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**Subject:** EPA/NYC Matrix



wtcFEMAmatrix3.wpd

Brad and Paul - attached is a matrix of the EPA and NYC indoor air activities. We still need to fill in some of the cost estimates but believe we have captured all of the activities. We would like to discuss this with you as soon as possible. Please let us know if you require any additional information. Thank you.

(See attached file: wtcFEMAmatrix3.wpd)

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**EPA & NYC Indoor Air Program Activities & Costs**

(6/11/02)

**1. Hotline**

| <b>Activities</b>         | <b>Description</b>                                                                                                                                                                   | <b>Prog.<br/>Lead</b> | <b>Fund.<br/>Lead</b> | <b>Costs</b> | <b>Comments</b>                                                                                   |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|--------------|---------------------------------------------------------------------------------------------------|
| Establishing Hotline      | Acquire contractor services for hotline. Includes setup, management, handling calls, and distribution of materials.                                                                  | EPA                   | NYC                   | \$560,500    | Estimate based on 490,000 minutes of call time, and distributing materials to 3,000 callers.      |
| Creating Hotline Database | Development of database to support hotline and to house analytical data. Used in program to manage information received through the hotline and website.                             | EPA                   | EPA                   | \$475,000    | EPA NEEDS TO ADD \$75,000                                                                         |
| Building Status Database  | Dewitt Database. Development of database that houses environmental information for all buildings within lower Manhattan                                                              | NYC                   | NYC                   | \$500,000    | EPA will link its database to NYC's. Application pending with FEMA.                               |
| Web-hosting               | Establishment of mechanism for residents to contact the hotline through the Internet. Used to share time sensitive information regarding the indoor air program.                     | EPA                   | EPA                   | \$100,000    |                                                                                                   |
| Community Relations       | Conducting outreach efforts and developing information regarding the hotline and indoor air program. Includes printing, advertising, graphics, direct mail, and translation services | EPA                   | EPA                   | \$75,000     | NYC's Lower Manhattan Communications Plan does not provide for these activities. (See next item.) |

|                                                      |                                                                                                                                                                                                                                                        |     |     |           |                                                                                                                                                                           |
|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Disseminating Information Regarding Lower Manhattan. | Lower Manhattan Communications Plan. Development of strategy for providing information on various issues such as air quality, environment, transportation, business incentives, security, memorials, events on an ongoing basis through various means. | NYC | NYC | \$500,000 | EPA will work with NYC to coordinate distribution of materials on air quality and the environment, but this effort does not duplicate EPA's community relations proposal. |
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## 2. Monitoring & Scheduling

| Activities                                         | Description                                                | Prog. Lead | Fund. Lead | Costs                                                                          | Comments                                                                                      |
|----------------------------------------------------|------------------------------------------------------------|------------|------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Air Monitoring Contract (Scheduling/ Coordinating) | Scheduling of cleaning and testing by contractor services. | EPA        | NYC        | Clean & Test = \$1,350,000<br>Test only = \$300,000<br><br>TOTAL = \$1,650,000 | Estimate based on these # of units:<br>Scope A = 15,000<br>Scope B = 500<br>Test only = 5,000 |

|                                                        |                                                                                                                                                             |     |     |                                                                                                  |                                                                                                   |
|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| <b>Air Monitoring Contract (Asbestos Air Sampling)</b> | Collecting post-cleaning air samples from 15,500 units (cleaning & testing) and collecting samples from 5,000 units (testing only), by contractor services. | EPA | NYC | 15,500 units = \$6,000,000<br>5,000 units = \$2,000,000<br><br>TOTAL = \$8,000,000               | NYC NEEDS TO ADD. NEED ESTIMATE FOR SAMPLING COMMON AREAS                                         |
| <b>Analyzing Asbestos Samples</b>                      | Analyzing post-cleaning samples for all units, conducted by contractor services.                                                                            | EPA | EPA | Estimate based on appmx. 20,500 units being cleaned & tested and tested only<br><br>\$12,000,000 | EPA NEEDS TO ADD ANALYTICAL COSTS FOR COMMON SPACES BASED ON NYC SAMPLE # ESTIMATE (ABOVE)        |
| <b>Validating Asbestos Sample Data</b>                 | Validating analyses data of post-cleaning samples, conducted by contractor services.                                                                        | EPA | EPA | \$2,404,040                                                                                      | EPA NEEDS TO ADD. BASED ON NYC SAMPLE # ESTIMATE (ABOVE), NEED ANALYTICAL COSTS FOR COMMON SPACES |

