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New York City Department of Environmental Protection
Bureau of Environmental Compliance

Asbestos Control Program

Building Exterior Clean-up

Scope of Work

All work performed under this contract must be in compliance with all applicable, relevant, and appropriate regulations, including but not limited to those of the United States Environmental Protection Agency (USEPA), the United States Department of Labor Occupational Safety and Health Administration (OSHA), the New York State Department of Labor (NYS DOL), the New York State Department of Environmental Conservation (NYS DEC), the New York State Historic Preservation Office (SHPO), the New York City Department of Sanitation (DOS), the New York City Department of Health (DOH), the New York City Landmarks Preservation Commission (NYC LPC), and the New York City Department of Environmental Protection (DEP).

Background

The DEP with assistance from representatives of the NYS DOL and US EPA performed follow-up site visits at buildings in the vicinity of the World Trade Center. The visual assessments disclosed the presence of various amounts of debris with various dispersal patterns at the building exteriors. The majority of buildings had isolated areas of debris specifically at the perimeter of the roofs, at the base of parapet walls, and in gutters. Debris was also visible at horizontal surfaces on some of the building facades. For some buildings, building facades facing the street were cleaned while the facades at the rear remained dirty.

The observed debris was characteristic of the debris from the impact of September 11, 2001. The debris appears to have reformed into a dense mass (caked). During the DEP follow-up visits, samples of the debris were collected from various roofs. The uneven dispersal identified above was also evident in the sample collection. Samples collected from various buildings indicated that some of the debris was asbestos-containing material (ACM). Based on these results and the most stringent assessment and evaluation, this material may be ACM and shall be cleaned by NYS DOL licensed contractors with DEP and NYSDOL certified workers.

Purpose

The purpose of this contract is to acquire the services of a NYS DOL licensed asbestos contractor with DEP and NYSDOL certified workers for the clean-up of building roofs, setbacks, and/or building facades within the vicinity of the WTC. The scope of work for the clean-up activities is attached. The clean-up activities shall consist of collection of debris and wet cleaning/HEPA vacuuming until the surfaces are clean of visible debris.

Contract Term and Specifications

This contract shall be in force for 120 consecutive calendar days from the DEP commencement date. Services shall be directed by the DEP. The DEP reserves the right to assign work outside the delineated areas. Contractors must be prepared to mobilize within 72 hours of the contract award. The DEP estimates the clean up of approximately 50 buildings per delineated area. The DEP expects contractors to

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provide four to five crews with a minimum of five handlers per day at each of the areas. Multiple building roofs shall be cleaned simultaneously.

Work shall not be performed at any building found to be structurally unsound.

An ACP7 form signed by the contractor and air-monitoring firm shall be submitted directly to the DEP representative on site. The DEP shall provide notification to the NYS DOL. The filing fees are exempt. The size of the project, specified area, shall be indicated on the ACP7 form, and shall be used to calculate payment. Building owners shall provide written authorization to the DEP for the work activities.

DEP will coordinate activities with building owners and other city agencies.

The sites and specific areas to be cleaned shall be determined and specified by the DEP.

The contractor shall restrict access by the public to the work area (s) during clean-up activities. Caution tape and warning signs shall be used to identify work areas. Access shall be limited to the contractor, his employees, and Federal, State or local officials.

The contractor shall provide all necessary equipment, to remove, bag, transport, and dispose collected waste. The contractor is responsible for supplying all necessary equipment.

The DEP will attempt to make arrangements with building owners/occupants for power and water. The contractor shall have electrical generators available on site in the event electrical power is not available.

The specific clean-up procedures for building roofs are attached. The DEP shall consider substitution of the specified methodologies only if the request is received in writing. Any substitutions must receive prior approval by the DEP.

For large asbestos clean-up projects, a partial decontamination system (changing room and shower) shall be required at an entry/exit from each work area. A remote decontamination system shall be acceptable with DEP on-site approval.

Contractor Qualifications

The contractor shall have on staff and assigned to this contract a sufficient number of properly trained and certified workers. See above.

Bids

A mandatory pre-bid meeting is scheduled for April 3, 2002 at 10:30 A.M. at the NYC DEP 59-17 Junction Boulevard, 8th Floor Conference Room, Corona, New York.

Any questions regarding the scope of work may be directed to R. Radhakrishnan, P.E., Director Asbestos Control Program at (718) 595-3718.

Modified to include Addendum 1 & 2

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Roof Clean-Up

Application: This procedure utilizes wet methods and careful hygiene protocol for cleaning roofs contaminated with asbestos containing material (ACM).

1. The entire roof shall be considered the work area for entry/access determinations. All abatement will be performed by NYSDOL licensed contractors with NYC DEP certified workers.

   For non-gravel or stone covered roofs with localized accumulations of visible debris, the clean-up areas shall be specified ("specified area") by DEP.

