



ASBESTOS AND OTHER BUILDING RELATED HAZARDOUS MATERIALS ABATEMENT PROJECT SPECIFICATIONS

Buildings A thru C, Portables 22 thru 33, and
RR2

Oak Elementary School
633 South Oak Street
Inglewood, California

Prepared for:

Inglewood Unified School District c/o Cordoba Corporation
Bond Management Team
401 South Inglewood Avenue
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1 SCOPE OF WORK

The primary and general intent of this project is the removal and disposal of identified asbestos-containing materials (ACM) impacted by the upcoming renovation project. By submitting a bid, the Contractor warrants its intent to conduct said work properly using qualified personnel employed by licensed contractors.

2 CONTRACTOR QUALIFICATIONS

The Contractor must submit copies of all federal, state, and local licenses and permits necessary to carry out the removal scope of work as outlined in this document.

3 NOTIFICATION REQUIREMENTS

The Contractor will make all required notifications pertinent to the removal of ACM for this project, including notifications to Cal/OSHA and the South Coast Air Quality Management District (SCAQMD), if necessary.

4 PROJECT SUBMITTALS

4.1 Prior to Commencement of Work

The Contractor shall provide the following submittals to the Owner's Representative prior to the pre-construction meeting, unless specified otherwise by the Owner or their Representative. Piecemeal submittal of data is not acceptable and such submittals will be returned without review for correction:

- The Contractor shall submit documentation satisfactory to the Owner's Representative that the Contractor's employees, including foremen, supervisors, and any other company personnel or agents who may be exposed to airborne asbestos fibers or who may be responsible for any aspects of abatement activities, have received adequate training.
- The Contractor shall submit documentation from a physician that all employees or agents who may be exposed to airborne Asbestos in excess of the background level have been medically monitored to determine whether they are physically capable of working while wearing the respirator required without suffering adverse health effects. In addition, the Contractor shall document that his asbestos abatement personnel have received medical monitoring as required in 29 CFR 1926.1101. The documentation shall be in the form of a Physician's written Opinion.
- The Contractor shall submit certification for all HEPA Vacuums, ventilation units, and other local exhaust ventilation equipment.

- Whenever rental equipment is to be used in abatement areas, or to handle or transport Asbestos-Containing Waste Material, the Contractor shall submit to the rental agency a written notification concerning the intended use of the rental equipment. A copy of this written notification shall be submitted to the Owner's Representative.
- The Contractor shall document NIOSH approvals for all respiratory protective devices used on site. The Contractor shall include manufacturer certification of HEPA filtration capabilities for all cartridges and filters.
- The Contractor shall submit to the Owner's Representative a written Injury and Illness Prevention Program meeting the requirements of CCR Title 8, Section 3203.
- The Contractor shall submit to the Owner's Representative a written respiratory protection program meeting the requirements of 29 CFR 1910.134 (b) (d) (e) and (f), and CCR Title 8, Section 5144, documentation that all employees using respirators having received the training specified on Section 7.2, and documentation of respirator fit-testing for all Contractor employees and agents who must enter the Work Area wearing negative pressure respirators. This fit testing shall be in accordance with procedures as detailed in 29 CFR 1926.1101 and CCR Title 8, section 1529.
- The Contractor shall submit an emergency evacuation plan for approval prior to the commencement of work. This plan shall include consideration of containment failure, fire, explosion, toxic atmospheres, electrical hazards, slips, trips and falls, confined spaces and heat related injury.
- The Contractor shall verify that an EPA generator number has been obtained for the lead based paint waste generated from the remediation project.
- The Contractor shall submit written notification to EPA, OSHA, the local Air Quality Management District, and the local fire department, as necessary, of planned abatement activities. Copies of these notifications shall be provided to the Owner's Representative.
- The Contractor shall submit names, address, contact person, and phone number for proposed licensed waste hauler and proposed landfill.

4.2 During Abatement Activities

- Submittals described in this section may, at Owner or their Representative's discretion, be provided to the Owner's Representative rather than directly to Owner. The Contractor shall submit the following items on a daily or weekly basis as directed by Owner or their Representative:
 - Daily job progress reports detailing abatement, transportation, and disposal activities.
 - Daily copies of work site entry logbooks with information on worker and visitor access.
 - Daily logs documenting filter changes on respirators, HEPA vacuums, ventilation units, and other engineering controls.
 - Results of any material tests conducted during the Abatement, for use during the abatement activities.
 - Copies of California Uniform Hazardous Waste Manifest forms for all Asbestos-Containing Waste Material removed from the abatement site and transported to the disposal site.
 - Daily personal monitoring results, within 48 hours of sample collection.

