WTC Indoor Air/Environments Monitoring - Sampling and Analytical Procedures For Background and Pilot Clean up Studies

Media	Sampling Points	Analytical Parameters	Sampling Method Proposed	Description	Analytical Method Proposed
Settled Dust Porous Soft surfaces	Carpets, fabric furniture or drapery in areas of activity (living rooms, family rooms)	Asbestos	ASTM D 5755-95	This is a micro vacuuming method. Three co-located samples will be collected from each location.	ASTM D 5755-95
		Lead	ASTM E 1973-99	This is a micro vacuuming method. Three co-located samples will be collected from each location.	SW-846 6010B
Settled Dust Non-porous Hard surfaces	Horizontal surfaces of tables or counters and bare floors, ceilings and walls in areas of activity (living rooms, family rooms)	Asbestos	ASTM D 6480-99	Wipe Samples	ASTM D 6480-99 (wipe)
		Lead	HUD Appendix 13.1	Wipe Samples	SW-846 6010B
		Dioxins	ASTM D 6661-01	Wipe Samples	ASTM 6661-01/SW-846 8290
		PAHs	ASTM D 6661-01	Wipe Samples	ASTM 6661-01/SW-846 8270C
		Total Dust	HUD Appendix 13.1**	Wipe Sample collected at one location per unit.	No Formal Method (NIOSH 7500 Modified)
		Silica, calcite, gypsum	HUD Appendix 13.1**	Wipe Samples. All parameters will be collected on one wipe.	NIOSH 7500 (XRD)
		MMVF	ASTM D 6480-99	Samples will be combined with the asbestos sampling.	EMSL MSD.0300
Indoor Air	Areas of known activity (living rooms, family rooms)	Asbestos	NIOSH 7400	Air pump operated at 10L/min for 8 hours to achieve the COPC wkgroup Practical Quantitation Limit (PQL)	PCM NIOSH 7400 followed by TEM AHERA method.
		Lead	NIOSH 7300	Air pump operated at 10L/min for 8 hours to achieve the COPC wkgroup PQL	SW-846 6010B
		PAHs	NIOSH 5515	Air pump operated at 2L/min for 8 hours. Pilot Clean-up study only for worst case scenarios.	SW-846 8270 (Analytical method with be modified to achieve the COPC wkgroup PQL
		Dioxins	TO-9 (Modified for indoor air)	Air pump operated at 25L/min for 35 hours. This modification is not a proven method. To be conducted during the Pilot Clean-up study only for worst case scenarios.	SW-846 8290
		Silica, calcite, gypsum	NIOSH 7500	Air pump operated at 2.5L/min for 8 hours to achieve the COPC wkgroup PQL	NIOSH 7500 (XRD)
		MMVF	NIOSH 7400	Assumed that it behaves the same as asbestos, samples will be combined with the asbestos sampling.	EMSL MSD.0300
Bulk Dust	HVAC systems and AC units (collection of bulk dust sample from the unit air filters). **Background study only.**	Asbestos	Bulk Sample	Bulk samples will be collected from HVAC or AC window type unit filters, shaken into a plastic bag and transferred into the sample container.	PLM NYS 198.1 followed by TEM NYS 198.4
		Lead	Bulk Sample	(If the volume required is not sufficient for all analyses, the sample will be analyzed for asbestos only.	SW-846 6010B
		PAHs	Bulk Sample	(If the volume required is not sufficient for all analyses, the sample will be analyzed for asbestos only.	SW-846 8270
		Dioxins	Bulk Sample	(If the volume required is not sufficient for all analyses, the sample will be analyzed for asbestos only.	SW-846 8290
		Silica, calcite, gypsum	Bulk Sample	(If the volume required is not sufficient for all analyses, the sample will be analyzed for asbestos only.	NIOSH 7500 (XRD)
		MMVF	Bulk Sample	(If the volume required is not sufficient for all analyses, the sample will be analyzed for asbestos only.	PLM NYS 198.1/EMSL MSD.0300

NOTE: ** Wipe samples for silica, calcite and gypsum will be collected using the HUD Appendix 13.1 method since no standardized method is available.