Toxic Substances Control Act of 1976
✓ PCB Regulations 40 CFR Part 761
✓ EPA Guidance: Current Best Practices for PCBs in Caulk Fact Sheets
  o Testing in Buildings (September 2009)
  o Contractors: Handling PCBs in Caulk During Renovation (September 2009)
  o Disposal Options for PCBs in Caulk and PCB-Contaminated Soil and Building Materials (September 2009)
  o Interim Measures for Assessing Risk and Taking Action to Reduce Exposures (October 2009)
  o Facts About PCBs in Caulk (April 2010)
  o Steps to Safe Renovation and Abatement of Buildings That Have PCB-Containing Caulk  (April 2010)