

Asbestos Consultant Specifications
for
Asbestos Related Work



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ASBESTOS CONSULTANT SPECIFICATIONS

PART 1 GENERAL

1.1 Definitions

- 1.1.1 Aggressive method - removal or disturbance of building material by sanding, abrading, grinding or other method that breaks, crumbles, or disintegrates intact asbestos-containing material (ACM).
- 1.1.2 Amended water - water to which surfactant (wetting agent) has been added to increase the ability of the liquid to penetrate ACM.
- 1.1.3 Asbestos Manager (AM) - shall be the Los Angeles County (County) employee responsible for implementing County's asbestos policy and program. The AM shall be considered County's Representative for all determinations of project consistency with County's department policy and laws and regulations relating to asbestos.
- 1.1.4 Asbestos - includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any of these materials that has been chemically treated and/or altered. Asbestos includes Presumed Asbestos Containing Material (PACM).
- 1.1.5 Asbestos-containing construction material (ACCM) - any material containing more than one tenth of one percent asbestos, but less than 1% by weight.
- 1.1.6 Asbestos-containing material (ACM) - any material containing more than one percent asbestos.
- 1.1.7 Authorized person - any person authorized by the employer and required by work duties to be present in regulated areas.
- 1.1.8 Class I asbestos work - activities involving the removal of thermal system insulation (TSI) and surfacing ACM and PACM, including removal of non-friable asbestos by aggressive methods.
- 1.1.9 Class II asbestos work - 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.
- 1.1.10 Class III asbestos work - repair and maintenance operations, where "ACM", including TSI and surfacing ACM and PACM, is likely to be disturbed. No more than 25 square feet, or one glove bag, worth of material is to be disturbed.
- 1.1.11 Class IV asbestos work - maintenance and custodial activities during which employees contact but do not disturb ACM or PACM.

- 1.1.12 Clean room - an uncontaminated room having facilities for the storage of employees' street clothing and uncontaminated materials and equipment.
- 1.1.13 Closely resemble - that the major workplace conditions which have contributed to the levels of historic asbestos exposure, are no more protective than the conditions of the current workplace.
- 1.1.14 Competent person - one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them: in addition, for Class I and Class II work who is specially trained in a training course which meet the criteria of EPA's model accreditation Plan (40 CFR 763) for project designer or supervisor, or its equivalent.
- 1.1.15 Consultant – the independent entity or agency who has been hired to oversee, survey, provide consultation, response and supervision services for asbestos abatement activities. A Consultant shall have at least one Certified Asbestos Consultant on their payroll.
- 1.1.16 Contractor – a worker or agency with proper certification* who conduct removal, encapsulation, enclosure, general cleaning and repair of asbestos-containing materials. (*Proper certifications are *Asbestos Supervisor* and *Asbestos Worker*)
- 1.1.17 Critical barrier - two or more layers of plastic sealed over all openings into a work area or any other similarly placed physical barrier sufficient to prevent airborne asbestos in a work area from migrating to an adjacent area.
- 1.1.18 Decontamination area - an enclosed area adjacent and connected to the regulated area and consisting of an equipment room, clean room, and on occasions, a shower unit, which is used for the decontamination of workers, materials, and equipment that are contaminated with asbestos.
- 1.1.19 Demolition - the wrecking or taking out of load-supporting structural member and any relating razing, removing, or stripping of asbestos products.
- 1.1.20 Disturbance - contact that releases fibers from ACM or PACM or debris containing ACM or PACM. This term includes activities that disrupt the matrix of ACM or PACM, render ACM or PACM friable, or generate visible debris. Disturbance includes cutting away small amounts of ACM and PACM, no greater than the amount which can be contained in one standard sized glove bag or waste bag in order to access a building component. In no event shall the amount of ACM or PACM so disturbed exceed that which can be contained in one glove bag or waste bag which shall not exceed 60 inches in length and width.

