



PEDNEAULT ASSOCIATES, INC.

1615 NINTH AVENUE, BOX 205

BOHEMIA, N.Y. 11716

Phone: (631) 467-8477 Fax: (631) 467-6905

AMERICA'S TEST LAB!

Prepared Exclusively For:

NYCDEP-Emergency Response & Tech Assmt.

96-05 Horace Harding Expressway

Corona, NY 11368

(718) 595-4650

MR. M.FAWZY, DIRECTOR

PEDNEAULT ASSOCIATES, INC.

1615 NINTH AVENUE, BOX 205, BOHEMIA, N.Y. 11716

LAB NUMBER: 01100027

PROJECT ID : WORLD TRADE CENTER-5 Boro Sampling

DATE RECEIVED		RELEASE DATE		REPORT DATE
10/2/01		10/3/01		10/3/01
COLLECT DATE:	SAMPLE ID#:	MATRIX:	SAMPLE ORIGIN:	
10/1/01 7:25 PM	01100027-001	AIR/GAS	BROADWAY AVE & 31st ST., QUEENS	
PARAMETER	METHOD		RESULT	UNITS
Aluminum (Al)	OSHA ID 121/125G		<0.01	mg/m3
Antimony (Sb)	OSHA ID 121/125G		0.74	mg/m3
Arsenic (As)	OSHA ID 121/125G		0.26	mg/m3
Barium (Ba)	OSHA ID 121/125G		<0.01	mg/m3
Beryllium (Be)	OSHA ID 121/125G		<0.01	mg/m3
Cadmium (Cd)	OSHA ID 121/125G		<0.01	mg/m3
Calcium (Ca)	OSHA ID 121/125G		0.24	mg/m3
Chromium (Cr)	OSHA ID 121/125G		0.02	mg/m3
Copper (Cu)	OSHA ID 121/125G		0.03	mg/m3
Iron (Fe)	OSHA ID 121/125G		<0.01	mg/m3
Lead (Pb)	OSHA ID 121/125G		0.03	mg/m3
Magnesium (Mg)	OSHA ID 121/125G		<0.01	mg/m3
Manganese (Mn)	OSHA ID 121/125G		<0.01	mg/m3
Mercury (Hg)	OSHA ID 121/245.5		<0.01	mg/m3
Nickel (Ni)	OSHA ID 121/125G		0.01	mg/m3
Potassium (K)	OSHA ID 121/125G		<0.01	mg/m3
Selenium (Se)	OSHA ID 121/125G		0.26	mg/m3
Silver (Ag)	OSHA ID 121/125G		<0.01	mg/m3
Sodium (Na)	OSHA ID 121/125G		0.70	mg/m3
Thallium (Tl)	OSHA ID 121/125G		0.03	mg/m3
Zinc (Zn)	OSHA ID 121/125G		0.02	mg/m3

John Pedneault
Lab Director

Reported results are reflective of TOTAL, Metals @ 2L per min/15 min run.

SUPPLEMENTAL II

Page 1 of 240
NYS ELAP #10224
MWBE #46075

CITY_21MC100_002851307

CALCULATION FOR OSHA ID121/125G-- METALS IN AIR VIA CASSETTE FILTER (37MM MILLIPORE) & MOBILE VACUUM PUMPS

A= Concentration of Analyte in sample solution (µg/ml) or (mg/L)
B=Concentration of Blank in sample solution (µg/ml) or (mg/L)
SSV= Sample Solution Volume ASSV= Analyte concentration x Sample Solution Volume
BSV=Blank Sample Volume BBSV=Blank concentration x Blank Sample Volume
RAB= Reagent Blank Concentration (µg/ml) or (mg/L)
RABSV= Reagent Blank Sample Volume
D= Dilution Factor (NONE)
NO GRAVIMETRIC FACTORS
AV= Air Volume Sampled
IAR=Analytical Result
IARR=Analytical Reportable Result in mg/m³ (rounded off to 3-sigma)

$$AR = \frac{(A \times SSV) - (B \times BSV)}{AV}$$

For the Trip Blank Analytical Value:

