



Leach Table 1. Table summarizing analytical results for solutions leached from WTC dust and beam coating samples. Details of the leach test methods are summarized in the text.

Leach Table 1					
	Outdoor dust samples				
	WTC-01-2	WTC-01-3	WTC-01-05	WTC-01-06	WTC-01-14
pH	10.1	9.51	9.9	9.65	9.68
Specific Conductance mS/cm	1.58	1.31	1.9	2.01	2.03
Chloride mg/L	7.8	3.7	nm	nm	5.1
Fluoride mg/L	<.8	<.8	nm	nm	<1.6
Nitrate mg/L	1.5	0.5	nm	nm	1.4
Calcium mg/L	388	314	577	523	544
Magnesium mg/L	1.75	2.83	3.2	3.65	3.52
Potassium mg/L	6	3.8	7.71	6.33	6.9
Silicon mg/L	5.8	4.5	8.1	5.9	6.4
Phosphorous mg/L	0.05	0.1	0.04	0.03	0.05
Sodium mg/L	6.1	2.84	7.69	5.76	3.05
Sulfate mg/L	834	694	1210	1040	1250
Aluminum μ g/L	111	44.6	24.3	26	30.3
Antimony μ g/L	33.1	22.9	46.3	42	35.9
Arsenic μ g/L	1	1	< 3	< 3	1
Barium μ g/L	36.5	28.4	38.3	36	45.1
Beryllium μ g/L	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bismuth μ g/L	< 0.005	0.01	< 0.005	< 0.005	0.01
Cadmium μ g/L	0.44	0.26	1.08	0.82	0.37
Cerium μ g/L	< 0.01	0.03	0.02	0.02	0.01
Cesium μ g/L	0.08	0.05	0.04	0.04	0.06
Chromium μ g/L	25.9	9	25.1	18.2	31.4
Cobalt μ g/L	1.23	0.72	1.04	1.02	1.15
Copper μ g/L	19.2	19.8	22.4	13.5	11.4
Gallium μ g/L	0.23	0.1	0.1	0.1	0.1

Germanium $\mu\text{g/L}$	0.07	0.09	0.1	0.08	0.07
Iron $\mu\text{g/L}$	< 50	< 50	< 50	< 50	< 50
Lanthanum $\mu\text{g/L}$	< 0.01	0.01	< 0.01	0.01	< 0.01
Lead $\mu\text{g/L}$	0.64	0.5	0.5	0.51	0.97
Lithium $\mu\text{g/L}$	11.2	4.1	11.2	9.4	9.8
Manganese $\mu\text{g/L}$	1	3.2	2	3.8	2.3
Mercury ng/L	nm	nm	18	7	nm
Molybdenum $\mu\text{g/L}$	56.8	14	45.7	42.2	30.8
Nickel $\mu\text{g/L}$	18.1	14.4	21.4	19.4	25.2
Niobium $\mu\text{g/L}$	< 0.02	0.03	0.1	0.1	0.02
Rubidium $\mu\text{g/L}$	12.6	8.08	12.4	12.9	14.1
Scandium $\mu\text{g/L}$	1.8	1.3	2.2	1.9	1.9
Selenium $\mu\text{g/L}$	2.5	1	< 5	< 5	1.9
Silver $\mu\text{g/L}$	< 3	< 3	nm	nm	< 3
Strontium $\mu\text{g/L}$	834	561	1150	1100	1230
Thallium $\mu\text{g/L}$	< 0.05	< 0.05	0.2	0.06	< 0.05
Thorium $\mu\text{g/L}$	0.04	0.09	0.8	0.37	0.06
Titanium $\mu\text{g/L}$	17.9	13.4	18.9	18.7	25.7
Uranium $\mu\text{g/L}$	0.03	0.15	0.08	0.09	0.06
Vanadium $\mu\text{g/L}$	6.2	6	11.8	8.8	9.7
Yttrium $\mu\text{g/L}$	< 0.01	< 0.01	0.08	0.08	0.11
Zinc $\mu\text{g/L}$	10.7	7.7	15.6	20.9	11.6
Zirconium $\mu\text{g/L}$	0.07	0.1	0.5	0.3	0.08

nm - not measured; ppm - parts per million; mg/L - milligrams per liter; $\mu\text{g/L}$ - micrograms per liter; ng/L - nanograms per liter; mS/cm - milliSiemens per centimeter

