Asbestos Abatement - Roofing Removal Work Plan

Introduction: It is the intent of this work plan to abate asbestos containing materials (ACM) found within the proposed areas of roofing replacement or related renovations. If previously unidentified suspect or presumed asbestos materials are encountered during roofing removal or renovation work, the Abatement contractor or other contractors shall immediately contact FCG Environmental @ 805.646.1995 and request testing and assessment prior to further work in the area.

General Requirements

1. The Abatement contractor, or any subcontractor performing asbestos-related work, shall be registered with the State of California Division of Occupational Safety and Health (DOSH), and maintain all required contractors licensing.

2. Asbestos abatement, lead mitigation and other hazardous materials mitigation work will be coordinated with and integrated into the planned renovation project for this property.

3. All removal or disturbance of hazardous materials includes transportation and final disposal of generated waste materials to an approved landfill compliant with statutory regulations relating to hazardous waste.

4. Client, General Contractor and/or Consultant may conduct additional assessment as needed to further define asbestos and lead issues at the project site. If discrepancies exist within the scope of work regarding the location or quantities of ACM or LBP found during site work, the Client reserves the right to perform additional testing or assessment as necessary to resolve these conflicts.

5. Abatement contractor acknowledges that he has investigated and satisfied himself as to: a) the conditions affecting the Work, including but not limited to physical conditions of the site which may bear upon site access, handling and storage of tools and materials, access to water, electric, or other utilities that may otherwise affect performance of required activities; b) the character and quantity of all surface and subsurface materials or obstacles to be encountered in so far as this information is reasonably ascertainable from an inspection of the site, including exploratory work done by the Abatement contractor or his designated representative, as well as information presented in Drawings and specifications included with this Contract.

6. All work under this Contract shall be performed in strict accordance with all applicable Federal, State, and Local regulations, standards and codes governing demolition, asbestos abatement and any other trades.

7. Safety shall be the first and primary goal guiding the work on this project.

Asbestos Roofing Removal Procedures

1. Contractor shall remove all designated asbestos roofing materials using proper wet methods and housekeeping techniques which are detailed in applicable Federal and State regulations.
2. Asbestos material shall be adequately wet at all times and shall not be allowed to accumulate on the roof surface. Contractor shall avoid causing water damage to the building when using water.

3. Contractor shall not saw, sand, chip, grind, abrade, or drill asbestos roofing materials during removal activities. Whenever possible, asbestos materials shall be removed in large sections with minimal breakage or disturbance.

4. As work is to be conducted outdoors, an exclusion zone shall be established using fencing, caution tape, barricades or similar methods to establish a perimeter which will exclude the public and unauthorized personnel from entering the work area. This should extend at least 20’ from the work area if possible.

5. Abatement contractor shall post caution signs meeting the specifications of Cal-OSHA at any location and approaches to a location where airborne concentration of asbestos may exceed ambient background levels. Signs shall be posted at a distance sufficiently far enough away from the work area to permit an employee to read the sign and take the necessary protective measures to avoid exposure. Additional signs may need to be posted following construction of workplace enclosure barriers.

6. Ground surfaces around the work areas where significant removal work or waste loading is required shall be covered with 6-mil polyethylene sheeting and affixed to the edges of the building to protect the perimeter areas.

7. Seal off all nearby windows, vents, doorways, drains, ducts, grills, grates, diffusers, skylights and any other openings located in close proximity to the areas of proposed abatement with 6-mil polyethylene sheeting and tape.

8. Pre-clean and prepare the work area in accordance with current standards.

9. Wet all asbestos containing material with an amended water solution using equipment capable of providing a fine spray mist in order to reduce airborne fiber concentrations when the material is disturbed. Saturate the material to the substrate, however, do not allow excessive water to accumulate in the work area. Keep all removed material wet enough to prevent fiber release until it can be containerized for disposal.

10. Saturated asbestos containing material shall be removed in manageable sections. Removed material should be containerized (bagged or wrapped, etc.) before moving to a new location for continuance of work. Surrounding areas shall be periodically sprayed and maintained in a wet condition until visible material is cleaned up.

11. All removal work shall be conducted using hand tools (knives, scrapers, pry-bars, hatchets, etc.). No mechanical means shall be used unless appropriate HEPA vacuum attachments are provided to prevent asbestos fiber emissions. This includes a prohibition on radial saws or similar mechanical cutting tools unless HEPA filtration is provided.

12. Material removed shall not be dropped or thrown to the floor or ground. Material should be removed as intact sections or components whenever possible and bagged or containerized. All waste must be bagged and carefully lowered to the ground using slide, pulley system, man-lift or similar method. The waste bags may be cleaned and...
carried down by hand using the stairs or service elevator with approval of the client. Cleanup of removed material shall be continuous. Contractor shall carefully lower containerized roofing materials from the roof to the on-site storage/transportation container in a manner that prevents loss of asbestos materials onto the ground or into the atmosphere.

13. Containers (6 mil polyethylene bags or drums) shall be sealed when full (Wet material can be exceedingly heavy). Double bagging of waste material is necessary. Bags shall not be overfilled. They should be securely sealed to prevent accidental opening and leakage by tying tops of bags in an overhand knot or by taping in gooseneck fashion. Do not seal bags with wire or cord. Bags may be placed in a locked storage area or DOT approved container within the contractor’s designated staging area until ready for transportation to the landfill. Bags shall be decontaminated on exterior surfaces by wet cleaning and HEPA vacuuming before being placed in an appropriate waste bin which can be sealed and locked.