$$AR = \frac{(B \times BSV) - (RAB \times RABSV)}{AV}$$

A (mg/L)	SSV (ml)	A x SSV	ASSV	B (mg/L)	BSV (ml)	B x BSV	BBSV	ASSV - BBSV	AR	AV Liters	AR/AV	ANALYTE	IARR mg/m ³
0.078	100	7.8		0.086	100	8.6		-0.8		30	-0.0266667	Aluminum-Al	<0.01
0.279	100	27.9		0.058	100	5.8		22.1		30	0.7366667	Antimony-Sb	0.74
0.072	100	7.2		-0.005	100	-0.5		7.7		30	0.2566667	Arsenic-As	0.26
0.003	100	0.3		0.003	100	0.3		0		30	0	Barium-Ba	<0.01
0.002	100	0.2		0	100	0		0.2		30	0.0066667	Beryllium-Be	<0.01
0.003	100	0.3		0.001	100	0.1		0.2		30	0.0066667	Cadmium-Cd	<0.01
0.493	100	49.3		0.422	100	42.2		7.1		30	0.2366667	Calcium-Ca	0.24
0.013	100	1.3		0.007	100	0.7		0.6		30	0.02	Chromium-Cr	0.02
0.019	100	1.9		0.009	100	0.9		1		30	0.0333333	Copper-Cu	0.03
0.055	100	5.5		0.104	100	10.4		-4.9		30	-0.1633333	Iron-Fe	<0.01
0.016	100	1.6		0.006	100	0.6		1		30	0.0333333	Lead-Pb	0.03
0.073	100	7.3		0.077	100	7.7		-0.4		30	-0.0133333	Magnesium-Mg	<0.01
0.032	100	3.2		0.039	100	3.9		-0.7		30	-0.0233333	Manganese-Mn	<0.01
	100				100					30		Mercury-Hg	<0.01
0.002	100	0.2		-0.001	100	-0.1		0.3		30	0.01	Nickel-Ni	0.01
0.127	100	12.7		0.148	100	14.8		-2.1		30	-0.07	Potassium-K	<0.01
0.079	100	7.9		0.001	100	0.1		7.8		30	0.26	Selenium-Se	0.26
0.003	100	0.3		0.001	100	0.1		0.2		30	0.0066667	Silver-Ag	<0.01
2.358	100	235.8		2.15	100	215		20.8		30	0.6933333	Sodium-Na	0.7
-0.001	100	-0.1		-0.011	100	-1.1		1		30	0.0333333	Thallium-Tl	0.03
0.021	100	2.1		0.016	100	1.6		0.5		30	0.0166667	Zinc-Zn	0.02

PED ID #01100027-001

NYCDEP - BROADWAY & 31ST QUEENS

NYCDEP - WTC 5-BORO SAMPLING METALS IN AIR

Prepared Exclusively For:
 NYCDEP-Emergency Response & Tech Assmt.
 96-05 Horace Harding Expressway
 Corona, NY 11368
 (718) 595-4650
MR. M.FAWZY, DIRECTOR

PEDNEAULT ASSOCIATES, INC.
 1615 NINTH AVENUE, BOX 205, BOHEMIA, N.Y. 11716

LAB NUMBER: 01100027

PROJECT ID : WORLD TRADE CENTER-5 Boro Sampling

DATE RECEIVED		RELEASE DATE		REPORT DATE
10/2/01		10/3/01		10/3/01
COLLECT DATE:		SAMPLE ID#:	MATRIX:	SAMPLE ORIGIN:
10/1/01 8:00 PM		01100027-002	AIR\GAS	138th St. & 3rd AVENUE, BRONX
PARAMETER		METHOD		RESULT
Aluminum (Al)		OSHA ID 121/125G		0.08
Antimony (Sb)		OSHA ID 121/125G		0.21
Arsenic (As)		OSHA ID 121/125G		0.06
Barium (Ba)		OSHA ID 121/125G		<0.01
Beryllium (Be)		OSHA ID 121/125G		<0.01
Cadmium (Cd)		OSHA ID 121/125G		<0.01
Calcium (Ca)		OSHA ID 121/125G		0.50
Chromium (Cr)		OSHA ID 121/125G		<0.01
Copper (Cu)		OSHA ID 121/125G		0.04
Iron (Fe)		OSHA ID 121/125G		<0.01
Lead (Pb)		OSHA ID 121/125G		<0.01
Magnesium (Mg)		OSHA ID 121/125G		0.06
Manganese (Mn)		OSHA ID 121/125G		<0.01
Mercury (Hg)		OSHA ID 121/245.5		<0.01
Nickel (Ni)		OSHA ID 121/125G		<0.01
Potassium (K)		OSHA ID 121/125G		<0.01
Selenium (Se)		OSHA ID 121/125G		0.09
Silver (Ag)		OSHA ID 121/125G		<0.01
Sodium (Na)		OSHA ID 121/125G		0.08
Thallium (Tl)		OSHA ID 121/125G		<0.01
Zinc (Zn)		OSHA ID 121/125G		<0.01

John Pedneault
 Lab Director

Reported results are reflective of TOTAL, Metals @ 2L per min/15 min run.