5 WORKER CERTIFICATIONS

5.1 Training Requirements

All workers are to be accredited as Abatement Workers, as required by the *AHERA* regulation, *40 CFR 763, Appendix C to Subpart E*, and *California Code of Regulations (CCR), Title 8 Section 341.16*. Worker certifications must be kept current and maintained on-site.

5.2 Medical Examinations

All workers will participate in a medical surveillance program as required by *California Code of Regulations (CCR), Title 8 Section 1529*. A physical examination directed to the pulmonary and gastrointestinal systems, including a chest roentgenogram to be administered as specified, and pulmonary function tests of forced vital capacity (FVC) and forced expiratory volume at one second (FEV(1)), and other examinations or tests deemed necessary by the examining physician.

The Contractor shall require its employees to be evaluated by a physician to determine their capability to

- Work safely while breathing through the added resistance of a respirator;
- Carry the extra weight of a respirator; and
- Physiological ability to wear a respirator.

5.3 Respirator Training/Fit Testing

The Contractor must provide current proof of worker annual training in the selection, fitting, limitations, and care and maintenance of respirators. Documentation will include the name of the worker, fit testing procedures used, testing agent used, manufacturer of respirator, type of respirator (half face/full face), date of testing and training, and name of the instructor/tester.

5.4 Hazard Communication

For each worker, the Contractor shall secure a Worker Acknowledgment that indicates the worker was provided training and information regarding hazardous substances in accordance with *CCR Title 8, Section 5194, Hazard Communication*.

6 WORKER RESPIRATORY PROTECTION DURING ABATEMENT

6.1 Regulatory Compliance

The Contractor shall provide all respiratory protection to workers in accordance with the submitted written respiratory protection program, which includes all items in *29 CFR 1910.134 (b) (1–11)*, *29 CFR 1926.1101*, and *CCR Title 8, Sections 5144 and 1529*. The Contractor shall post a copy of this program in the Clean Room of the Worker Decontamination Enclosure System.

The Contractor shall instruct and train each worker involved in asbestos abatement or maintenance and repair of friable ACM in proper respiratory use and require that each worker always wear a properly fitted respirator in the work area from the start of any operation that may cause airborne asbestos fibers until the work area is completely decontaminated. **Do not use single-use, disposable, or quarter-face respirators.**

6.2 Personal Exposure Monitoring

The Contractor shall conduct the required worker exposure monitoring as required by *Occupational Safety and Health Administration (OSHA), Title 8, Section 1529, and 29 CFR 1926.1101*. Results shall be made available to the Client's Representative and Consultant upon request.

6.3 Minimum Respiratory Protection Requirements

The Contractor shall supply to its workers NIOSH-approved respirators. Half face respirators are to be equipped with P100 HEPA particulate filters (HEPA); powered air purifying respirators (PAPR) are to be equipped with High Efficiency (HE) filters. The minimum respiratory protection requirements are detailed with each type of material removal plan.

7 EMERGENCY PLANNING AND PROCEDURE

7.1 Fire-Retardant Materials

The Contractor should use only approved fire-resistant or retardant materials. Documentation shall be provided evidencing proper fire rating prior to the use of subject materials.

7.2 Contingency Plan

The Contractor will be responsible for developing an Emergency, Fire, Safety, and Evacuation Plan for the abatement project. This will include, but not be limited to, procedures to be used in the event of emergencies such as fire, medical problems, loss of power, waste removal spills, water leaks, etc., describing how they will control or limit the release of asbestos fibers and minimize the impact of the emergency on the abatement project and the building. The Contractor will provide a written plan outlining the above, including emergency phone numbers and the route to hospital and emergency facility. The plan will be available on-site.

Disruption of fire alarm and sprinkler systems should be minimized. Any such disruption shall immediately be brought to the attention of the Owner's Representative and the Consultant. The Contractor shall also provide a fire watch to be present at all times that such disruptions exist. If work is in progress, the senior responsible Contractor's Representative (job project manager or foreman) will be responsible for the fire watch. The Contractor is responsible for compliance with applicable site and local requirements associated with the work.