Leach Table 1, continued

Outdoor dust samples, continued

	WTC-01-15	WTC-01-16	WTC-01-17	WTC-01-21	WTC-01-22
pH	10	8.22	9.47	9.98	10.4
Specific Conductance mS/cm	2.01	2.08	1.96	2.02	2.02
Chloride mg/L	3.4	8.5	nm	7.8	8.1

Fluoride mg/L	<1.6	<1.6	nm	<1.6	<1.6
Nitrate mg/L	1.5	<1.6	nm	2.4	1.5
Calcium mg/L	528	526	517	549	529
Magnesium mg/L	1.71	20.2	2.54	2.61	2.12
Potassium mg/L	5.9	9.2	4.83	7.7	5.2
Silicon mg/L	4.9	4.3	2	5.8	5.4
Phosphorous mg/L	0.02	0.03	< 0.01	0.04	0.05
Sodium mg/L	2.65	5.09	4.81	4.11	5.69
Sulfate mg/L	1230	1350	1110	1270	1170
Aluminum μ g/L	53.9	6.33	50.6	53.6	153
Antimony μ g/L	15.3	28.6	11.2	21.2	17
Arsenic μ g/L	< 1	2	< 3	1	< 1
Barium μ g/L	28.9	23.2	17.5	33.9	32.2
Beryllium μ g/L	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bismuth μ g/L	0.01	0.01	< 0.005	0.006	0.01
Cadmium μ g/L	0.55	0.39	0.47	0.25	0.16
Cerium μ g/L	0.01	0.02	0.02	0.01	0.02
Cesium μ g/L	0.05	0.05	0.03	0.06	0.05
Chromium μ g/L	42	20.8	17.4	19.3	27.7
Cobalt μ g/L	1.02	1.29	1.04	1.16	0.98
Copper μ g/L	10.2	15.6	14.4	6.2	9.6
Gallium μ g/L	0.1	0.05	0.08	0.2	0.27
Germanium μ g/L	0.06	0.1	0.05	0.05	0.04
Iron μ g/L	< 50	< 50	< 50	< 50	< 50
Lanthanum μ g/L	< 0.01	0.01	< 0.01	< 0.01	< 0.01
Lead μ g/L	1.5	0.4	0.3	1.1	0.68
Lithium μ g/L	6.4	11.2	6.9	7.4	7.8
Manganese μ g/L	1.2	35.1	1.7	1.4	1
Mercury ng/L	nm	nm	8	nm	nm
Molybdenum μ g/L	10.6	46.3	35.5	10.7	7.42
Nickel μ g/L	22.2	25	21.9	24.6	24.8
Niobium μ g/L	0.02	0.02	0.07	0.04	0.04
Rubidium μ g/L	12.4	14.1	8.91	14.1	10

Scandium $\mu\text{g/L}$	1.5	1.2	0.8	1.7	1.5
Selenium $\mu\text{g/L}$	< 1	3	< 5	2.2	1.6
Silver $\mu\text{g/L}$	< 3	< 3	nm	< 3	< 3
Strontium $\mu\text{g/L}$	1060	999	1000	1020	943
Thallium $\mu\text{g/L}$	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Thorium $\mu\text{g/L}$	0.06	0.24	0.2	0.1	0.17
Titanium $\mu\text{g/L}$	24.8	25.1	19.4	25.9	24
Uranium $\mu\text{g/L}$	0.03	0.52	0.01	0.02	0.02
Vanadium $\mu\text{g/L}$	6.6	6.5	2.7	8	5.5
Yttrium $\mu\text{g/L}$	0.1	0.1	0.05	0.1	0.07
Zinc $\mu\text{g/L}$	10.6	24.1	12.7	9.6	6.5
Zirconium $\mu\text{g/L}$	0.2	0.2	0.09	0.2	0.2

nm - not measured; ppm - parts per million; mg/L - milligrams per liter; $\mu\text{g/L}$ - micrograms per liter; ng/L - nanograms per liter; mS/cm - milliSiemens per centimeter