SUPPLEMENTAL II

Page 2 of 240
 NYS ELAP #10224
 MWBE #46075

CITY_21MC100_002851309

CALCULATION FOR OSHA ID121/125G-- METALS IN AIR VIA CASSETTE FILTER (37MM MILLIPORE) & MOBILE VACUUM PUMPS

A= Concentration of Analyte in sample solution (µg/ml) or (mg/L)
B=Concentration of Blank in sample solution (µg/ml) or (mg/L)
SSV= Sample Solution Volume ASSV= Analyte concentration x Sample Solution Volume
BSV=Blank Sample Volume BBSV=Blank concentration x Blank Sample Volume
RAB= Reagent Blank Concentration (µg/ml) or (mg/L)
RABSV= Reagent Blank Sample Volume
D= Dilution Factor (NONE)
NO GRAVIMETRIC FACTORS
IAV= Air Volume Sampled
IAR=Analytical Result
IARR=Analytical Reportable Result in mg/m³ (rounded off to 3-sigma)

$$AR = \frac{(A \times SSV) - (B \times BSV)}{AV}$$

For the Trip Blank Analytical Value:

$$AR = \frac{(B \times BSV) - (RAB \times RABSV)}{AV}$$

A (mg/L)	SSV (mL)	A x SSV	ASSV	B (mg/L)	BSV (mL)	B x BSV	BBSV	ASSV-BBSV=AR	AV Liters	AR/AV	ANALYTE	IARR mg/m ³
0.11	100		11	0.086	100		8.6	2.4	30	0.08	Aluminum-Al	0.08
0.12	100		12	0.058	100		5.8	6.2	30	0.2066667	Antimony-Sb	0.21
0.013	100		1.3	-0.005	100		-0.5	1.8	30	0.06	Arsenic-As	0.06
0.003	100		0.3	0.003	100		0.3	0	30	0	Barium-Ba	<0.01
0.001	100		0.1	0	100		0	0.1	30	0.0033333	Beryllium-Be	<0.01
0.002	100		0.2	0.001	100		0.1	0.1	30	0.0033333	Cadmium-Cd	<0.01
0.573	100		57.3	0.422	100		42.2	15.1	30	0.5033333	Calcium-Ca	0.5
0.007	100		0.7	0.007	100		0.7	0	30	0	Chromium-Cr	<0.01
0.02	100		2	0.009	100		0.9	1.1	30	0.0366667	Copper-Cu	0.04
0.049	100		4.9	0.104	100		10.4	-5.5	30	-0.1833333	Iron-Fe	<0.01
0.007	100		0.7	0.006	100		0.6	0.1	30	0.0033333	Lead-Pb	<0.01
0.094	100		9.4	0.077	100		7.7	1.7	30	0.0566667	Magnesium-Mg	0.06
0.038	100		3.8	0.039	100		3.9	-0.1	30	-0.0033333	Manganese-Mn	<0.01
	100				100				30		Mercury-Hg	<0.01
0	100		0	-0.001	100		-0.1	0.1	30	0.0033333	Nickel-Ni	<0.01
0.14	100		14	0.148	100		14.8	-0.8	30	-0.0266667	Potassium-K	<0.01
0.028	100		2.8	0.001	100		0.1	2.7	30	0.09	Selenium-Se	0.09
0.002	100		0.2	0.001	100		0.1	0.1	30	0.0033333	Silver-Ag	<0.01
2.175	100		217.5	2.15	100		215	2.5	30	0.0833333	Sodium-Na	0.08
-0.011	100		-1.1	-0.011	100		-1.1	0	30	0	Thallium-Tl	<0.01
0.018	100		1.8	0.016	100		1.6	0.2	30	0.0066667	Zinc-Zn	<0.01

PED ID #01100027-002

NYCDEP - 138TH & 3RD AVENUE BRONX

C:\TEMP\FILES\NYCDEP\138TH\MAT\01100027-002

Prepared Exclusively For:

NYCDEP-Emergency Response & Tech Assmt.