|                                                       |                                                                                                                                                                             |     |     |                                                                                 |                                                 |
|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|---------------------------------------------------------------------------------|-------------------------------------------------|
| <b>Air Monitoring Contract (Metals Dust Sampling)</b> | Collecting wipe samples for metals pre- and post-cleaning at 5% of the units (not to exceed 50 units /quadrant for a total of 200 units), conducted by contractor services. | EPA | NYC | Estimated based on<br>20/wipe, 6<br>wipes/unit + 10%<br>QA.<br><br>\$26,400     |                                                 |
| <b>Analyzing Metals Samples</b>                       | Analyzing wipe samples for metals pre- and post-cleaning at 5% of the units (not to exceed 50 units /quadrant for a total of 200 units) conducted by contractor services.   | EPA | EPA | \$396,000                                                                       |                                                 |
| <b>Validating Metals Sample Data</b>                  | Validating analyses data of pre- and post-cleaning samples by contractor services                                                                                           | EPA | EPA | \$52,800                                                                        |                                                 |
| <b>Air monitoring Contract (Shipping of Samples)</b>  | Shipping of samples to lab. Includes samples for cleaning & testing units and testing only units, conducted by contractor services.                                         | EPA | NYC | 15,500 units =<br>\$30,000<br>5,000 units =<br>\$10,000<br><br>TOTAL = \$40,000 | NEED TO INCREASE<br>ESTIMATE FOR METALS<br>WORK |
| <b>Air Monitoring Contract (Supervising Sampling)</b> | Supervising air sampling, conducted by contractor services.                                                                                                                 | EPA | NYC | Estimate based on<br>1 hour/ unit.<br><br>\$400,000                             |                                                 |

|                                                                                              |                                                                                                                                                                                      |     |     |                                                                      |                                                                                                                            |
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| Air Monitoring Contract (Personal Monitoring of Workers)                                     | Monitoring of workers for 4-6 weeks and then randomly throughout effort. Monitoring will occur according to OSHA standards, to be performed during cleaning by cleaning contractors. | EPA | NYC |                                                                      | NYC NEEDS TO ADD. NEED ESTIMATE OF # OF SAMPLES AND COSTS<br>Sample analyses will also be handled by cleaning contractors. |
| Oversight by OSHA                                                                            | OSHA will provide oversight to ensure worker protection                                                                                                                              | EPA | EPA | Estimate based on 5 OSHA employees assigned to the project \$200,000 | FUNDS WILL NEED TO BE PROVIDED TO OSHA                                                                                     |
| Air Monitoring Contract (Evaluating Circulating Ventilation Systems)                         | Evaluation of circulating ventilation systems by monitoring contractor to determine if they have been impacted by WTC debris.                                                        | EPA | NYC |                                                                      | NYC NEEDS TO ADD. NEED ESTIMATE OF # OF SYSTEMS AND COST PER SYSTEM                                                        |
| Air Monitoring Contract (Oversight of Cleaning on a Building Basis by Monitoring Contractor) | Monitoring contractor on-site at every building during cleaning.                                                                                                                     | EPA | NYC |                                                                      | NYC NEEDS TO ADD. ESTIMATE FOR MONITORING CONTRACTOR TO BE AT EVERY BUILDING                                               |
| Data/Risk Assessment                                                                         | Evaluation/follow-up with the NY Academy of Medicine (NYAM). EPA data assessment activities.                                                                                         | EPA | EPA | NYAM travel = \$6,000                                                | EPA's costs already represented in staff estimates.                                                                        |

|          |                                                                         |     |     |                      |                                                     |
|----------|-------------------------------------------------------------------------|-----|-----|----------------------|-----------------------------------------------------|
| Database | Maintain database for data assessments, public info, report preparation | EPA | EPA |                      | EPA NEEDS TO ADD.                                   |
| Reports  | Compile, review, evaluate info collected and prepare summaries          | EPA | EPA | No additional costs. | EPA's costs already represented in staff estimates. |