Leach Table 1, continued

	Outdoor dust samples, continued				
	WTC-01-25	WTC-01-27	WTC-01-28	WTC-01-30	WTC-01-34
pH	9.37	10	9.93	9.63	9.8
Specific Conductance mS/cm	2.16	2.31	2.02	1.9	2.02
Chloride mg/L	37	52	12	nm	nm
Fluoride mg/L	<1.6	<1.6	<1.6	nm	nm
Nitrate mg/L	11	3	3.2	nm	nm
Calcium mg/L	558	568	553	461	524
Magnesium mg/L	6.15	2.01	2.85	5.27	3.2
Potassium mg/L	11.7	9.7	11.3	3.22	5.06
Silicon mg/L	8.1	7.2	8.6	5	4.2
Phosphorous mg/L	0.06	0.04	0.04	0.02	0.02
Sodium mg/L	12.9	12.7	5.57	4.28	2.76
Sulfate mg/L	1240	1240	1250	986	1180
Aluminum $\mu\text{g/L}$	23.8	33.4	45	22.6	27.8
Antimony $\mu\text{g/L}$	73.6	25.5	43.6	35.5	33.5
Arsenic $\mu\text{g/L}$	3.2	3	2	< 3	< 3
Barium $\mu\text{g/L}$	58.4	38.6	43.5	53.9	32.4

Beryllium $\mu\text{g/L}$	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bismuth $\mu\text{g/L}$	0.01	0.01	0.007	< 0.005	< 0.005
Cadmium $\mu\text{g/L}$	1.56	0.38	0.54	1.06	1.04
Cerium $\mu\text{g/L}$	0.02	0.02	0.02	0.02	0.02
Cesium $\mu\text{g/L}$	0.08	0.05	0.1	0.04	0.03
Chromium $\mu\text{g/L}$	24.4	15.7	34.5	26.1	16.2
Cobalt $\mu\text{g/L}$	3.18	1.17	1.25	0.72	0.87
Copper $\mu\text{g/L}$	39	21.5	9	14	10.6
Gallium $\mu\text{g/L}$	0.1	0.2	0.2	0.1	0.1
Germanium $\mu\text{g/L}$	0.2	0.05	0.08	0.09	0.08
Iron $\mu\text{g/L}$	< 50	< 50	< 50	< 50	< 50
Lanthanum $\mu\text{g/L}$	0.01	< 0.01	0.02	0.01	< 0.01
Lead $\mu\text{g/L}$	11.5	0.4	0.83	0.2	0.5
Lithium $\mu\text{g/L}$	29.7	24.3	11.2	9.6	7.9
Manganese $\mu\text{g/L}$	4.9	1	2	3.3	1.8
Mercury ng/L	nm	nm	nm	12	10
Molybdenum $\mu\text{g/L}$	140	126	50.4	30.6	27.9
Nickel $\mu\text{g/L}$	32.1	27	25.9	18.1	20.7
Niobium $\mu\text{g/L}$	0.03	0.06	0.03	0.07	0.06
Rubidium $\mu\text{g/L}$	19.3	14.9	25	9.26	10.8
Scandium $\mu\text{g/L}$	2.2	2.1	2.5	1.6	1.4
Selenium $\mu\text{g/L}$	7.4	8.8	3.5	< 5	< 5
Silver $\mu\text{g/L}$	< 3	< 3	< 3	nm	nm
Strontium $\mu\text{g/L}$	1240	1440	1160	1540	1070
Thallium $\mu\text{g/L}$	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Thorium $\mu\text{g/L}$	0.13	0.16	0.08	0.12	0.1
Titanium $\mu\text{g/L}$	25.5	25	26.3	16.5	18.9
Uranium $\mu\text{g/L}$	0.13	0.008	0.04	0.09	0.03
Vanadium $\mu\text{g/L}$	13.2	16.1	12.2	7.2	7
Yttrium $\mu\text{g/L}$	0.11	0.09	0.12	0.08	0.07