8 PREVENTION OF ASBESTOS FIBER RELEASE

8.1 Work Practices

The Contractor shall assume full responsibility and liability for compliance with all applicable federal, state, and local regulations pertaining to work practices including, but not limited to, hauling and disposal, protection of workers, visitors to the site, and persons occupying areas adjacent to the site. The Contractor is responsible for providing medical examinations and maintaining medical records of personnel as required by the applicable federal, state, and local regulations.

All asbestos abatement shall be conducted using sound work procedures consistent with the current standard of care and state of the art practices to prevent the release of asbestos fibers outside the containment area. If poor work practices are observed, the Consultant will advise the Contractor to make the necessary corrections; however, it is the contractor's sole responsibility to implement and follow appropriate work procedures. If area fiber concentration levels (not personal samples) in the workplace exceed 0.1 fibers per cubic centimeter (f/cc) measured by phase contrast microscopy (PCM), this will generally be viewed as an indication of poor work practices unless it is a direct result of design or external circumstances anticipated in the project specifications. If appropriate corrections are not made after repeated warnings, or if an immediate threat exists that fibers could be released outside the work area, abatement work shall be stopped. The decision to stop work shall be made jointly by the Consultant and the Owner's Representative.

8.2 Air Sampling During Abatement Activities

The Environmental Consultant shall conduct area sampling during the removal work activities. The sampling shall include, but not be limited to, entry/egress, critical barriers, negative air exhaust, etc. If removal of asbestos-containing roofing materials including tars, mastics, roofing felts, papers and other roofing materials is conducted, air sampling will occur upwind and downwind of the removal areas.

8.3 Air Sampling Methodology: Phase Contrast Microscopy

Air samples collected during the abatement activities will be analyzed in accordance with NIOSH Method 7400, using PCM analysis.

8.4 Stop Work Authorization

The Consultant is authorized to immediately stop all abatement work and direct the conduct of any required remedial action if any of the following should occur:

- An observed breach in the containment that cannot be repaired *immediately*;
- A measured value of pressure differential below that specified for the job; or
- A fiber concentration level equal to or exceeding 0.01 f/cc measured by PCM outside the work area.

Any loss or damage due to a stop work order issued to prevent release of asbestos shall be the Contractor's responsibility.

9 SITE-SPECIFIC WORK PLAN

9.1 Asbestos-Containing Materials

Building A

| Item No. | Material | Location | Type of Work | ACM Content | Specs Material Section |
|----------|---|---|---------------------------------|--|------------------------|
| 01 | 9"x9" beige floor tile with dark brown mastic | Psych room and custodian room | Material should not be impacted | 6% chrysotile - tile none detected - mastic | 9.4 |
| 02 | Gray roof mastic | Roof east center on and between clay tile roofing | Removal | 15% chrysotile | 9.2 |
| 03 | Base felt with mastic (under foam layer) | Courtyard walkway roofing (under foam layer) | Removal | None detected - base felt 15% chrysotile - mastic | 9.2 |

Building B

| Item No. | Material | Location | Type of Work | ACM Content | Specs Material Section |
|----------|--|---|---------------------------|---|------------------------|
| 04 | 12" beige floor tile with mastic and tar paper | Room 15 restroom storage (below 12" gray floor tile), room 15 restroom, and room 14 storage room (below 12" gray floor tile). | Full removal in restroom. | 5% chrysotile - tile 8% chrysotile - mastic none detected - tar paper | 9.4 |
| 05 | *Ceiling space debris - | Ceiling space throughout | Removal | Chrysotile present | See attached |
| 06 | Black non-skid flooring | Exterior east and west entry ramps - residual material is weather 80% gone | Removal | 5% chrysotile | 9.4 |

| Item No. | Material | Location | Type of Work | ACM Content | Specs Material Section |
|----------|-----------------|-----------------------------------|--------------|-------------|------------------------|
| 07 | Transite panels | Exterior door and window transoms | Removal | Assumed | 9.5 |

* Material requires removal under a Procedure 5 per SCAQMD

Note – Alta observed a large volume of rodent feces and urine in the ceiling space. Caution should be taken, and proper safety measures put in place prior to entry or removal.