96-05 Horace Harding Expressway

Corona, NY 11368

(718) 595-4650

MR. M.FAWZY, DIRECTOR

PEDNEAULT ASSOCIATES, INC.

1615 NINTH AVENUE, BOX 205, BOHEMIA, N.Y. 11716

LAB NUMBER: 01100027

PROJECT ID : WORLD TRADE CENTER-5 Boro Sampling

DATE RECEIVED		RELEASE DATE		REPORT DATE
10/2/01		10/3/01		10/3/01
COLLECT DATE:	SAMPLE ID#:	MATRIX:	SAMPLE ORIGIN:	
10/1/01 8:30 PM	01100027-003	AIR\GAS	CENTAL PARK N. & LENOX, MANHATTAN	
PARAMETER	METHOD		RESULT	UNITS
Aluminum (Al)	OSHA ID 121/125G		<0.01	mg/m3
Antimony (Sb)	OSHA ID 121/125G		0.20	mg/m3
Arsenic (As)	OSHA ID 121/125G		0.04	mg/m3
Barium (Ba)	OSHA ID 121/125G		<0.01	mg/m3
Beryllium (Be)	OSHA ID 121/125G		<0.01	mg/m3
Cadmium (Cd)	OSHA ID 121/125G		<0.01	mg/m3
Calcium (Ca)	OSHA ID 121/125G		<0.01	mg/m3
Chromium (Cr)	OSHA ID 121/125G		<0.01	mg/m3
Copper (Cu)	OSHA ID 121/125G		0.02	mg/m3
Iron (Fe)	OSHA ID 121/125G		<0.01	mg/m3
Lead (Pb)	OSHA ID 121/125G		<0.01	mg/m3
Magnesium (Mg)	OSHA ID 121/125G		<0.01	mg/m3
Manganese (Mn)	OSHA ID 121/125G		0.02	mg/m3
Mercury (Hg)	OSHA ID 121/245.5		<0.01	mg/m3
Nickel (Ni)	OSHA ID 121/125G		<0.01	mg/m3
Potassium (K)	OSHA ID 121/125G		<0.01	mg/m3
Selenium (Se)	OSHA ID 121/125G		0.08	mg/m3
Silver (Ag)	OSHA ID 121/125G		<0.01	mg/m3
Sodium (Na)	OSHA ID 121/125G		<0.01	mg/m3
Thallium (Tl)	OSHA ID 121/125G		0.01	mg/m3
Zinc (Zn)	OSHA ID 121/125G		<0.01	mg/m3

John Pedneault
Lab Director

Reported results are reflective of TOTAL, Metals @ 2L per min/15 min run.

Page 3 of 240
NYS ELAP #10224
MWBE #46075

SUPPLEMENTAL II

CITY_21MC100_002851311

CALCULATION FOR OSHA ID121/125G-- METALS IN AIR VIA CASSETTE FILTER (37MM MILLIPORE) & MOBILE VACUUM PUMPS

A= Concentration of Analyte in sample solution (µg/ml) or (mg/L)
 B=Concentration of Blank in sample solution (µg/ml) or (mg/L)
 SSV= Sample Solution Volume ASSV= Analyte concentration x Sample Solution Volume
 BSV=Blank Sample Volume BBSV=Blank concentration x Blank Sample Volume
 RAB= Reagent Blank Concentration (µg/ml) or (mg/L)
 RABSV= Reagent Blank Sample Volume
 D= Dilution Factor (NONE)
 NO GRAVIMETRIC FACTORS
 AV= Air Volume Sampled
 AR=Analytical Result
 IARR=Analytical Reportable Result in mg/m³ (rounded off to 3-sigma)

$$AR = \frac{(A \times SSV) - (B \times BSV)}{AV}$$

For the Trip Blank Analytical Value:

$$AR = \frac{(B \times BSV) - (RAB \times RABSV)}{AV}$$

A (mg/L)	SSV (mL)	A x SSV = ASSV	B (mg/L)	BSV (mL)	B x BSV = BBSV	ASSV - BBSV	AR	AV Liters	AR/AV	ANALYTE	IARR mg/m ³
0.081	100	8.1	0.086	100	8.6	-0.5	30	-0.0166667		Aluminum-Al	<0.01
0.118	100	11.8	0.058	100	5.8	6	30	0.2		Antimony-Sb	0.2
0.007	100	0.7	-0.005	100	-0.5	1.2	30	0.04		Arsenic-As	0.04
0.003	100	0.3	0.003	100	0.3	0	30	0		Barium-Ba	<0.01
0	100	0	0	100	0	0	30	0		Beryllium-Be	<0.01
0.001	100	0.1	0.001	100	0.1	0	30	0		Cadmium-Cd	<0.01
0.396	100	39.6	0.422	100	42.2	-2.6	30	-0.0866667		Calcium-Ca	<0.01
0.008	100	0.8	0.007	100	0.7	0.1	30	0.0033333		Chromium-Cr	<0.01
0.015	100	1.5	0.009	100	0.9	0.6	30	0.02		Copper-Cu	0.02
0.036	100	3.6	0.104	100	10.4	-6.8	30	-0.2266667		Iron-Fe	<0.01
0.008	100	0.8	0.006	100	0.6	0.2	30	0.0066667		Lead-Pb	<0.01
0.062	100	6.2	0.077	100	7.7	-1.5	30	-0.05		Magnesium-Mg	<0.01
0.044	100	4.4	0.039	100	3.9	0.5	30	0.0166667		Manganese-Mn	0.02
	100			100			30			Mercury-Hg	<0.01
0	100	0	-0.001	100	-0.1	0.1	30	0.0033333		Nickel-Ni	<0.01
0.148	100	14.8	0.148	100	14.8	0	30	0		Potassium-K	<0.01
0.024	100	2.4	0.001	100	0.1	2.3	30	0.0766667		Selenium-Se	0.08
0.001	100	0.1	0.001	100	0.1	0	30	0		Silver-Ag	<0.01
1.991	100	199.1	2.15	100	215	-15.9	30	-0.53		Sodium-Na	<0.01
-0.007	100	-0.7	-0.011	100	-1.1	0.4	30	0.0133333		Thallium-Tl	0.01
0.015	100	1.5	0.016	100	1.6	-0.1	30	-0.0033333		Zinc-Zn	<0.01

PED ID #01100027-003

NYCDEP - CENTRAL PK NO & LENOX-NYC

CLIENT FILES\NYCDEP\HAZMAT\01100027-003

<p><i>Prepared Exclusively For:</i></p> <p>NYCDEP-Emergency Response & Tech Assmt.</p> <p>96-05 Horace Harding Expressway</p> <p>Corona, NY 11368</p> <p>(718) 595-4650</p> <p>MR. M.FAWZY, DIRECTOR</p>	<p>PEDNEAULT ASSOCIATES, INC.</p> <p>1615 NINTH AVENUE, BOX 205, BOHEMIA, N.Y. 11716</p> <p>LAB NUMBER: 01100027</p> <p>PROJECT ID : WORLD TRADE CENTER-5 Boro Sampling</p>
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DATE RECEIVED		RELEASE DATE		REPORT DATE
10/2/01		10/3/01		10/3/01
COLLECT DATE:	SAMPLE ID#:	MATRIX:	SAMPLE ORIGIN:	
10/1/01 9:50 PM	01100027-004	AIR\GAS	BERRY ST. & NORTH 11th ST, BROOKLYN	
PARAMETER	METHOD		RESULT	UNITS
Aluminum (Al)	OSHA ID 121/125G		<0.01	mg/m3
Antimony (Sb)	OSHA ID 121/125G		0.11	mg/m3
Arsenic (As)	OSHA ID 121/125G		0.02	mg/m3
Barium (Ba)	OSHA ID 121/125G		<0.01	mg/m3
Beryllium (Be)	OSHA ID 121/125G		<0.01	mg/m3
Cadmium (Cd)	OSHA ID 121/125G		<0.01	mg/m3
Calcium (Ca)	OSHA ID 121/125G		0.17	mg/m3
Chromium (Cr)	OSHA ID 121/125G		<0.01	mg/m3
Copper (Cu)	OSHA ID 121/125G		<0.01	mg/m3
Iron (Fe)	OSHA ID 121/125G		<0.01	mg/m3
Lead (Pb)	OSHA ID 121/125G		<0.01	mg/m3
Magnesium (Mg)	OSHA ID 121/125G		<0.01	mg/m3
Manganese (Mn)	OSHA ID 121/125G		<0.01	mg/m3
Mercury (Hg)	OSHA ID 121/245.5		<0.01	mg/m3
Nickel (Ni)	OSHA ID 121/125G		<0.01	mg/m3
Potassium (K)	OSHA ID 121/125G		<0.01	mg/m3
Selenium (Se)	OSHA ID 121/125G		0.02	mg/m3
Silver (Ag)	OSHA ID 121/125G		<0.01	mg/m3
Sodium (Na)	OSHA ID 121/125G		0.66	mg/m3
Thallium (Tl)	OSHA ID 121/125G		0.02	mg/m3
Zinc (Zn)	OSHA ID 121/125G		<0.01	mg/m3

John Pedneault
Lab Director

Reported results are reflective of TOTAL, Metals @ 2L per min/15 min run.