Zinc $\mu\text{g/L}$	11	8.4	12.1	5.3	12.2
Zirconium $\mu\text{g/L}$	0.2	0.2	0.2	0.2	0.1

nm - not measured; ppm - parts per million; mg/L - milligrams per liter; $\mu\text{g/L}$ - micrograms per liter; ng/L - nanograms per liter; mS/cm - milliSiemens per centimeter

Leach Table 1, continued

	Indoor dust samples		Girder coatings		
	WTC-01-20	WTC-01-36	WTC-01-8	WTC-01-9	
pH	11.8	11.8	INS	10.8	
Specific Conductance mS/cm	3.41	3.4	INS	1.43	
Chloride mg/L	45	40	16	3	
Fluoride mg/L	<1.6	<1.6	<.8	<.8	
Nitrate mg/L	9.1	17	62	4.1	
Calcium mg/L	718	888	528	336	
Magnesium mg/L	0.11	0.08	10.3	1.1	
Potassium mg/L	10.9	12.3	3	1	
Silicon mg/L	3.4	3.2	6.7	11.3	
Phosphorous mg/L	0.09	0.09	< 0.01	< 0.01	
Sodium mg/L	15.3	18.3	2.1	1.54	
Sulfate mg/L	1320	1640	1090	674	
Aluminum $\mu\text{g/L}$	611	702	10.8	121	
Antimony $\mu\text{g/L}$	20.8	17.1	8.72	7.97	
Arsenic $\mu\text{g/L}$	3.3	3.3	< 3	< 3	
Barium $\mu\text{g/L}$	61.7	57.2	22.8	10.4	
Beryllium $\mu\text{g/L}$	< 0.05	< 0.05	< 0.05	< 0.05	
Bismuth $\mu\text{g/L}$	0.02	< 0.005	< 0.005	< 0.005	
Cadmium $\mu\text{g/L}$	0.18	0.18	0.02	0.02	
Cerium $\mu\text{g/L}$	< 0.01	0.01	0.26	0.4	
Cesium $\mu\text{g/L}$	0.09	0.08	0.02	< 0.01	
Chromium $\mu\text{g/L}$	69.4	109	18	408	
Cobalt $\mu\text{g/L}$	1.84	2.21	1.27	0.75	
Copper $\mu\text{g/L}$	15.1	33.6	5.6	3.5	
Gallium $\mu\text{g/L}$	0.59	0.97	0.08	0.38	
Germanium $\mu\text{g/L}$	0.05	0.07	0.1	< 0.02	

Iron $\mu\text{g/L}$	< 50	< 50	< 50	< 50
Lanthanum $\mu\text{g/L}$	0.01	0.01	0.05	0.18
Lead $\mu\text{g/L}$	5.8	10.9	0.4	0.3
Lithium $\mu\text{g/L}$	18.5	19.5	1.3	0.3
Manganese $\mu\text{g/L}$	1.3	1.7	5.5	2.1
Mercury ng/L	130	125		
Molybdenum $\mu\text{g/L}$	73.8	72.9	1.74	1.18
Nickel $\mu\text{g/L}$	36.2	42.6	24.9	16.6
Niobium $\mu\text{g/L}$	0.08	0.05	0.08	< 0.02
Rubidium $\mu\text{g/L}$	17.7	20.8	3.54	1.35
Scandium $\mu\text{g/L}$	1.2	2.1	3.6	5.5
Selenium $\mu\text{g/L}$	10.5	10.3	< 5	< 5
Silver $\mu\text{g/L}$	< 3	< 3	< 3	< 3
Strontium $\mu\text{g/L}$	1420	1690	990	758
Thallium $\mu\text{g/L}$	0.08	< 0.05	< 0.05	< 0.05
Thorium $\mu\text{g/L}$	0.51	0.38	0.52	0.18
Titanium $\mu\text{g/L}$	25.5	28.4	24.9	15.3
Uranium $\mu\text{g/L}$	0.01	< 0.005	0.02	0.006
Vanadium $\mu\text{g/L}$	6.5	7.8	13.8	14.4
Yttrium $\mu\text{g/L}$	0.13	0.16	0.31	0.27
Zinc $\mu\text{g/L}$	28.4	61.8	20.1	15.8
Zirconium $\mu\text{g/L}$	0.4	0.4	3.7	0.2