Building C

| Item No. | Material | Location | Type of Work | ACM Content | Specs Material Section |
|----------|---|--|---------------------------------|---|------------------------|
| 08 | 12" beige speckled floor tile with black mastic | Multipurpose room, hallway by janitor's closet, office, kitchen restroom | Material should not be impacted | <1% chrysotile-tile 2% chrysotile-mastic | 9.4 |
| 09 | Gray window putty | Exterior windows | Removal | 0.37% chrysotile | 9.6 |
| 10 | Canvass type vibration | Roof - northwest above kitchen restroom | Removal | 50% chrysotile | 9.3 |
| 11 | Gravel type roof core | Roof - north end and walkway (note: sections are covered with foam) | Removal as necessary | None detected - layer 1 30% chrysotile - layer 2 | 9.2 |
| 12 | Gray roof mastic | Roof - northwest above kitchen restroom | Removal as necessary | 2% chrysotile | 9.2 |
| 13 | Wood flooring barrier paper | Stage | Material should not be impacted | Assumed | 9.3 |
| 14 | 6" transite pipe | Roof level - southwest corner | Material should not be impacted | Assumed | 9.5 |

Portable RR2

| Item No. | Material | Location | Type of Work | ACM Content | Specs Material Section |
|----------|------------------------------|--|---------------------------------|--------------------|------------------------|
| 15 | Silver and black roof mastic | RR2 roof various spots down the center | Material should not be impacted | 6% - 8% chrysotile | 9.2 |

Portable rooms 22-23

| Item No. | Material | Location | Type of Work | ACM Content | Specs Material Section |
|----------|--------------------------------|---|---------------------------------|--------------------|------------------------|
| 16 | Silver and black roof patch | Rooms 22 and 23 at the base of the VA units and 2 pipes on room | Material should not be impacted | 15% chrysotile | 9.2 |
| 17 | White HVAC duct silver sealant | Rooms 22 and 23 around AC units | Material should not be impacted | 2% - 3% chrysotile | 9.2 |

The Contractor is responsible for assessing the type, extent, and quantity of material to be removed in each area of the project.

9.2 Removal of Roofing Materials (ACM)

Engineering Controls: Establish critical barriers as necessary to prevent contamination outside of the regulated area. A wash station is required. Install drop floors around the perimeter of the building to extend at least 10 feet beyond the edge of the roof, where applicable.

| | |
|------------------------------|--|
| Minimum PPE: | Half face APR with P100 filters; provide personal monitoring and comply with Cal/OSHA requirements during removal. Provide personal monitoring and otherwise comply with Cal/OSHA requirements during removal. |
| Material Removal: | Remove the material by manual means and methods. Allow surfactant to soak into material and remove in manageable sections. |
| Preparation/Transport | Package and label the waste immediately. Store all waste in a labeled, lockable storage dumpster. |
| Disposal: | Dispose of waste as non-friable, non-hazardous asbestos-containing waste. A Non-Hazardous Waste Shipment Record is required. |

9.3 Removal of Vibration Reducer and Hard Wood Floor Vapor Barrier (ACM)

| | |
|------------------------------|---|
| Engineering Controls: | Establish a containment work area by installing critical barriers (seal off all HVAC vents and other openings into the work area) and place floor, and wall polyethylene barriers (2 layers/6 mil) with a three-stage decontamination facility as appropriate. Using HEPA filtered fan units, establish a temporary negative air pressure differential of -0.01 inches of water column documented at the entrance to the work area with a recording manometer. A minimum of four air changes per hour are required; machines must be exhausted to the outside of the building. Place signs and viewports as required. |
| Minimum PPE: | Powered air-purifying respirators (PAPR) provide personal monitoring and comply with Cal/OSHA requirements during removal. Provide personal monitoring and otherwise comply with Cal/OSHA requirements during removal. |
| Material Removal: | Remove the material by manual means and methods. Allow surfactant to soak into material and remove in manageable sections. |
| Preparation/Transport | Bag immediately, using double six-mil marked bags. Keep wet and cover during transport to dumpster. |
| Disposal: | Dispose of waste as friable asbestos-containing waste. A Hazardous Waste Shipment Record is required. |

