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Indoor Air Residential Assistance Program
Monitoring Contract Scope of Work
Draft - 6/10/02

A. Introduction

All work performed under this contract must be in compliance with all applicable, and appropriate regulations and this Scope of Work, 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 (USOSHA), the New York State Department of Labor (NYSDOL), the New York State Department of Health Environmental Laboratory Approval Program (ELAP) and the New York City Department of Environmental Protection (NYCDEP). This project shall involve scheduling, coordinating and monitoring the clean up of dust/debris and air sampling from building apartments impacted by the attack and collapse of the World Trade Center.

B. Roles and Responsibilities

The USEPA On-Scene Coordinator (OSC) has overall responsibility for insuring that work conducted as part of the Indoor Air Residential Assistance Program is completed safely, efficiently and in a compliance with the Scope of Work. As such, the OSC or designee shall have the following authorities relating to work conducted under this contract:

1. *The OSC has the authority to stop work for health and safety reasons or for non-compliance with the Scope of Work.*
2. *The OSC has the authority to direct the contractor in the performance of the work.*
3. *The OSC has the authority to review and approve or disapprove of the qualifications of all contractor personnel involved in the work.*
4. *The OSC has the right to inspect and accept or reject any work.*

[input DEP Roles and Responsibilities for contract officer and project manager]

C. Qualifications

Proof of qualifications must be presented upon request, including qualifications for wipe sampling, personal monitoring, HVAC and mold expertise.

Project Monitors

The Project Monitors must possess valid NYS Asbestos Project Monitor certificates. Project Monitors must have served as a third party project monitor on at least 20 asbestos abatement projects. Project Monitor must have performed final clearance inspections on at least 50 asbestos abatement projects. The Project Monitor must have access to translation services to conduct scheduling visits with residents

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Technicians

Air monitoring technicians must possess valid NYS Asbestos Project Sampling Technician (APST) certificates. Technicians must have performed air sampling for at least 6 months.

D. Specifications

Clean up activities shall be scheduled for 20 to 30 units per day. Air sampling shall also be provided at 10 to 20 units where clean up activities are not scheduled. Sufficient personnel shall be available for project monitoring and sampling.

Sampling equipment must be in sufficient quantity to provide the amount and type of samples required for this project. At a minimum the following equipment are required: air-sampling pumps with flow rate capacities of 10 liters per minute, tripods, rotometers, sample cassettes with mixed cellulose ester filters having pore size of 0.45um. Contractors should be prepared to go to 0.8um filters if 0.45um filters clog.

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The contractor shall prepare a Health and Safety Plan (HASP) in accordance with 29 CFR 1910.120. All personnel involved in residential cleaning and monitoring activities shall follow the contractor HASP prepared by their employer. EPA shall be provided with a copy of the employer HASP prior to the start of work. Individuals performing clean up activities may wear personal protective equipment or respirators in accordance with their employer's health and safety plan. All cleaning operations will be conducted in accordance with the Cleaning Contract Scope of Work.

Copies of all invoices for work conducted under this contract shall be provided to USEPA and DEP.

The Project Monitor shall direct and coordinate all services and report all findings to USEPA. The scope of this project will be as follows:

1. The Project Monitor shall be responsible for accessing a secure EPA Website (url, user name and password to be provided by EPA). In coordination with the USEPA OSC, the Project Monitor will access residential services requested from the Website and schedule clean-up activities and air sampling with the tenants/owners, project monitors, asbestos abatement contractors and air monitoring technicians to the various apartments. The Project Monitor will then supply relevant information on activities back into the EPA Indoor Air database via the secure EPA website. *Data to be input may include but is not limited to start and completion dates for the cleaning, sampling dates and sample identification numbers.*
2. The Project Monitor will schedule and conduct pre-cleaning and pre-sampling inspections of the apartments, HVAC systems and common spaces. Residents will be provided with information regarding sampling options (aggressive and modified aggressive sampling protocols) and the handling of valuable personal items (money, jewelry, heirlooms) during work. The Project Monitor will obtain written access and authorization to clean the apartments, heating ventilation and air conditioning (HVAC) systems and common spaces using the USEPA Access Agreement (to be provided). The Project Monitor will advise EPA

if any of following conditions are observed: mixed residential and commercial use within a building; dust and/or debris in common spaces; the presence of mold that may pose a hazard to residents or workers (guidelines to be provided); residents with special needs; or other circumstances that may require deviation from the procedures specified in Scope of Work. In consultation with EPA, the Project Monitor will make a determination of the appropriate Cleaning Contract Scope of Work (i.e. Scope A or B) to be employed. *This determination is to be made based the descriptions included in the Cleaning Contract Scope of Work and best professional judgement.*