- 1.1.21 Employee exposure - that exposure to airborne asbestos that would occur if the employee were not using respiratory protective equipment.
- 1.1.22 Equipment room (change room) - a contaminated room located within the decontamination area that is supplied with impermeable bags or containers for the disposal of contaminated protective clothing and equipment.
- 1.1.23 Fiber - a particulate form of asbestos, 5 micrometers or longer, with a length to diameter ration of at least 3 to 1.
- 1.1.24 Glovebag - an impervious plastic bag-like enclosure affixed around asbestos containing material, with glove-like appendages through which materials and tools can be handled.
- 1.1.25 High-efficiency particulate air (HEPA) filter - a filter capable of trapping and retaining at least 99.97 percent of all mono-dispersed particles of 0.3 micrometers in diameter.
- 1.1.26 Homogenous area - an area of surfacing material or thermal system insulation that is uniform in color and texture.
- 1.1.27 Industrial hygienist - a professional qualified by education, training, and experience to anticipate, recognize, evaluate and develop controls for occupational health hazards. A Certified Industrial Hygienist (CIH) is an industrial hygienist who has been certified by the American Board of Industrial Hygiene. ***A CIH must also be certified in asbestos to perform asbestos-related work.**
- 1.1.28 Intact - that the ACM has not crumbled, been pulverized, or otherwise deteriorated so that it is no longer likely to be bound with its matrix.
- 1.1.29 Modification - a changed or altered procedure. Material or component of a control system, which replaces a procedure. Material or component of a required system. Omitting a procedure or component, or reducing or diminishing the stringency or strength of a material or component of the control system is not a "modification".
- 1.1.30 Negative air machine (NAM) – a mechanical device approved and certified by the South Coast Air Quality Management District to create negative pressure while filtering air, within a work area. Units must be fitted with High-efficiency particulate air (HEPA) filters.
- 1.1.31 Negative initial exposure assessment - a demonstration by the employer which complies with the criteria in Title 8 of the California Code of Regulations, Section 1529 (Title 8 CCR 1529), subsection (f)(2)(c), that employee exposure during an operation is expected to be consistently below the Permissible Exposure Limit (PEL).
- 1.1.32 Negative pressure enclosure (NPE) – An enclosure that is sealed with polyethylene sheeting that, with the use of a negative air machine, causes air to be drawn from outside the containment, inside. This in turn

will cause an inward draw on the polyethylene sheeting and the flap to the enclosure.

- 1.1.33 Packaged asbestos materials – asbestos containing materials that are properly bagged, placed in sealed drums, wrapped, or otherwise prepared to leave the work area to the disposal area.
- 1.1.34 Presumed Asbestos-Containing Material (PACM) - thermal system insulation and surfacing material found in buildings constructed no later than 1980. The designation of material as “PACM” may be rebutted pursuant to CCR Title 8 Section 1529, subsection (k)(4). Materials may not be deemed PACM for disposal purposes.
- 1.1.35 Project Designer - a person who has successfully completed the training requirements for the abatement project designer established by 40 U.S.C. Section 763.90(g).
- 1.1.36 Project Manager – representative from the County that is responsible for the project and is the main point of contact for the vendors.
- 1.1.37 Regulated area - an area established by the employer to demarcate areas where Class I, II, and III asbestos work is conducted, and any adjoining area where debris and waste from such asbestos work accumulate; and a work area within which airborne concentrations of asbestos, exceed or there is a reasonable possibility they may exceed the permissible exposure limit.
- 1.1.38 Removal - all operations where ACM and/or PACM is taken out or stripped from structures or substrates, and includes demolition operations.
- 1.1.39 Renovation - the modifying of an existing structure, or portion thereof.
- 1.1.40 Repair - overhauling, rebuilding, reconstructing or reconditioning of structures or substrates, including encapsulation or other repair of ACM or PACM attached to structures or substrates.
- 1.1.41 Surfacing material - 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).
- 1.1.42 Surfacing ACM - surfacing material which contains more than 1 percent asbestos.
- 1.1.43 Thermal system insulation (TSI) - ACM applied to pipes, fittings, boilers, breeching, tanks, ducts, or other structural components to prevent heat loss or gain.
- 1.1.44 Thermal system insulation ACM - is thermal system insulation that contains more than 1 percent asbestos.
- 1.1.45 Turn-around time – length of time from when samples are submitted to a laboratory, analyzed, and the results are generated on a report.