9.4 Removal of Floor Tile, Mastic, and Non Skid Flooring (ACM)

- Engineering controls:** A regulated area will be established by the placement of critical barriers. Establishment of a temporary negative air pressure differential inside the work area will be required. If a buffer is used to remove asbestos mastic, a full containment, complete with a three stage decon, will be required; wet hand removal and chemical solvent or buffer for mastic removal.
- Minimum PPE:** Powered air-purifying respirators (PAPR) provide personal monitoring and comply with Cal/OSHA requirements during removal. Provide personal monitoring and otherwise comply with Cal/OSHA requirements during removal.
- Removal:** Wet all work area surfaces. Allow surfactant to soak into material to be removed. Remove in small sections.
- Preparation/transport:** Bag immediately, using double six-mil marked bags. Keep wet and cover during transport to dumpster.
- Disposal:** Dispose of as non-friable asbestos-containing waste unless a buffer is used on the mastic. A Non-Hazardous Waste Shipment Record (manifest) required.

9.5 Removal of Transite Panels and Pipes (ACM)

- Engineering controls:** Establish critical barriers and regulated area. A minimum of one-stage decontamination facility with wash station at each work area will be required.
- Minimum PPE:** Half face APR with P100 filters; provide personal monitoring and comply with Cal/OSHA requirements during removal. Provide personal monitoring and otherwise comply with Cal/OSHA requirements during removal.
- Removal:** Manual removal methods only. No power saws without Point-of-Cut local exhaust capture. Bag wet waste material immediately, using double six-mil marked bags
- Preparation/transport:** Bag immediately, using double six-mil marked bags. Keep wet and cover during transport to dumpster.
- Disposal:** Dispose of as non-friable asbestos-containing waste. A Non-Hazardous Waste Shipment Record is required.

9.6 Removal of Window Putty (ACCM)

| | |
|-------------------------------|--|
| Engineering controls: | Establish critical barriers as necessary to prevent contamination outside of containment. A one-stage decontamination facility is required with wash station. Place a polyethylene drop cloth under the work area. |
| Minimum PPE: | Half-face negative pressure respirators with HEPA filters. Provide personal monitoring and otherwise comply with Cal/OSHA requirements during removal. |
| Removal: | Remove the material by manual means and methods. Remove the window, wrap, and label. Use a HEPA filtered vacuum cleaner to collect any debris |
| Preparation/transport: | Bag immediately, using double six-mil marked bags. Keep wet and cover during transport to dumpster. |
| Disposal: | (ACM) Dispose of as non-friable asbestos-containing waste. A Non-Hazardous Waste Shipment Record (manifest) is required. |

10 FINAL VISUAL INSPECTION AND AIR CLEARANCE SAMPLING

10.1 Visual Inspection

Upon completion of the removal process, the Owner's Representative and the Abatement Contractor will conduct a post-abatement visual inspection. If any material designated for removal, including loose debris, is observed, the Contractor will be required to re-clean that specific area.

10.2 Clearance Sampling Protocol

The Owner's Representative will collect the required air samples in the abatement work areas. Air clearance by Aggressive TEM will be conducted.

11 HAZARDOUS MATERIALS

A Material Safety Data Sheet (MSDS) must be present on-site for all materials used by the Contractor, including, but not limited to, solvents, paint chemical strippers, etc.

12 DISPOSAL AND TRANSPORTATION OF WASTE

For each material, refer to the specific disposal requirements outlined in Section 9, Site-Specific Work Plan, of this document.

All hazardous waste materials shall be stored in a secured, lined, closed-top, lockable dumpster.

The Contractor shall transport asbestos-containing waste material from this abatement site directly to an Owner-approved landfill. The Contractor shall not accept material from any other site when transporting asbestos-containing waste material from this abatement site.

Contractor shall provide acceptable written proof of acceptance of each waste stream from the Contractor's designated waste disposal site(s). Waste may not be transported off-site until satisfactory waste stream acceptance is provided.

13 PATENT PROTECTION

The Contractor has the sole responsibility for determining whether patents are applicable to any equipment, methods, or procedures used on this project and to meet any requirements of the patent owner. The Contractor will be responsible for any fees associated with the use of such patents.

14 OTHER IDENTIFIED BUILDING RELATED HAZARDOUS SUBSTANCES

14.1 Polychlorinated Biphenyls (PCBs)

During demolition activities, it should be determined whether the light ballasts contain PCBs. The contractor shall review the label on each unit to verify if the unit contains PCB. If the label is missing or is not clearly labeled "No PCB" by the manufacture, the unit must be assumed to contain PCBs. Units assumed to be PCBs shall be segregated and packaged for proper disposal in accordance with all federal, state, and local regulations and guidelines.