3. The Monitoring contractor shall evaluate all HVAC systems in all buildings where cleaning will take place to determine if these systems have been impacted by dust or debris from the collapse of the World Trade Center and if these systems require cleaning. The Monitoring Contractor will clean impacted HVAC systems utilizing specialized labor trained and experienced in duct cleaning. No residential or common space shall be cleaned until the HVAC system has been evaluated and cleaned ~~in~~ necessary. *it*
4. In the event that mold is observed in a residence during the pre-cleaning inspection, a follow-up inspection will be conducted by a mold expert to determine if the mold poses a health risk to residents or workers. If the presence of mold is determined to pose a health risk, the Monitoring Contractor may be required to mitigate the problem using specialized labor trained and experienced in mold remediation.
5. The Project Monitor shall schedule and oversee the cleaning operations of the Cleaning Contractor. If DEP has determined that additional exterior clean up is *required*, *no residential, common space or HVAC system shall be cleaned until the exterior of the building is cleaned. The Project Monitor shall coordinate daily access for cleaning and sampling with residents, owners, the Cleaning Contractor and sampling technicians.*
6. The Monitoring Contractor shall provide sufficient personnel to provide oversight of the Cleaning Contractor to verify that work is being conducted in accordance with the Cleaning Contact Scope of Work.
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The Project Monitor shall verify that the Cleaning Contractor is using certified workers.
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The Project Monitor shall conduct routine quality assurance inspections during the course of cleaning and concur by initialing the Cleaning Checklist (to be developed) for tasks completed satisfactorily.
9. The Project Monitor shall perform a final visual inspections upon completion of the cleaning. *If all areas are not dust free then the Project Monitor will direct the Cleaning Contractor to reclean as necessary. If all areas are dust free then the Project Monitor will authorize final air sampling. Final inspections shall be documented using the Cleaning Checklist.*

10. The Project Monitor will conduct a post-cleaning inspection of the apartment with the resident at the completion of the sampling. The resident should inspect the apartment and identify any damage at this time and sign-off on the Project Completion Form. Any damage or loss to an apartment or its contents is to be documented on this form.
11. The Project Monitor will complete a daily report which documents cleaning starts, continuations completions, air sampling and any delays or difficulties encountered.
12. EPA will notify residents and owners of results of sampling conducted as part of this project. No other party is authorized to release residential or common area sampling results.
13. *Copies of all reports, Cleaning Checklist, Project Completion Forms and chain of custody forms shall be submitted daily to the USEPA OSC and DEP.*

14. **Personal Air Monitoring**

Personal air monitoring shall be performed by the Monitoring Contractor in accordance with USDOL OSHA requirements. The person who conducts sampling shall possess a valid NYS DOL certificate. Personal air monitoring will be performed on a minimum of one worker per shift per apartment during for the first 4 - 6 weeks of cleaning operations. There after personal air monitoring samples will be taken at of one sample per quadrant per day. Samples shall be collected and analyzed in accordance with NIOSH Method 7400. Analysis of these samples shall be the responsibility of the Monitoring Contractor. Results of analysis shall be available within 24 hours of collection. These results of this sampling shall be sent immediately to EPA, DEP OSHA and the employer. The employer will make these results available to the employees or their designated representatives for their review in accordance with 29 CFR 1910.120.

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15. **Air Sampling without cleaning**

- a. Residents shall not be present in their apartment during aggressive air monitoring activities. Residents may be present during modified aggressive air monitoring.
- b. Based on consultation with resident or owner, aggressive or modified aggressive air sampling will be conducted..
 - i. Before beginning aggressive air sampling, forced air equipment (such as a 1 horsepower electric leaf blower) shall be used to direct exhaust air against walls, ceilings, floors and other surfaces. When directing the exhaust, caution shall be taken to minimize disturbance and potential damage to furnishings and personal belongings.
 - ii. For modified aggressive air sampling forced air equipment shall not be employed.
 - iii. All other procedures are identical for aggressive and modified aggressive air sampling.
- c. One 20-inch fan shall be installed per 10,000 cubic feet of room space and run at low speed. The fan shall operate continuously throughout sampling and shall not be turned off until sampling is completed.