1.2 APPLICABILITY OF SPECIFICATIONS

- 1.2.1 These specifications cover the processes of surveying, asbestos abatement oversight, emergency response, troubleshooting, and training provision at any site, building or structure specified by the Los Angeles County Department.
- 1.2.2 These specifications for asbestos consultants are intended to define the asbestos related project. Site Specific General Requirements, Site Specific Work Area Plans and Site Specific Scopes of Work that may be developed as the work schedule is clarified are integral to and shall constitute a part of these specifications.
- 1.2.3 The Consultant shall have at least one Certified Asbestos Consultant (CAC) on payroll. That CAC shall be present during initial job walks or at any time the County desires their presence.
- 1.2.4 It is the Consultant's responsibility to provide oversight, recommendations, and response by an employee with a valid asbestos certification.
 - 1.2.4.1 At no point shall any asbestos-related service be accepted by anyone without a current and valid certification.
- 1.2.5 It is the responsibility of the Consultant to remain current with any and all updates to Asbestos related work and to implement them for any and all situations.
- 1.2.6 The hired Consultant shall at no point subcontract the awarded project to another company or person.
- 1.2.7 The Consultant is to be onsite throughout the abatement project.
 - 1.2.7.1 The Contractor must stop any and all work, abatement, containment building, etc. until the Consultant arrives.
- 1.2.8 The Consultant should carefully inspect each work area with the Contractor to determine if the considered materials can be removed or not. The consultant shall work together with the contractor to provide the project manager with documentation on the findings as well as any other areas deemed inaccessible. In some cases a sign may be required to warn of hidden asbestos material. Signs can be placed as determined to be necessary.
- 1.2.9 The Consultant shall be responsible for reviewing any necessary paperwork, as needed per project, before they are submitted to regulatory agencies.
- 1.2.10 On any and all multi-issue projects (ie. Mold, vibration, sound, etc.) a CIH will be required to be present on the initial jobwalk and sign off of the completion of the project.

- 1.2.10.1 To the best of the County's ability, issues should be discovered before contacting vendors. Should additional issues be discovered during the project, the awarded Consultant shall have the opportunity to obtain a CIH.
- 1.2.10.2 The CIH must be on the awarded agency's payroll and not subcontracted.
- 1.2.10.3 The CIH and the CAC may be two people or one person with both credentials.
- 1.2.11 All work shall be performed under the strict work practices and procedures outlined herein, as applicable. The retained CIH/CAC's decision(s) shall be final in all matters relating to the interpretation of these specifications and all applicable regulations.
 - 1.2.11.1 Should additional issues be involved in the course of work, such as infection control, vector control, etc. the retained CIH/CAC will remain the sole source of guidance for asbestos. The retained CIH/CAC shall coordinate with the Facility for clearances of the other issues to the Facility's specification either through themselves, or through the Facility's representative expert on the topic.
- 1.2.12 If at any point, a Consultant is found to be negligent or not providing proper, concise, and cost effective methods to solve an asbestos issue, a second opinion may be obtained at the County's expense.
 - 1.2.12.1 Should there be a vast discrepancy in opinions, a meeting shall be held to remedy the issue. During this meeting, both Consultants shall furnish documentation to justify their recommendations. The County Project Manager shall consult with South Coast Air Quality Management District to make the final determination on which method to follow.
- 1.2.13 If the Consultant furnishes a Certified Site Surveillance Technician to oversee a project, that CSST shall remain in contact with the CAC at all times.
 - 1.2.13.1 Should the CSST be found negligent, incompetent, or otherwise incapable to properly oversee the project, the County can request the presence of a CAC for the remainder of the project at no added cost to the County.
- 1.2.14 The Consultant shall furnish all labor, materials, services, required insurance coverage, and equipment to carry out the tasks in these specifications.
- 1.2.15 A clearance report stating that the area is clear for re-occupancy must be furnished within 24 hours of the completion of the project and adhered to the containment. A copy of the clearance report will also be made available to the project manager.

- 1.2.15.1 Clearance reports shall be included in the project's formal report
- 1.2.16 All work shall be accompanied with a formal report. The report shall include, but is not limited to including: an executive summary including findings, notes taken during the project, sampling forms, chain(s) of custody, laboratory analytical findings, and diagrams of the affected area. This report will be required in its final form within ten business days of the completion of the project.
- 1.2.17 At all times, the Consultant shall carry themselves as professionals. Consultants deemed to be acting otherwise may be removed from the project and possibly ask to be removed from any future projects of that facility or Department.
- 1.2.18 Any and all documentation discovered in the course of work will be kept confidential.
 - 1.2.18.1 Any unnecessary discovery, searching, or other unauthorized access of information not pertinent to work activities will result in removal from the project and possible legal ramifications.
- 1.2.19 Henceforth, these Asbestos Consultant Specifications are referred to as the Specifications.