### 3. Cleaning and Oversight

| Activities | Description | Prog.<br>Lead | Fund.<br>Lead | Costs | Comments |
|------------|-------------|---------------|---------------|-------|----------|
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|-------------------------------------------------|------------------------------------------------------------------------------|-----|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Cleaning Contract (Asbestos Abatement Cleaning) | Cleaning by contractor services of minimal dust accumulations. (Scope A)     | EPA | NYC | <p>Estimate based on 15,000 units to be cleaned.</p> <p>studio = \$2,250,000<br/> 1 BR = \$10,500,000<br/> 2 BR = \$30,000,000<br/> 3 BR = \$13,500,000<br/> 4 BR = \$3,750,000</p> <p>TOTAL = \$60,000,000</p> |                                                   |
| Cleaning Contract (Asbestos Abatement Cleaning) | Cleaning by contractor services of significant dust accumulations. (Scope B) | EPA | NYC | <p>Estimate based on 500 units to be cleaned.</p> <p>studio = \$115,000<br/> 1 BR = \$530,000<br/> 2 BR = \$1,500,000<br/> 3 BR = \$570,000<br/> 4 BR = \$175,000</p> <p>TOTAL = \$2,990,000</p>                |                                                   |
| Cleaning Contract (Asbestos Abatement Cleaning) | Cleaning by contractor services of common areas                              | EPA | NYC |                                                                                                                                                                                                                 | NYC NEEDS TO ADD. NEED ESTIMATE FOR COMMON SPACES |

|                                                                                      |                                             |     |     |                                                                                                                                                                        |  |
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| Cleaning Contract<br>(Supervising of Cleaning by Contractor Conducting the Cleaning) | On-site supervision conducted by contractor | EPA | NYC | Estimate based on 15,500 units.<br><br>studio = \$180,000<br>1 BR = \$960,000<br>2 BR = \$2,400,000<br>3 BR = \$960,000<br>4 BR = \$240,000<br><br>TOTAL = \$4,740,000 |  |
| Oversight by EPA of Cleaning and Monitoring Effort                                   | EPA's program oversight.                    | EPA | EPA | EPA's salary costs = \$2,953,607<br>EPA's travel costs = \$314,200<br><br>TOTAL = \$3,267,807                                                                          |  |

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| EPA Oversight of Cleaning and Monitoring Effort (Equipment & Supplies) | EPA needs computers, docking stations, printers, digital cameras, camcorders, tripods, phones, car rentals, personal protective equipment. | EPA | EPA | laptops = \$7,000<br>desktops = \$3,000<br>docks = \$2,370<br>printers = \$1,000<br>digital cameras = \$5,730<br>camcorders = \$4,584<br>tripods = \$600<br>phones = \$11,700<br>car rentals = \$12,800<br>PPE = \$408,240<br><br>TOTAL = \$457,000 | Equipment needed to support the unit within EPA that is implementing the indoor air program. PPE is the primary cost factor in this item. |
| Removal Support Team Contractor                                        | Contractor support to assist EPA in its program oversight.                                                                                 | EPA | EPA | Contractor's salary = \$1,596,672<br>Travel per diem + lodging = \$512,064<br><br>TOTAL = \$2,108,736                                                                                                                                               | Contingency for additional oversight if needed.                                                                                           |

|                                                                     |                                                                                                                                                            |       |     |                                                                                                               |                                                                                                                                |
|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| US Coast Guard                                                      | USCG support to assist EPA in its program oversight.                                                                                                       | EPA   | EPA | USCG's salary =<br>\$2,419,200<br>Travel per diem +<br>lodging =<br>\$1,280,160<br><br>TOTAL =<br>\$3,699,360 |                                                                                                                                |
| Cleaning Contract<br>(Cleaning of Circulating Ventilation Systems)  | Cleaning of systems identified by monitoring contractor as requiring cleaning. Will be performed by contractor obtained by monitoring contractor services. | EPA   | NYC |                                                                                                               | NYC NEEDS TO ADD. NEED ESTIMATE OF # OF SYSTEMS AND COST PER SYSTEM                                                            |
| NYCDOH????<br>Evaluating Units and Buildings for Mold Contamination | Evaluating units and buildings for mold contamination by contractor services obtained by monitoring contractor.                                            | NYC ? | NYC |                                                                                                               | NYC NEEDS TO ADD. NEED ESTIMATE OF # OF SYSTEMS AND COST PER SYSTEM. NYC NEEDS TO DETERMINE IF NYCDOH WILL BE CONDUCTING THIS. |
| Cleaning Contract<br>(Cleaning Mold Contamination)                  |                                                                                                                                                            | NYC ? | NYC |                                                                                                               |                                                                                                                                |