- d. For studio apartments 3 samples shall be collected. For 1-bedroom apartments and above 5 samples shall be collected. Sampling equipment shall be placed in living areas and away from obstructions. The sampling cassette must be placed on a tripod and not taped to existing surfaces.
- e. Common spaces will be sampled using modified aggressive sampling techniques (20 inch fans,). For small spaces, less than 260 linear feet and 160 square feet, 3 samples will be collected. For large spaces greater than 260 linear feet or 160 square feet and less than 25,000 square feet 5 samples will be collected. For spaces greater than 25,000 square feet, 1 sample will be collected for each 5,000 square feet. Sampling equipment shall be placed away from obstructions. The sampling cassette must be placed on a tripod and not taped to existing surfaces.
- f. Asbestos air samples shall be collected in accordance with the procedures specified in NIOSH Method 7400. Air sampling pumps will be operated at 10 liters per minute for eight (8) hours to achieve the minimum volume requirement of 4800 liters.
- g. Samples must be labeled and accompanied with completed chain of custody forms before shipping to the designated laboratory. The label must include the EPA Project Tracking Number. Samples will be packed, sealed and shipped to USEPA Contract Laboratory for analysis.
- h. All information must be maintained using the secure EPA website(url, user name and password to be provided by EPA). Dates for monitoring and/or cleaning shall be provided to EPA electronically in an EPA approved format within 24 hours. *Information on sampling activities (date, sample ID) will be provided to EPA, via the website, within 24 hours of completion of analysis.*

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16. Pre-cleaning and Post-cleaning Wipe Sampling Procedures

- a. The Project Monitor will collect pre and post-cleanup wipe samples at 5 percent of the residences cleaned up to a maximum of 50 units per quadrant. This sampling will consist of the collection of 3 pre clean-up and 3 post clean-up wipe samples for total metals and mercury (Note: a separate wipe sample is require for analysis for mercury). All wipe samples will be collected in accordance with procedures specified in HUD Appendix 13.1.
- b. Samples must be labeled and accompanied with completed chain of custody forms before shipping to the designated laboratory. The label must include the EPA Project Tracking Number. Samples will be packed, sealed and shipped to USEPA Contract Laboratory for analysis. Metals samples will be analyzed using EPA Method SW-846 6010B. Mercury samples will be analyzed using EPA Method SW-846 7471.

17. Post Clean-up Air Sampling Procedures

- a. Sampling shall not begin until a visual inspection confirms the absence of visible dust and debris. Post cleaning air sampling shall be completed within 24-hours of the completion of cleaning activities.
- b. All surfaces must be completely dry prior to the start of sampling.

- c. Window air conditioning units where applicable shall be run/operated at least 15 minutes prior to the start of sampling. The air conditioning units shall operate continuously throughout the sampling. HVAC systems shall be in operation during sampling.
- d. Based on consultation with resident, aggressive or modified aggressive air sampling will be conducted upon completion of cleaning. Before the start of sampling, forced air equipment (such as a 1 horsepower electric leaf blower) may be used to direct exhaust air against walls, ceilings, floors and other surfaces. When directing the exhaust, caution shall be taken to minimize disturbance and potential damage to furnishings and personal belongings.
- e. One 20-inch fan shall be installed per 10,000 cubic feet of room space and run at low speed. The fan shall operate continuously throughout sampling and shall not be turned off until sampling is completed.
- f. For studio apartments 3 samples shall be collected. For 1-bedroom apartments and above 5 samples shall be collected. Sampling equipment shall be placed in living areas and away from obstructions. The sampling cassette must be placed on a tripod and not taped to existing surfaces.
- g. Common spaces will be sampled without the use of forced air devices (fans, leaf blowers etc). For small spaces, less than 260 linear feet and 160 square feet, 3 samples will be collected. For large spaces greater than 260 linear feet or 160 square feet and less than 25,000 square feet 5 samples will be collected. For spaces greater than 25,000 square feet, 1 sample will be collected for each 5,000 square feet. Sampling equipment shall be placed away from obstructions. The sampling cassette must be placed on a tripod and not taped to existing surfaces. *45° angle*
- h. Asbestos air samples shall be collected in accordance with the procedures specified in NIOSH Method 7400. Air sampling pumps will be operated at 10 liters per minute for eight (8) hours to achieve the maximum volume requirement of 4800 liters.
- i. Samples must be labeled and accompanied with completed chain of custody forms before shipping to the designated laboratory. The label must include the EPA Project Tracking Number. Samples will be packed, sealed and shipped to USEPA Contract Laboratory for analysis.
- j. All information must be maintained using the secure EPA website(url, user name and password to be provided by EPA). Dates for monitoring and/or cleaning shall be provided to EPA and DEP electronically in an EPA approved format within 24 hours. *Information on sampling activities (date, sample ID) will be provided to EPA, via the website, within 24 hours of completion of analysis.*

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