1.3 DESCRIPTION OF WORK

- 1.3.1 Survey
 - 1.3.1.1 The Consultant shall implement all local and federal regulations as well as accepted industry standards while surveying building materials for asbestos.
 - 1.3.1.2 All sampling strategies will be generated by a Certified Asbestos Consultant that has visited the site at least one time.
 - 1.3.1.3 All environmental aspects should be taken into consideration where taking the sample. Such aspects can include, but are not limited to: nearby employee, patient, or public presence, vibration, air flow, and probability for further damage after sampling.
 - 1.3.1.4 Any and all material sampling shall follow the 3, 5, 7 rule for square footage, regardless if the material is sprayed, troweled, or not.
 - 1.3.1.5 No analysis will be stopped at first positive unless the Department representative is directly notified in writing and agrees up front.
 - 1.3.1.6 Each homogeneous group shall have a minimum of 3 samples taken.
 - 1.3.1.7 All sampling shall have a minimum of 3 samples for a negative determination.
 - 1.3.1.8 All materials found positive are to be quantified.

- 1.3.1.9 When sampling large square footages or multiple floors, homogenization should be kept to a minimum to reduce the possibility of false positives.
- 1.3.1.10 When anomaly positives are found while performing homogenization, further investigative samples shall be taken to reduce the total square footage of positive material.
- 1.3.1.11 All samples are to be documented on a map or floor plan.
- 1.3.1.12 Care shall be taken to ensure damage caused from sampling is minimal and only as large as needed.
- 1.3.1.13 All materials shall be sampled to the substrate or interstitial space.
- 1.3.1.14 Sample locations are to be patched or repaired. If the facility so chooses, areas where samples were taken can be visibly demarcated to be patched or repaired as part of a separate project.
- 1.3.1.15 Samples found to be asbestos containing, but less than 1% asbestos by composition must be point counted at 1,000 points under gravimetric reduction.
- 1.3.1.16 Sample “turn-around” times must keep the best interest of the County in mind. Samples that are not of immediate urgency should request a longer “turn-around” time to reduce the cost to the County. This is particularly important with point counting. The urgency of the samples should be determined with the project manager.

1.3.2 Abatement Oversight

- 1.3.2.1 Consultants shall arrive onsite at the same time or earlier than the Contractor.
- 1.3.2.2 The Consultant shall remain onsite throughout the entirety of the project; from the time containment begins to be built to the time clearances are granted.
 - 1.3.2.2.1 At any point, if the project is not represented by a properly certified, active member, of the Consultant’s payroll, the Consultant shall be removed from the project.
 - 1.3.2.2.2 The Contractor will stop any and all work until a Consultant returns to oversee the project. Any cost associated with the stoppage will be the responsibility of the Consultant.
- 1.3.2.3 All work shall be performed as either Class I, Class III, or Class IV work. Class II work will be performed under Class I containment requirements.

- 1.3.2.4 On the first day of the project, the Consultant shall begin to take background air samples.
 - 1.3.2.4.1 Any samples taken while abatement processes are in place will not be accepted as background and are, in fact, perimeter samples.
 - 1.3.2.4.2 If no proper background samples are taken, the Consultant shall be removed from the project.
- 1.3.2.5 The Consultant shall ensure each visual and physical barrier has a proper warning sign and caution tape.
- 1.3.2.6 Ensure that all openings are sealed with a 6-mil minimum polyethylene containment barrier to prevent leakage of air into the outside environment or other portions of the building. Individually seal ventilation openings in walls (supply and exhaust), wall mounted fixtures, doorways, windows, convectors, and other wall and floor openings into the work area with 2 layers of polyethylene sheeting at least 6-mil, taped securely in place with adhesive tape.
- 1.3.2.7 Upon completion of the containment, including any necessary plumbing and monometers, the Consultant will inspect and be responsible for the containment and the negative pressure within.
 - 1.3.2.7.1 The Consultant shall inspect the NPE for breaches and smoke test for leaks before the beginning of work and at the beginning of each shift. Any leaks detected will be sealed by the Contractor.
- 1.3.2.8 The Consultant shall ensure that the Contractor uses Ground Fault Circuit Interrupters (GFCI) at all times.
- 1.3.2.9 If materials are deemed contaminated, they are not to be removed from the containment area until they are properly decontaminated or disposed of.
- 1.3.2.10 The Consultant shall ensure the Contractor pre-cleans immovable objects, such as mechanical and electrical equipment and fixtures, within proposed work area using HEPA vacuuming equipment or wet cleaning methods, as appropriate.
- 1.3.2.11 The Consultant shall ensure that the Contractor does not use any dry methods during pre-cleaning that will generate dust into the air.
- 1.3.2.12 The Consultant shall ensure that the work area(s) are contained in the method determined in the scope of work.