Until confirmatory samples can be taken, the oil in the transformer on the roof is assumed to be PCB containing. The fluid shall be drained and collected prior to disposal per federal, state, and local regulations. The transformer shall be thoroughly cleaned of all residual fluid prior to disposal.

14.2 Mercury

Mercury is present in small amounts in florescent light tubes and mercury switches. California State Law defines "significant quantities" as more than 15 tubes. During demolition activities, the florescent light tubes should be segregated and disposed of properly.

All fluorescent light tubes from this project shall be segregated, packaged and disposed in accordance with all federal, state, and local regulations and guidelines including 40 CFR Part 261, CCR Title 22 Sections 66261 and 66699. These light tubes typically contain concentrations of mercury exceeding the established Total Threshold Limit Concentration (TTL) and/or the Soluble Threshold Limit Concentration (STLC) values.

14.3 Universal Waste

Contractor is responsible for following requirements set forth in Management Requirements for Universal Waste Handlers (CCR, Title. 22, div. 4.5, ch. 23)

15 DEFINITIONS

Definitions contained in this section are not necessarily complete but are general to the extent that they are not defined more explicitly elsewhere in the contract documents. However, no implied meaning shall be

interpreted to extend the Owner's Representative's responsibility into the Contractor's area of construction supervision.

| | |
|--|--|
| Abatement: | Procedures to control fiber release from asbestos-containing materials. |
| Accredited PCM Laboratory: | A laboratory that participates in the Proficiency Analytical Testing (PAT) program to count asbestos fibers with at least one person who is a qualified participant in a quality assurance program meeting the requirements of 29 CFR 1926.1101. |
| AHERA: | Asbestos Hazard Emergency Response Act |
| AIHA: | American Industrial Hygiene Association 475 Wolf Ledges Parkway Akron, OH 44311 |
| Airlock: | A system for permitting ingress and egress with minimum air movement between a contaminated area and an uncontaminated area. |
| Air Monitoring: | The process of measuring the fiber content of a known volume of air collected during a specific period of time. |
| Air Monitoring Professional: | The professional contracted or employed by the Contractor to supervise and/or conduct personal air monitoring and analysis. |
| Amended Water: | Water to which a chemical wetting agent or surfactant has been added. |
| ANSI: | American National Standards Institute 1430 Broadway New York, NY 10018 |
| Asbestos: | The asbestiform varieties of serpentine (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite (amosite), anthophyllite, and actinolite or tremolite. |
| Asbestos-Containing Material (ACM): | Material composed of asbestos of any type and in an amount greater than 0.1% by weight, either alone or mixed with other fibrous or non-fibrous materials. |
| Asbestos-Containing Waste Material: | Any waste generated by the disturbance or removal of asbestos-containing material containing greater than 1% asbestos by weight. |

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| ASTM: | American Society for Testing and Materials 1916 Race Street Philadelphia, PA 19103 |
| Authorized Visitor: | Any designated representatives of the Owner or their representative, and/or a representative of a regulatory or other agency having jurisdiction over the project, and/or any person authorized in writing by the Owner or their Representative as a visitor. |
| Building Owner: | Any authorized representative of Inglewood Unified School District. |
| Certified Industrial Hygienist (CIH): | An industrial hygienist holding a current certification in comprehensive practice from the American Board of Industrial Hygiene. |
| Class I Non-friable Asbestos-Containing Material: | Non-friable material containing more than 1% asbestos by area or by weight that can potentially be broken, crumbled, pulverized, or reduced to powder in the course of demolition or renovation activities. Non-friable asbestos-containing material may become friable when physically worn or disturbed by mechanical force. |
| Class II Non-friable Asbestos-Containing Material: | All other asbestos-containing material that is neither friable nor Class I non-friable. |
| Clean Room: | An uncontaminated area or room that is a part of the Worker Decontamination Enclosure System with provisions for storage of workers' street clothes and clean protective equipment. |
| Clearance Air Monitoring: | The process of measuring the airborne asbestos concentration to determine if an abated area is sufficiently clean to allow re-occupancy. |
| Competent Person: | A person trained in all aspects of asbestos, tremolite, anthophyllite, or actinolite abatement; the contents of <i>OSHA Regulation 29 CFR 1926.1101</i> ; the identification of asbestos, tremolite, anthophyllite, or actinolite and their removal procedures; and other practices for reducing the hazard. Such training shall be obtained in a comprehensive course, such as a course conducted by an EPA Asbestos Training Center or an equivalent course. |
| Containment Work Area: | Work area that has been sealed, plasticized, and equipped with both Worker Decontamination and Waste and Equipment Decontamination/Pass-Out Enclosure Systems. |