   For gravel/stone covered roof surfaces, the entire roof shall be included in the specified roof area for clean-up. The gravel/stone shall be taken to a clean-up staging area on the roof and washed. Water shall be collected, filtered, and discharged into the drain/sewer as applicable.

2. A changing area consisting of two adjacent step-off pads located on the roof immediately adjoining the roof entrance/exit. This area shall consist of a clean pad and a change pad. The clean pad shall be adjacent to the building interior access way (or at the point of entry to the roof for exterior access). The change pad shall be adjacent to the contaminated roof areas. Each pad (change pad and clean pad) shall consist of two layers of 10-mil reinforced plastic on the roof/access way surface and shall be large enough to facilitate changing and decontamination as described herein. A minimum of 4' x 4' is recommend, though the exact configuration will be specific to the roof.

3. Workers shall first step from the building interior (or exterior at the point of entry to the roof) directly onto the clean pad. On the clean pad, each worker shall be double suited with disposable coveralls, plastic booties, gloves, and head coverings. Rubber boots may be used instead of the plastic booties. The boots shall be wet wiped and HEPA vacuumed prior to leaving the roof. Each worker shall wear a minimum of a half-face air-purifying respirator equipped with HEPA cartridges.

4. All penetrations at the roof within 10 feet of the specified roof area included in the clean-up shall be cleaned by wet methods/HEPA vacuum and sealed with 6-mil polyethylene sheeting.

5. Roof cleanup shall begin at the entrance/exit and proceed in a path working away from the entrance/exit. Water shall be the primary engineering control to minimize the potential for fiber release.

6. Roof surfaces shall be wetted and then wet cleaned using wet wiping techniques with water, mops, rags, brushes, etc. HEPA vacuuming may also be used as alternative to or in combination with wet cleaning.

7. Throughout the procedure, all personnel entering or existing the roof shall observe the personal decontamination practices. Attention shall be paid to limiting unnecessary walking on or disturbance of material on the roof. These personal decontamination procedures shall be strictly adhered to, in order to minimize the potential for spreading contamination to the interior of the buildings.

8. Solid nonporous objects, such as metal patio furniture, plant potters, and plastic furniture cushions, shall be wet wiped with damp rags. Wooden objects such as decking shall be HEPA vacuumed, wet wiped, and lightly brushed with a bristle brush utilizing simultaneous misting and local HEPA exhaust. Woven materials shall either be disposed as ACM or bagged and removed off-site for proper laundering in accordance with 29 CFR 1901. 1001. Potted plants with visual contamination should be disposed as ACM waste unless the owner requests decontamination. Potted plants will be repeatedly rinsed, and provisions shall be made to catch the runoff water (i.e. into ACM disposal bags or by using rags and HEPA wet-vacuums).

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9. After completion of the above, the specified area roof shall be carefully washed.

10. Some common outdoor spaces (i.e. alleys, yards, setbacks) may be included in this clean-up. They have been included in the quantity estimates and shall be cleaned using the same procedures as the roof clean-up.

11. Air Monitoring shall be performed by NYSDOL licensed a Third Party Air Monitoring firm with certified workers. The Third Party Air monitoring firm shall perform a visual inspection to confirm the absence of ACM or debris after the areas are completely dry. Clearance air monitoring shall not be required if all samples collected during the work were found to be below 70 s/mm^2.

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Building Facade Clean-up

Work shall be performed by a NYSDOL licensed asbestos contractor with NYCDEP and NYSDOL asbestos certified workers.

The contractor performing the cleaning should be experienced in cleaning building facades.

The clean up area shall be specified ("specified area") by DEP. The area below the façade cleaning shall be covered with a layer of polyethylene sheeting. All debris must be collected for disposal as ACM directly upon removal from the surface. (i.e. All waste must be double bagged in ACM waste labeled bags.) Running water or water runoff on the building façade is not permitted.

Building occupants shall be notified prior to the façade cleaning. Access to the street below the façade cleaning shall be restricted and marked with caution tape. Cleaning shall not be performed during wind speeds greater than 20 mph.

All HVAC systems and air conditioners shall be turned off. All windows shall be closed during the cleaning of the building. Some air conditioners and windows may require sealing with duct tape to prevent water penetration.

> In cases where equipment is rigged from the roof: All clean-up activities on the roof must be completed prior to rigging equipment from the roof.

All horizontal surfaces and all windows on the facade shall be cleaned of large bulk material by wetting and hand brushing or scraping with non-metallic bristle brushes or non-metallic scrapers, by wet wiping and/ or by HEPA vacuuming from top to bottom. Only water shall be used for wet wiping and low-pressure washing. Detergents, solvents, additives, and any other chemical cleaning agents are prohibited. The removed material shall be immediately placed into containers (e.g. bags). Windows shall be wet wiped. Free running water shall not be evident during this procedure. Power for HEPA vacuums shall be supplied through ground fault interrupters.

After completion of debris removal, the specified area shall be carefully washed. A low pressure washing technique, moving from top to bottom, shall be employed to minimize water bounce-back. Facades shall be washed with a low-pressure wash not to exceed 250 psi.