- 1.3.2.13 If during performance of abatement work suspect ACM is observed outside of abatement enclosures, or if damage occurs to the enclosure barrier(s), work shall stop immediately upon discovery, appropriate repairs will be made (by Contractor), and all such debris will be collected using appropriate vacuums and wet methods.
- 1.3.2.14 The Consultant will observe that the Contractor is meeting all safety requirements including, but not limited to, electrical safety, fall protection, etc.
- 1.3.2.14.1 Any violations will be immediately brought to the Contractor's supervisor to immediately remedy. If the correction is not made, the Consultant will notify the project manager immediately and stop the project.
- 1.3.2.15 The Consultant will ensure that appropriate cleaning is performed using HEPA vacuum or wet cleaning methods of all areas physically connected to areas receiving asbestos removal.
- 1.3.2.16 High pressure water streams are not to be used to remove any type of ACM or ACCM.
- 1.3.2.17 Ensure that after cleaning, surfaces are free of visible material.
- 1.3.2.18 Ensure the Contractor mists the work area continuously with amended water to reduce airborne fiber levels, when it is safe to do so.
- 1.3.2.19 Ensure the Contractor applies approved encapsulant on all concrete substrates, structural steel, and piping surfaces from which the material was removed and to plastic sheeting prior to the removal of the plastic sheeting from the wall and floor surfaces.
- 1.3.2.20 Ensure that the Consultant's employees and Contractor do not eat, smoke or apply cosmetics in the work areas.
- 1.3.2.21 The Consultant will ensure that the Contractor Removes and disposes of all asbestos containing materials in accordance with the methods and procedures outlined in CCR Title 8, Section 1529.
- 1.3.2.22 A containment will only be visually cleared when the Consultant thoroughly checks the area that all project related asbestos has been cleared.
- 1.3.2.22.1 Any additional asbestos discovered will be brought to the project manager's attention immediately.
- 1.3.2.22.2 Any project related materials discovered still present, in the project/affected area, once the abatement is complete will be removed at the Consultant's expense.

1.3.2.23 Samples will be taken for two hours minimum at 10 LPM unless conditions require otherwise. At no point shall samples be taken for less time or at higher flow rates for convenience.

1.3.2.24 Samples will be read onsite by the consultant using the NIOSH 582 or equivalent methodology.

1.3.2.24.1 The person(s) reading the samples must hold a signed certificate of completion of the 582 or equivalent course.

1.3.3 Emergency Response

1.3.3.1 The Consultant shall arrive on scene to assist with emergency responses as soon as possible.

1.3.3.2 While the Consultant is performing emergency response procedures, every effort shall be taken to expedite the clearance of the affected area.

1.3.3.3 If at any point, a Consultant is suspected to be negligent or not providing proper, concise, and cost effective methods to solve an asbestos issue, a second opinion may be obtained at the County's expense.

1.3.3.4 Should there be a vast discrepancy in opinions, a meeting shall be held to remedy the issue. During this meeting, both Consultants shall furnish documentation to justify their recommendations. The County Project Manager shall consult with South Coast Air Quality Management District on which method to follow.

1.4 Notifications

1.4.1.1 The Consultant shall confirm that the Contractor notified Cal/OSHA and SCAQMD of the planned asbestos removal operation at least 14 calendar days prior to beginning work. Proof of notification shall be supplied to the County, or its representative, prior to the start of work.

1.5 Submittals

1.5.1 The Consultant shall confirm that the submittals are accurate and complete.

1.5.2 Prior to beginning work, the County, Consultant, and Contractor shall meet to discuss in detail the asbestos plan, including work procedures, safety precautions, and contingency plans.

1.5.3 Field Test Reports

1.5.3.1 Air Sampling Results: Fiber counting shall be completed and results made available to the County *within 24 hours*. The Consultant shall notify the Contractor immediately of exposure to asbestos fibers in excess of the Permissible Exposure Limit (PEL) of 0.1 fibers/cubic centimeter (f/cc).