| | |
|--|--|
| Contractor (or Abatement Contractor): | The individual and/or business with whom the Owner or their Representative arranges to perform the asbestos abatement. |
| Curtained Doorway: | A device to allow ingress or egress from one room to another while permitting minimal one-way air movement. |
| Demolition: | The wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations. |
| Encapsulant: | A liquid material which, when applied to asbestos-containing material, controls the possible release of asbestos fibers from the material. |
| Encapsulation: | The application of an encapsulant to asbestos-containing materials to control the release of asbestos fibers into the air. |
| Enclosure: | The construction of an airtight, impermeable, permanent barrier around asbestos-containing material to control the release of asbestos fibers into the air. |
| EPA: | U.S. Environmental Protection Agency, Region IX 215 Fremont Street San Francisco, CA 94105 |
| Equipment Room: | A contaminated area or room that is part of the Worker Decontamination Enclosure System with provisions for storage of contaminated clothing and equipment; also referred to as the dirty room. |
| Facility: | Any institution, commercial or industrial structure, installation, or building. |
| Facility Component: | Any pipe, duct, boiler, tank, reactor, turbine, or furnace at or in a facility, or any structural member of a facility. |
| Fixed Object: | A piece of equipment or furniture in the work area that cannot be removed from the work area, or has been specified to remain in the work area during abatement. |
| Friable Asbestos-Containing Material: | Material that when dry can be broken, crumbled, pulverized, or reduced to powder by hand pressure, and that contains more than 1% asbestos by area or by weight as determined by the procedure in "Methods of Analysis for Bulk Samples" (refer to <i>SCAQMD 1403 paragraph [g]</i>). |

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| Glove Bag Technique: | A method for removing friable asbestos-containing material from HVAC ducts, short piping runs, valves, joints, elbows, and other non-planar surfaces. The glove bag is constructed and installed in such a manner that it surrounds the object or material to be removed and contains all asbestos fibers released during the process. |
| HEPA Filter: | A high-efficiency particulate air filter capable of removing particles 0.3 microns or larger in diameter with 99.97% efficiency. |
| HEPA Vacuum: | A vacuum system equipped with HEPA filtration. |
| Holding Area: | A secured area adjacent to the Waste and Equipment Decontamination/ Pass-Out Enclosure System located in an uncontaminated area used for temporary storage of waste prior to disposal. |
| Limit of Detection: | For air monitoring by PCM, 5.5 fibers per 100 fields; TEM, one fiber per 10 grid squares. Represented as < *** (example: < 0.04 f/cc) when converted to airborne fiber concentration. |
| Limited-Containment Work Area: | An isolated or controlled access work area that has been sealed but not fully plasticized and is equipped with a Worker Decontamination Enclosure System and an Air Pressure Differential System. |
| Movable Object: | A piece of equipment or furniture in the work area that can be removed from the work area. |
| NESHAP: | National Emission Standards for Hazardous Air Pollutants (<i>40 CFR Part 61</i>) |
| NIOSH | National Institute for Occupational Safety and Health CDC – NIOSH Building J, N.E., Room 3007 Atlanta, GA 30333 |
| On-Site Sample Evaluation: | On-site evaluation (counting) by a person with a current satisfactory listing in the American Industrial Hygiene Association Asbestos Analysis Registry, or a person who is a participant in a quality assurance program meeting the requirements of <i>29 CFR 1926.1101</i> . |