At the completion of work, a visual inspection of the abated surfaces and sidewalk shall be performed to verify the absence of visible debris.

Air monitoring shall be performed by an independent NYSDOL licensed third party air monitoring firm with certified workers.

In order to minimize disruption to the public and to the building occupants, it is recommended this work be performed during off-hours.

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Building Exterior Clean-up Bid Submittal Form[1]

Delineated Area 1

Approximately 83 roofs and 52 facades

Item #	Description of Item	Unit Price	Estimated Quantity	Cost ($)
1	Roof Clean up - Asphalt/Uncovered Surface Up to 2500 square feet of clean-up per building/structure	$____/ft^2	130,725 ft^2	
2	Roof Clean up - Asphalt/Uncovered Surface 2500 square feet to 5000 square feet	$____/ft^2	74,700 ft^2	
3	Roof Clean up - Asphalt/Uncovered Surface Greater than 5000 square feet	$____/ft^2	74,700 ft^2	
4	Roof Clean up - Gravel/Stone Surface Up to 2500 square feet of clean-up per building/structure	$____/ft^2	14,525 ft^2	
5	Roof Clean up - Gravel/Stone Surface 2500 square feet to 5000 square feet	$____/ft^2	8,300 ft^2	
6	Roof Clean up – Grave l/Stone Surface Greater than 5000 square feet	$____/ft^2	8,300 ft^2	
7	Façade Clean up (up to 5000 square feet)	$____/ft^2	208,000 ft^2	
8	Façade Clean up (greater than 5000 sq. ft.)	$____/ft^2	104,000 ft^2	

Bid Total = Sum of Cost, Item 1-8 $ _____

[1] Clean-up Bid Price must include labor, materials, preparation time, transportation, and disposal. Surfaces are coated with 0.5 to 1" depth of debris.

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Building Exterior Clean-up Bid Submittal Form[2]

Delineated Area 2

Approximately 102 Roofs and 53 Facades

Item #	Description of Item	Unit Price	Estimated Quantity	Cost ($)
1	Roof Clean up - Asphalt/Uncovered Surface Up to 2500 square feet of clean-up per building/structure	$___/ft^2	160,650 ft^2	
2	Roof Clean up - Asphalt/Uncovered Surface 2500 square feet to 5000 square feet	$___/ft^2	91,800 ft^2	
3	Roof Clean up - Asphalt/Uncovered Surface Greater than 5000 square feet	$___/ft^2	91,800 ft^2	
4	Roof Clean up - Gravel/Stone Surface Up to 2500 square feet of clean-up per building/structure	$___/ft^2	17,850 ft^2	
5	Roof Clean up - Gravel/Stone Surface 2500 square feet to 5000 square feet	$___/ft^2	10,200 ft^2	
6	Roof Clean up - Gravel/Stone Surface Greater than 5000 square feet	$___/ft^2	10,200 ft^2	
7	Façade Clean up (up to 5000 square feet)	$___/ft^2	212,000 ft^2	
8	Façade Clean up (6-15 story buildings) (greater than 5000 square feet)	$___/ft^2	106,000 ft^2	

Bid Total = Sum of Cost, Item 1-8 $ _____

[2] Clean-up Bid Price must include labor, materials, preparation time, transportation, and disposal. Surfaces are coated with 0.5 to 1" depth of debris.

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Building Exterior Clean-up Bid Submittal Form[3]

Delineated Area 3

Approximately 65 Roofs and 45 Facades

Item #	Description of Item	Unit Price	Estimated Quantity	Cost ($)
1	Roof Clean up - Asphalt/Uncovered Surface Up to 2500 square feet of clean-up per building/structure	$___/ft^2	102,375 ft^2	
2	Roof Clean up - Asphalt/Uncovered Surface Between 2500 square feet and 5000 square feet	$___/ft^2	58,500 ft^2	
3	Roof Clean up - Asphalt/Uncovered Surface Greater than 5000 square feet	$___/ft^2	58,500 ft^2	
4	Roof Clean up - Gravel/Stone Surface Up to 2500 square feet of clean-up per building/structure	$___/ft^2	11,375 ft^2	
5	Roof Clean up - Gravel/Stone Surface Between 2500 square feet and 5000 square feet	$___/ft^2	6,500 ft^2	
6	Roof Clean up - Gravel/Stone Surface Greater than 5000 square feet	$___/ft^2	6,500 ft^2	
7	Façade Clean up (up to 5000 square feet)	$___/ft^2	180,000 ft^2	
8	Façade Clean up (6-15 story buildings) (greater than 5000 square feet)	$___/ft^2	90,000 ft^2	

Bid Total = Sum of Cost, Item 1-8 $ _____

[3] Clean-up Bid Price must include labor, materials, preparation time, transportation, and disposal. Surfaces are coated with 0.5 to 1" depth of debris.

Modified to include Addendum 1 & 2

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