1.5.3.1.1 One perimeter sample shall be taken in the morning and one sample in the afternoon. The samples will be read immediately upon completion by the Consultant using the NIOSH 582 method.

1.5.3.2 Pressure Differential Recordings for Local Exhaust Systems: The Consultant shall ensure the Contractor reviews and reports the pressure differential recordings onsite and frequently to address any failures in containment; particularly at the beginning and end of each shift. The Contractor shall immediately report to the County variance in the permissible pressure differential which could cause adjacent unsealed areas to have asbestos fiber concentration in excess of 0.01 fibers per cubic centimeter or background, whichever is higher.

1.5.3.3 Asbestos Disposal Quantity Report: The Consultant shall ensure the Contractor reviews and reports to the County within 24 hours from the end of each day, the amount of asbestos-containing material removed during the previous day. Quantities shall be listed as bags or parcels, not bins.

1.5.4 Administrative and Closeout Submittals

1.5.4.1 Notification of Equipment Rental: If rental equipment is to be used during asbestos handling and disposal, written notification concerning the intended use of the equipment will be furnished to the rental agency, with a copy to the County.

1.5.4.2 Respiratory Protection Program: The abatement Contractor and Consultant must have a written Respiratory Protection Program as required by CCR Title 8, Section 5144. The Respiratory Protection Form (Appendix B), shall be completed by the Contractor, and submitted to the County, or its representative.

1.6 Quality Assurance

1.6.1 Where methods or procedures are specified, they shall constitute minimum measures and shall in no way relieve the Consultant or the Contractor of sole responsibility for the means, methods, techniques, sequences or safety measures in connection with the work.

1.6.2 All work shall be performed in compliance with all pertinent laws, rules and regulations, and industry standards existing at the time of the work, including but not limited to:

1.6.2.1 Federal requirements which govern abatement work or hauling and disposal of hazardous waste materials include, but are not limited to, the following:

- United States Environmental Protection Agency (EPA), Title 40, Code of Federal Regulations, Part 61, National Emission Standards for Hazardous Air Pollutants (NESHAP), National Emission Standard for Asbestos (40 CFR, Part 61, Subpart A & M).
- EPA, Asbestos Hazard Emergency Response Act (AHERA), Title 40, Code of Federal Regulations, Part 763, including Appendices (40 CFR, Part 763).
- EPA, Resource Conservation & Recovery Act (RCRA).
- United States Department of Transportation (DOT), Hazardous Substances, Title 49, Code of Federal Regulations, Parts 171 through 180 (49 CFR Parts 171 and 180).
- United States Department of Labor, Division of Occupational Safety and Health (OSHA), Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite, Final Rules, Title 29, Code of Federal Regulations, Part 1910, Section 1001 and Part 1926, Section 1101.
- Respiratory Protection, 29 CFR Part 1910, Section 134 and 42 CFR Part 84.
- Asbestos in Construction Industry, 29 CFR Part 1926.
- Access of Employee Exposure/Medical Records, 29 CFR, Part 1910, Section 2.
- Hazard Communication, 29 CFR, Part 1910, Section 1200.
- Specifications for Accident Prevention Signs and Tags, 29 CFR, Part 1910, Section 145.
- Personal Protective Equipment, 29 CFR, Part 1910, Sections 132 -138.
- National Electric Code

1.6.2.2 State and Local Regulations

- The State of California, Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA),

Asbestos in Construction, Title 8, California Code of Regulations, Section 1529 (CCR Title 8, Section 1529).

- Title 8, Section 341.6, Registration, Asbestos-Related Work.
- Title 8, Division 1, Chapter 4, Division of Industrial Safety.
- The State of California, Department of Health Services, Title 22, California Code of Regulations, Environmental Health, Section 66699, Persistent and Bioaccumulative Toxic Substances (CCR Title 22, Section 66699).
- The State of California, Health and Safety Code, Sections 25249.5 and 25249.6.
- The State of California, Business and Professions Code, Section 7085.5 (Asbestos Certification) and other corresponding regulations in the California Contractors State License Board, Title 16, California Code of Regulations, Chapter 8 (CCR Title 16, chap. 8).
- California Labor Code, Sections 6501.5, 6501.7, 6501.8, and 6501.9.
- South Coast Air Quality Management District, Rules and Regulations including Rule 1403.
- Division 10 of the City of Los Angeles Fire Code, 92 Edition.