nm - not measured; ppm - parts per million; mg/L - milligrams per liter; $\mu\text{g/L}$ - micrograms per liter; ng/L - nanograms per liter; mS/cm - milliSiemens per centimeter

Leach Table 1, continued

	minimum	maximum	mean*	
pH	8.22	11.8	10.00	
Specific Conductance mS/cm	1.31	3.41	2.03	
Chloride mg/L	3	52	11.27	
Fluoride mg/L	<1.6	<1.6	***	
Nitrate mg/L	0.5	62	3.69	

Calcium mg/L	314	888	519.83		
Magnesium mg/L	0.08	20.2	2.27		
Potassium mg/L	1	12.3	6.03		
Silicon mg/L	2	11.3	5.43		
Phosphorous mg/L	0.02	0.1	0.04		
Sodium mg/L	1.54	18.3	5.16		
Sulfate mg/L	674	1640	1121.72		
Aluminum μ g/L	6.33	702	49.68		
Antimony μ g/L	7.97	73.6	24.37		
Arsenic μ g/L	1	3.3	1.83		
Barium μ g/L	10.4	61.7	33.90		
Beryllium μ g/L	< 0.05	< 0.05	***		
Bismuth μ g/L	0.006	0.02	0.01		
Cadmium μ g/L	0.02	1.56	0.33		
Cerium μ g/L	0.01	0.4	0.02		
Cesium μ g/L	0.02	0.1	0.05		
Chromium μ g/L	9	408	29.50		
Cobalt μ g/L	0.72	3.18	1.17		
Copper μ g/L	3.5	39	13.21		
Gallium μ g/L	0.05	0.97	0.15		
Germanium μ g/L	0.04	0.2	0.07		
Iron μ g/L	<50	<50	***		
Lanthanum μ g/L	0.01	0.18	0.02		
Lead μ g/L	0.2	11.5	0.83		
Lithium μ g/L	0.3	29.7	7.91		
Manganese μ g/L	1	35.1	2.31		
Mercury ng/L	7	130	21.26		
Molybdenum μ g/L	1.18	140	25.54		
Nickel μ g/L	14.4	42.6	23.46		
Niobium μ g/L	0.02	0.1	0.05		
Rubidium μ g/L	1.35	25	11.02		
Scandium μ g/L	0.8	5.5	1.82		

Selenium $\mu\text{g/L}$	1	10.5	3.58		
Silver $\mu\text{g/L}$	< 3	< 3	***		
Strontium $\mu\text{g/L}$	561	1690	1083.10		
Thallium $\mu\text{g/L}$	0.06	0.2	0.10		
Thorium $\mu\text{g/L}$	0.04	0.8	0.16		
Titanium $\mu\text{g/L}$	13.4	28.4	21.65		
Uranium $\mu\text{g/L}$	0.006	0.52	0.04		
Vanadium $\mu\text{g/L}$	2.7	16.1	8.24		
Yttrium $\mu\text{g/L}$	0.05	0.31	0.11		
Zinc $\mu\text{g/L}$	5.3	61.8	13.38		
Zirconium $\mu\text{g/L}$	0.07	3.7	0.22		

*Geometric mean for all parameters except pH; ***Geometric mean not calculated due to one or more samples having concentrations below detection limit; nm - not measured; ppm - parts per million; mg/L - milligrams per liter; $\mu\text{g/L}$ - micrograms per liter;

ng/L - nanograms per liter; mS/cm - milliSiemens per centimeter

ins - insufficient leachate solution volume to measure pH and conductivity

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