14. Bags shall be clear poly to enable a visual inspection to confirm adequate wetness of removed materials.

15. Large components removed intact may be wrapped in 2 layers of 6-mil polyethylene sheeting secured with tape for transport to the landfill.

16. After completion of all removal work, surfaces from which asbestos containing materials have been removed shall be wet brushed and sponged or cleaned by some equivalent method to remove all visible residues.

17. Clean up shall proceed in accordance with this specification using HEPA vacuums and damp wiping procedures. Decontaminate all tools and equipment and remove at the appropriate time in the cleaning sequence.

18. After the work area has been rendered free of visible residues, a thin coat of a satisfactory encapsulating agent shall be applied to all surfaces in the work area to seal in non-visible residue.

19. Worker decontamination shall be provided on site where workers will enter or exit the work area. One decontamination area for each work area is required. This area may consist of a contained area near the roof access point where plastic sheeting is used to protect ground surfaces and nearby surfaces from tools, equipment, suits and other items used in the project. As all abatement work is to be conducted outdoors, the decontamination system does not have to consist of an enclosed, negative pressure containment with shower, etc. as required for a Class I (friable) removal project.

20. The decontamination area shall be sufficiently large to use as a bag-out station and for storage of all waste materials.

21. Any washing or rinsing of asbestos contaminated equipment or materials must be conducted in a manner that will contain all waste water. No water used for decontamination purposes shall be allowed to drain upon the surface of the site.

22. The waste containers shall be located away from the worker decontamination area. The bag-out station shall be located at the point nearest where the waste disposal
containers are located. The waste bags shall be securely loaded off the roof using appropriate means, including a rope-and-pulley system, man-lift, hoist, covered chute or similar system to be approved prior to the commencement of abatement work.

23. Disposal of asbestos containing waste materials must comply with CA Title 22 and Federal regulations.

24. The worker decontamination area may be used for waste bag-out purposes only with prior approval from the Owner or Owner’s representative/consultant.

25. Emergency exits from the roof shall be established and clearly marked with duct tape arrows or other effective designations to permit easy location from anywhere within the work area. They shall be secured to prevent access from uncontaminated areas and still permit emergency exiting.

26. Visual inspections and clearance monitoring shall be performed as necessary to confirm proper removal and final approval of work. Abatement contractor shall conduct his own thorough and complete visual inspection of the work areas in advance of Owner’s visual clearance inspection. Re-inspections following a failed visual inspection shall be completed as needed until the area passes clearance inspection.

27. Following the satisfactory completion of clearance monitoring remaining barriers may be removed and properly disposed. A final visual inspection by the Hazardous Materials Consultant shall insure that no contamination remains in the work area. Unsatisfactory conditions may require additional cleaning and air monitoring.

28. In lieu of air clearance sampling, ambient air monitoring and visual inspections by the designated Asbestos Consultant or Hazardous Materials Consultant may be used for final sign-off of project.

29. All other aspects of asbestos roofing removal work shall comply with all federal, state and local asbestos regulations.

WASTE DISPOSAL PROCEDURES

1. Disposal must occur at the authorized landfill in accordance with regulatory requirements of NESHAP and applicable State and Local guidelines and regulations, including the California State Department of Health Services, Toxic Substances Control Division (DTSC).

2. Clear and legible copies of all dump receipts, trip tickets, transportation manifests or other documentation of disposal shall be continuously maintained in a designated job-site file, in chronological order, until the end of the job, when they shall be included in the Closeout Book.

TRANSPORATION TO LANDFILL

1. Once bags have been removed from the work area, they shall be loaded into an enclosed truck for transportation.
2. When moving containers, utilize hand trucks, carts and proper lifting techniques to avoid back injuries.

3. The enclosed cargo area of the truck shall be free of debris and lined with 6 mil polyethylene sheeting to prevent contamination from leaking or spilled containers. Floor sheeting shall be installed first and extend up the sidewalls. Wall sheeting shall be overlapped and taped into place.

4. Personnel loading asbestos-containing waste shall be protected by disposable clothing including head, body and foot protection and at a minimum, half-face piece, air-purifying, dual cartridge/respirators equipped with high efficiency filters.

5. Any debris or residue observed on containers or surfaces outside of the work area resulting from clean up or disposal activities shall be immediately cleaned-up using HEPA filtered vacuum equipment and/or wet methods as appropriate.

6. Large metal dumpsters are sometimes used for asbestos waste disposal. These should have doors or tops that can be closed and locked to prevent vandalism or other disturbance of the bagged asbestos debris and wind dispersion of asbestos fibers. Unbagged material shall not be placed in these containers, nor shall they be used for non-asbestos waste. Bags shall be placed, not thrown, into these containers to avoid splitting.

FINAL INSPECTION

- The Project Monitor and Contractor’s Supervisor shall perform a final inspection in and around the designated work area prior to formal release of Contractor. Contractor shall correct any deficiencies at the City or the Project Monitor’s request. Formal release shall be granted when all waste, equipment and materials pertaining to the asbestos abatement portion of the roofing removal project have been removed from City property.

ADDITIONAL NOTES

- The use of these procedures does not absolve the Contractor from the responsibility of complying with existing and applicable Federal, State, and Local regulations.
- Close communication between Contractor and the Project Monitor shall be maintained to facilitate the necessary steps and assurances.

If the contractor, client or other parties have questions regarding the enclosed information, please contact FCG Environmental at (805) 646-1995.

Prepared by:

[Signature]

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