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| OSHA: | Occupational Safety and Health Administration 200 Constitution Avenue Washington, D.C. 20210 Local Office: 400 Oceangate, Suite 530 Long Beach, CA 90802 (310) 514-6387 |
| Outside Air: | The air outside buildings and structures or the air outside a containment work area where abatement is being performed. |
| Owner's Representative: | An individual qualified by virtue of experience and education, and designated by the Owner as its Representative. Individual may include owner's employee, agent, or consultant, including Alta Environmental. |
| P100 Filter: | Particulate respirator filter (99.97% filter efficiency level) effective against all particulate aerosols. |
| Phase Contrast Microscopy (PCM): | Optical analytical method for determining fiber concentrations in air. The acceptable method is NIOSH Method 7400, specified in the <i>NIOSH Method of Analytical Methods</i> . |
| Physician's Written Opinion: | A written opinion from the examining physician as to whether an employee has any detected medical conditions that would place the employee at an increased risk of material health impairment from exposure to asbestos, any recommended limitations on the employee or on the use of personal protective equipment such as respirators, and a statement that the employee has been informed by the physician of the results of the medical examination and of any medical conditions that may result from asbestos exposure. |
| Plasticize: | To cover floors, ceilings, and walls with plastic sheeting (polyethylene film) as herein specified. |
| Polarized Light Microscopy (PLM): | An optical method that uses polarized light to analyze bulk or wipe samples and may include dispersion staining. |
| Removal: | The stripping of any asbestos-containing materials from surfaces or components of a facility. |
| Renovation: | Altering in any way one or more facility components. Operations in which load-supporting structural members are wrecked or taken out are excluded. |

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| Seal (Sealing): | The formation of an airtight connection between plasticized work areas and the outside environment. |
| Shower Room: | A room between the Clean Room and the Equipment Room in the Worker Decontamination Enclosure System with hot and cold or warm running water controllable at the tap and suitably arranged for complete showering during decontamination. |
| SCAQMD: | South Coast Air Quality Management District, the agency designated to enforce NESHAPs regulations in Southern California: South Coast AQMD Hazardous Materials Section/Enforcement 21865 East Copley Diamond Bar, CA 91765-4182 |
| Staging Area: | An area adjacent to the Waste and Equipment Decontamination/Pass-Out Enclosure System where containerized asbestos-containing waste has been placed prior to removal from the work area, with facilities to clean the container holding the waste before it is passed out through the Waste and Equipment Decontamination/Pass-Out Enclosure System. |
| Strip: | To take off friable asbestos materials from any part of the facility. |
| Structural Member: | Any load-supporting member of a facility (such as a beam or a load-supporting wall). |
| Surfactant: | A chemical wetting agent added to water in order to improve penetration. |
| Time Weighted Average (TWA): | The TWA for asbestos is an eight-hour, time-weighted average airborne concentration of fibers equal to or longer than 5 micrometers. The TWA is expressed in terms of the number of these fibers per cubic centimeter of air. |
| Transmission Electron Microscopy (TEM): | A method of analysis for air monitoring or wipe sampling that uses a transmitted electron beam to identify and/or count fibers. |
| Type "C" Respirator: | A pressure demand, supplied-air respirator. |
| UL: | Underwriters Laboratories 333 Pfingsten Road Northbrook, IL 60062 |

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| Ventilation System: | A portable exhaust system equipped with HEPA filtration and capable of maintaining a constant low-velocity airflow into contaminated areas from adjacent uncontaminated areas. |
| Visible Debris: | Any (particulate) asbestos material or residue that is visually detectable on a surface without the aid of instruments. |
| Visible Emissions: | Any emissions containing particulate asbestos materials that are visually detectable without the aid of instruments. This does not include condensed, uncombined water vapor. |
| Waste and Equipment Decontamination/Pass-Out Enclosure System: | A decontamination system used for transferring containerized waste or equipment from inside to outside the work area. |
| Wet Cleaning: | The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning utensils that have been dampened with water and afterwards thoroughly decontaminated or disposed of as asbestos-contaminated waste material. |
| Wipe Sampling: | A sampling method used to determine if asbestos is present on surfaces. Samples are collected by pressing an adhesive material onto substrate surfaces or by gently wiping a mixed cellulose ester filter across the surfaces. Analysis is by polarized light or electron microscopy. |
| Work Area: | Designated rooms, spaces, or areas of the project in which asbestos abatement actions are to be undertaken or which may become contaminated as a result of such abatement actions. |
| Worker Decontamination Enclosure System: | A decontamination system consisting of a Clean Room, a Shower Room, and an Equipment Room separated from each other and from the containment work area or limited-containment work area by curtained doorways and airlocks connected directly to the work area. |