Page 4 of 240
NYS ELAP #10224
MWBE #46075

SUPPLEMENTAL II

CITY_21MC100_002851313

CALCULATION FOR OSHA ID121/125G-- METALS IN AIR VIA CASSETTE FILTER (37MM MILLIPORE) & MOBILE VACUUM PUMPS

A= Concentration of Analyte in sample solution (µg/ml) or (mg/L)
B=Concentration of Blank in sample solution (µg/ml) or (mg/L)
SSV= Sample Solution Volume ASSV= Analyte concentration x Sample Solution Volume
BSV=Blank Sample Volume BBSV=Blank concentration x Blank Sample Volume
RAB= Reagent Blank Concentration (µg/ml) or (mg/L)
RABSV= Reagent Blank Sample Volume
D= Dilution Factor (NONE)
NO GRAVIMETRIC FACTORS
AV= Air Volume Sampled
IAR=Analytical Result
IARR=Analytical Reportable Result in mg/m³ (rounded off to 3-sigma)

$$AR = \frac{(A \times SSV) - (B \times BSV)}{AV}$$

For the Trip Blank Analytical Value:

$$AR = \frac{(B \times BSV) - (RAB \times RABSV)}{AV}$$

A (mg/L)	SSV (mL)	A x SSV = ASSV	B (mg/L)	BSV (mL)	B x BSV = BBSV	ASSV - BBSV = AR	AV Liters	AR/AV	ANALYTE	ARR mg/m ³
0.088	100	8.8	0.086	100	8.6	0.2	30	0.0066667	Aluminum- Al	<0.01
0.091	100	9.1	0.058	100	5.8	3.3	30	0.11	Antimony-Sb	0.11
0.002	100	0.2	-0.005	100	-0.5	0.7	30	0.0233333	Arsenic-As	0.02
0.003	100	0.3	0.003	100	0.3	0	30	0	Barium-Ba	<0.01
0	100	0	0	100	0	0	30	0	Beryllium-Be	<0.01
0.001	100	0.1	0.001	100	0.1	0	30	0	Cadmium-Cd	<0.01
0.473	100	47.3	0.422	100	42.2	5.1	30	0.17	Calcium-Ca	0.17
0.007	100	0.7	0.007	100	0.7	0	30	0	Chromium-Cr	<0.01
0.007	100	0.7	0.009	100	0.9	-0.2	30	-0.0066667	Copper-Cu	<0.01
0.033	100	3.3	0.104	100	10.4	-7.1	30	-0.2366667	Iron-Fe	<0.01
0.008	100	0.8	0.006	100	0.6	0.2	30	0.0066667	Lead-Pb	<0.01
0.077	100	7.7	0.077	100	7.7	0	30	0	Magnesium-Mg	<0.01
0.029	100	2.9	0.039	100	3.9	-1	30	-0.0333333	Manganese-Mn	<0.01
	100			100			30		Mercury-Hg	<0.01
0	100	0	-0.001	100	-0.1	0.1	30	0.0033333	Nickel-Ni	<0.01
0.139	100	13.9	0.148	100	14.8	-0.9	30	-0.03	Potassium-K	<0.01
0.008	100	0.8	0.001	100	0.1	0.7	30	0.0233333	Selenium-Se	0.02
0.001	100	0.1	0.001	100	0.1	0	30	0	Silver-Ag	<0.01
2.348	100	234.8	2.15	100	215	19.8	30	0.66	Sodium-Na	0.66
-0.005	100	-0.5	-0.011	100	-1.1	0.6	30	0.02	Thallium-Tl	0.02
0.016	100	1.6	0.016	100	1.6	0	30	0	Zinc-Zn	<0.01

PED ID #01100027-004

NYCDEP - BERRY & NORTH BROOKLYN

NYCDEP - WTC 5-BORO SAMPLING METALS IN AIR

Prepared Exclusively For:
 NYCDEP-Emergency Response & Tech Assmt.
 96-05 Horace Harding Expressway
 Corona, NY 11368
 (718) 595-4650
MR. M.FAWZY, DIRECTOR