|                                  |  |     |     |                     |                                                   |
|----------------------------------|--|-----|-----|---------------------|---------------------------------------------------|
| Cleaning of Unoccupied Buildings |  | NYC | NYC | \$6-10,000,000/bldg | NYC NEEDS TO ADD. NEED ESTIMATE OF # OF BUILDINGS |
|----------------------------------|--|-----|-----|---------------------|---------------------------------------------------|

#### 4. Background (IAG Completed)

| Activities        | Description                                                                                                                                                                                                        | Lead | Costs     | Comments |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|----------|
| Obtaining Access  | Obtaining access to units                                                                                                                                                                                          | EPA  |           |          |
| Sampling          | Collecting additional samples at 4 buildings previously sampled by ATSDR & at 10 buildings, as determined by EPA, for total dust and 7 COPCs: dioxins, lead, PAHs, ceramic fibers, fibrous glass, asbestos, silica | EPA  | \$145,600 |          |
| Equipment         | Sampling and photo documentation equipment                                                                                                                                                                         | EPA  | \$130,000 |          |
| Analyzing Samples | Analyzing of samples will be conducted by labs under contract with EPA HQ's                                                                                                                                        | EPA  | \$705,300 |          |

|                                    |                                                                             |     |                                                                                          |                                                  |
|------------------------------------|-----------------------------------------------------------------------------|-----|------------------------------------------------------------------------------------------|--------------------------------------------------|
| Validating Sample Data             | Validating analyses data of samples, conducted by specialized QA contractor | EPA | \$58,800                                                                                 |                                                  |
| EPA Oversight of Monitoring Effort | EPA's program oversight                                                     | EPA | EPA's salary costs = \$291,875<br>EPA's travel costs = \$10,000<br><br>TOTAL = \$301,875 | Work will include data review and report writing |
| ATSDR                              | ATSDR support to assist EPA in its program oversight                        | EPA | \$372,000                                                                                |                                                  |
| Peer Review Contractor             | Contractor support to assist EPA in its program oversight                   | EPA | \$75,000                                                                                 |                                                  |

**5. Pilot (IAG Completed)**

| <b>Activities</b>                        | <b>Description</b>                                                                                                                                                  | <b>Lead</b> | <b>Costs</b>                                                                | <b>Comments</b> |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------------------------------------------------------------------|-----------------|
| Obtaining Access                         | Work with NYC Office of Emergency Management to select building in which residents have not been able to reside since 9/11                                          | EPA         |                                                                             |                 |
| Sampling/Removal Support Team Contractor | Pre-, post- and during cleaning sampling to be performed for 7 COPCs: asbestos, dioxins, PAHs, lead, silica, fibrous glass, refractive ceramic glass, by contractor | EPA         |                                                                             | \$462,000       |
| Equipment                                | Sampling and photo documentation equipment                                                                                                                          | EPA         |                                                                             | \$130,000       |
| Analyzing Samples                        | Analyzing of samples by labs                                                                                                                                        | EPA         | Estimate based on 5,000 samples (approximately 200 samples/unit x 24 units) | \$2,512,000     |

|                                                 |                                   |     |                                                                                          |  |
|-------------------------------------------------|-----------------------------------|-----|------------------------------------------------------------------------------------------|--|
| Cleaning/Emergency Response Services Contractor | Cleaning by contractor of 7 COPCs | EPA | \$790,500                                                                                |  |
| EPA Oversight of Monitoring and Cleaning Effort | EPA's program oversight           | EPA | EPA's salary costs = \$462,245<br>EPA's travel costs = \$32,766<br><br>TOTAL = \$495,011 |  |

#### 6. Building Exterior (Funding Approved)

| Activities                     | Description                                                                                        | Lead | Costs        |
|--------------------------------|----------------------------------------------------------------------------------------------------|------|--------------|
| Cleaning of Building Exteriors | NYC is cleaning roofs and terraces of buildings in lower Manhattan that contain WTC-related debris | NYC  | \$10,000,000 |