1.6.2.3 Analytical Methods

- National Institute for Occupational Safety and Health (NIOSH) Method 7400 – Fibers.
- U.S. EPA Level II Transmission Electron Microscopy Analytical Method by Yamate et al., 1984.
- EPA, Title 40, Code of Federal Regulations, Part 763, Appendix A, Subpart F, Section 1, Polarized Light Microscopy, (40 CFR, Part 763).

1.6.2.4 Miscellaneous Standards and References

- Underwriters Laboratories (UL) Standard 586, 1990 High Efficiency, Particulate, Air Filter Units.

- American National Standards Institute (ANSI), ANSI Z9.2, Fundamentals Governing the Design and Operation of Local Exhaust Systems.
 - American National Standards Institute (ANSI), ANSI Z88.2, Practice for Respiratory Protection.
 - National Fire Protection Association (NFPA), Standard 10, Standard for Portable Fire Extinguishers.
- 1.6.3 All applicable state, local regulations and ordinances, including any regulations regarding state and/or local licenses or certificates.
- 1.6.4 Where applicable state or local regulations are more stringent than federal requirements or the requirements referenced herein, Contractor and Consultant shall adhere to the more stringent regulations.
- 1.6.5 The Consultant warrants that they are familiar with the codes and requirements applicable to asbestos abatement work and shall give all notices and comply with all laws, ordinances, rules, and regulations applicable to the work. If the Contractor observes that the Specifications or plans are at variance therewith, he shall give written notice to the County's Representative describing such variance. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules, and regulations, and without written notice to the County's Representative, he shall bear all costs arising therefrom. The Subcontractor's particular attention is directed to the applicable Cal/OSHA regulations found in CCR Title 8, Section 1529 and the necessity of complying with the regulations in the progress of his work. Failure or omission on the part of the Contractor, or any of their representatives, either to discover or to bring to the attention of the County any deviation from, omission from, or noncompliance with the requirements for asbestos abatement shall not be used by the Contractor as defense for failure on his part to fulfill such requirements.
- 1.6.6

PART 2 PRODUCTS

- 2.1 Negative pressure pumps: pumps will be furnished by the Consultant with noise reduction in mind. Where feasible, diaphragm pumps will be used in place of rotary pumps to keep noise levels at a minimum in occupied areas.
- 2.2 Sampling media: Proper, unopened, and non-contaminated media will be furnished by the Consultant for sampling purposes.
- 2.3 Air monitoring equipment: any additional air monitoring equipment, direct reading, or otherwise, will be furnished by the Consultant. All calibration and proper functionality of said equipment will be the responsibility of the Consultant.
- 2.4 Warning Labels and Signs: In conformance with applicable Cal/OSHA regulations (CCR Title 8, Section 1529).
- 2.5 Other Materials: Provide all other materials, such as extension cords and ground fault circuit interrupters that may be required for proper and safe execution of job duties.

PART 3 EXECUTION

3.1 Material Handling

- 3.1.1 Remove all ACM from the premises. Dispose of materials that become contaminated with asbestos in accordance with applicable regulatory standards.
- 3.1.2 All ACM is to be bagged and removed to the disposal bin daily. No loose asbestos shall remain on the grounds at the end of each shift.

3.2 Equipment

- 3.2.1 Respirators: Consultant shall provide workers with personally issued and marked respiratory equipment approved by NIOSH and meeting the specifications of Cal/OSHA. This respiratory equipment shall be suitable for the asbestos exposure level in the work area according to CCR Title 8, Section 1529 (i). The Consultant shall provide disposable HEPA (P100) cartridges as required, with sufficient replacement cartridges. Cleaning wipes shall also be provided as necessary
- 3.2.2 Personal Protective Equipment: Consultant shall provide workers, with sets of protective disposable clothing, head covers, gloves, eye protection and foot covers of sizes to properly fit individual workers whenever they are required to enter the work area. Provide a minimum of four sets per day for workers. The personal protective equipment shall remain the property of the Consultant.
- 3.2.3 Change Rooms: Vacuum and remove asbestos contaminated disposable protective clothing while still wearing respirators in the equipment room. Seal clothing in impermeable bags or containers for disposal.
 - 3.2.3.1 Do not remove disposable protective clothing in the decontamination locker room.