PEDNEAULT ASSOCIATES, INC.
 1615 NINTH AVENUE, BOX 205, BOHEMIA, N.Y. 11716

LAB NUMBER: 01100027

PROJECT ID : WORLD TRADE CENTER-5 Boro Sampling

DATE RECEIVED		RELEASE DATE		REPORT DATE	
10/2/01		10/3/01		10/3/01	
COLLECT DATE:		SAMPLE ID#:		MATRIX:	
10/1/01 10:30 PM		01100027-005		AIR\GAS	
SAMPLE ORIGIN:		ATLANTIC AVE. & SMITH ST., BROOKLYN			
PARAMETER		METHOD		RESULT	UNITS
Aluminum (Al)		OSHA ID 121/125G		0.08	mg/m3
Antimony (Sb)		OSHA ID 121/125G		0.05	mg/m3
Arsenic (As)		OSHA ID 121/125G		<0.01	mg/m3
Barium (Ba)		OSHA ID 121/125G		<0.01	mg/m3
Beryllium (Be)		OSHA ID 121/125G		<0.01	mg/m3
Cadmium (Cd)		OSHA ID 121/125G		<0.01	mg/m3
Calcium (Ca)		OSHA ID 121/125G		<0.01	mg/m3
Chromium (Cr)		OSHA ID 121/125G		<0.01	mg/m3
Copper (Cu)		OSHA ID 121/125G		<0.01	mg/m3
Iron (Fe)		OSHA ID 121/125G		<0.01	mg/m3
Lead (Pb)		OSHA ID 121/125G		<0.01	mg/m3
Magnesium (Mg)		OSHA ID 121/125G		<0.01	mg/m3
Manganese (Mn)		OSHA ID 121/125G		0.01	mg/m3
Mercury (Hg)		OSHA ID 121/245.5		<0.01	mg/m3
Nickel (Ni)		OSHA ID 121/125G		<0.01	mg/m3
Potassium (K)		OSHA ID 121/125G		0.03	mg/m3
Selenium (Se)		OSHA ID 121/125G		0.03	mg/m3
Silver (Ag)		OSHA ID 121/125G		<0.01	mg/m3
Sodium (Na)		OSHA ID 121/125G		<0.01	mg/m3
Thallium (Tl)		OSHA ID 121/125G		<0.01	mg/m3
Zinc (Zn)		OSHA ID 121/125G		<0.01	mg/m3

John Pedneault
Lab Director

Reported results are reflective of TOTAL, Metals @ 2L per min/15 min run.

SUPPLEMENTAL II

Page 5 of 240
 NYS ELAP #10224
 MWBE #46075

CALCULATION FOR OSHA ID121/125G-- METALS IN AIR VIA CASSETTE FILTER (37MM MILLIPORE) & MOBILE VACUUM PUMPS

A= Concentration of Analyte in sample solution (µg/ml) or (mg/L)
B=Concentration of Blank in sample solution (µg/ml) or (mg/L)
SSV= Sample Solution Volume ASSV= Analyte concentration x Sample Solution Volume
BSV=Blank Sample Volume BBSV=Blank concentration x Blank Sample Volume
RAB= Reagent Blank Concentration (µg/ml) or (mg/L)
RABSV= Reagent Blank Sample Volume
D= Dilution Factor (NONE)
NO GRAVIMETRIC FACTORS
IAV= Air Volume Sampled
IAR=Analytical Result
IARR=Analytical Reportable Result in mg/m³ (rounded off to 3-sigma)

$$AR = \frac{(A \times SSV) - (B \times BSV)}{AV}$$

For the Trip Blank Analytical Value:
$$AR = \frac{(B \times BSV) - (RAB \times RABSV)}{AV}$$