- 3.2.3.2 Remove cloth work clothing in the decontamination locker room.
 - 3.2.3.3 Tag and bag cloth work clothes for laundering and keep work shoes in the decontamination locker room.
 - 3.2.3.4 Do not wear work clothing between home and work.
 - 3.2.3.5 Shower wastewater shall be handled and disposed as asbestos containing material or shall be filtered through a final filter of at least 0.5 micron particle size collection capability before disposal into the sanitary sewer system.
 - 3.2.3.6 Handle and dispose of wastewater filters as asbestos containing material.
 - 3.2.3.7 Clean asbestos contaminated work clothing in accordance with CCR Title 8, Section 1529 or use disposable clothing
- 3.2.4 Eye Protection: Furnish goggles for personnel engaged in asbestos operation when a full face respirator is not being used.

3.3 Worker Protection

- 3.3.1 A meeting will be held by the consulting agency with their oversight personnel to discuss the identified hazards of the job and the methods to safely perform the work.
- 3.3.2 Prior to commencement to work, all workers shall be instructed and shall be knowledgeable in the appropriate procedures of personal protection and asbestos removal.
- 3.3.3 Contractor and Consultant shall be solely responsible for enforcing worker protection requirements.
- 3.3.4 Reporting Unusual Events: When an event of unusual and significant nature occurs at the site, the Consultant shall prepare and submit a special report listing chain of events, persons participating, responses and similar pertinent information. When such events are known or predictable in advance, advise the County at the earliest possible date.
- 3.3.5 Reporting Accidents: If a significant accident occurs at the site or anywhere else work is in progress, the Consultant shall prepare and submit appropriate reports to the County. For this purpose, a significant accident is defined to include events where personal injury is sustained, or property loss of substance is sustained. These reports shall be submitted the same business day as the occurrence.

3.4 General Work Area Requirements

- 3.4.1 Workers shall always wear a respirator properly fitted on the face while in the work area. Workers wearing tight-fitting face pieces shall be clean-shaven to the extent that the hair does not interfere with the sealing surface of the respirator. This must be documented by a standard respirator fit test.

- 3.4.2 The Consultant shall instruct and train workers in proper respirator use. They will also mandate the performance of fit checks any time a respirator is worn, including after meals and breaks.
- 3.4.3 Workers shall wear disposable, full-body coveralls and disposable head covers and footwear suitable for asbestos work in the work area.
- 3.5 Decontamination Unit Requirements: All workers without exception shall:
 - 3.5.1 Remove and properly store street clothes in the change room and put on new disposable coveralls, head covers, footwear and cleaned respirator before entering the work area.
 - 3.5.2 Remove the disposable coveralls, head covers, and footwear in the equipment room and dispose them in an appropriate asbestos waste container. Still wearing their respirators, workers shall proceed to the showers and remove their respirators while showering with soap and tempered water. Wetted HEPA respirator cartridges shall be disposed of in appropriate asbestos containers.
 - 3.5.3 This procedure shall be followed each time a worker enters or leaves the work area.
 - 3.5.4 Workers shall not eat, drink, smoke, or chew gum or tobacco in the work area.
 - 3.5.5 All persons entering the work area shall wear an approved respirator and disposable coveralls, head covering, and footwear.
- 3.6 Sign-In/Sign-Out Log and Daily Activity Report
 - 3.6.1 The Consultant shall ensure that the Contractor maintains a sign-in/sign-out log in the immediate vicinity of the change room of any decontamination area. This log shall be maintained from the time the first activity is performed involving the disturbance of asbestos-containing material until acceptance of the final air test results. All persons entering the work area, including the Contractor's workers, County, County's consultants, and Government officials, shall be required to sign in and out each time upon entering and leaving the work area. All persons shall indicate name, time, company or agency represented, and reason for entering the work area.
 - 3.6.2 Except for governmental inspectors having jurisdiction, no visitors shall be allowed in any work area, except as authorized by the County.
 - 3.6.3 Any materials, such as supplies, copper piping, etc., removed from site, without proper authorization, will be deemed as theft.
- 3.7 Housekeeping
 - 3.7.1 The Consultant shall ensure that the Contractor is removing packaged asbestos immediately at the completion of work at each shift, are maintaining surfaces of the work area free of debris, and keep waste from being distributed outside of the immediate work area.

3.8 Procedure for Disposal of Asbestos

- 3.8.1 Do not remove any asbestos containing materials from the site without approval from the County. Procedure for hauling and disposal of asbestos waste shall comply with 40 CFR 61, Subpart M and CCR Title 22, and South Coast Air Quality Management District Rule 1403.