A (mg/L)	SSV (mL)	A x SSV = ASSV	B (mg/L)	BSV (mL)	B x BSV = BBSV	ASSV - BBSV = AR	AV Liters	AR/AV	ANALYTE	ARR mg/m ³
0.11	100	11	0.086	100	8.6	2.4	30	0.08	Aluminum-Al	0.08
0.073	100	7.3	0.058	100	5.8	1.5	30	0.05	Antimony-Sb	0.05
-0.003	100	-0.3	-0.005	100	-0.5	0.2	30	0.0066667	Arsenic-As	<0.01
0.003	100	0.3	0.003	100	0.3	0	30	0	Barium-Ba	<0.01
0	100	0	0	100	0	0	30	0	Beryllium-Be	<0.01
0.001	100	0.1	0.001	100	0.1	0	30	0	Cadmium-Cd	<0.01
0.417	100	41.7	0.422	100	42.2	-0.5	30	-0.0166667	Calcium-Ca	<0.01
0.006	100	0.6	0.007	100	0.7	-0.1	30	-0.0033333	Chromium-Cr	<0.01
0.009	100	0.9	0.009	100	0.9	0	30	0	Copper-Cu	<0.01
0.039	100	3.9	0.104	100	10.4	-6.5	30	-0.2166667	Iron-Fe	<0.01
0.007	100	0.7	0.006	100	0.6	0.1	30	0.0033333	Lead-Pb	<0.01
0.067	100	6.7	0.077	100	7.7	-1	30	-0.0333333	Magnesium-Mg	<0.01
0.042	100	4.2	0.039	100	3.9	0.3	30	0.01	Manganese-Mn	0.01
	100			100			30		Mercury-Hg	<0.01
0	100	0	-0.001	100	-0.1	0.1	30	0.0033333	Nickel-Ni	<0.01
0.156	100	15.6	0.148	100	14.8	0.8	30	0.0266667	Potassium-K	0.03
0.011	100	1.1	0.001	100	0.1	1	30	0.0333333	Selenium-Se	0.03
0.001	100	0.1	0.001	100	0.1	0	30	0	Silver-Ag	<0.01
1.999	100	199.9	2.15	100	215	-15.1	30	-0.5033333	Sodium-Na	<0.01
-0.01	100	-1	-0.011	100	-1.1	0.1	30	0.0033333	Thallium-Tl	<0.01
0.016	100	1.6	0.016	100	1.6	0	30	0	Zinc-Zn	<0.01

PED ID #01100027-005

NYCDEP -ATLANTIC AV & SMITH STR. BROOKLYN

c:\IEM FILES\NYCDEP\HA7MAT\m01100027.xls

<p><i>Prepared Exclusively For:</i></p> <p>NYCDEP-Emergency Response & Tech Assmt.</p> <p>96-05 Horace Harding Expressway</p> <p>Corona, NY 11368</p> <p>(718) 595-4650</p> <p>MR. M.FAWZY, DIRECTOR</p>	<p align="center">PEDNEAULT ASSOCIATES, INC.</p> <p align="center">1615 NINTH AVENUE, BOX 205, BOHEMIA, N.Y. 11716</p> <p align="center">LAB NUMBER: 01100027</p> <p align="center">PROJECT ID : WORLD TRADE CENTER-5 Boro Sampling</p>
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DATE RECEIVED		RELEASE DATE		REPORT DATE
10/2/01		10/3/01		10/3/01
COLLECT DATE:	SAMPLE ID#:	MATRIX:	SAMPLE ORIGIN:	
10/1/01 11:15 PM	01100027-006	AIR\GAS	BAY ST & VICTORY BLVD., STATEN ISLAND	
PARAMETER	METHOD		RESULT	UNITS
Aluminum (Al)	OSHA ID 121/125G		0.05	mg/m3
Antimony (Sb)	OSHA ID 121/125G		0.02	mg/m3
Arsenic (As)	OSHA ID 121/125G		<0.01	mg/m3
Barium (Ba)	OSHA ID 121/125G		<0.01	mg/m3
Beryllium (Be)	OSHA ID 121/125G		<0.01	mg/m3
Cadmium (Cd)	OSHA ID 121/125G		<0.01	mg/m3
Calcium (Ca)	OSHA ID 121/125G		0.42	mg/m3
Chromium (Cr)	OSHA ID 121/125G		<0.01	mg/m3
Copper (Cu)	OSHA ID 121/125G		<0.01	mg/m3
Iron (Fe)	OSHA ID 121/125G		0.06	mg/m3
Lead (Pb)	OSHA ID 121/125G		<0.01	mg/m3
Magnesium (Mg)	OSHA ID 121/125G		0.02	mg/m3
Manganese (Mn)	OSHA ID 121/125G		<0.01	mg/m3
Mercury (Hg)	OSHA ID 121/245.5		<0.01	mg/m3
Nickel (Ni)	OSHA ID 121/125G		<0.01	mg/m3
Potassium (K)	OSHA ID 121/125G		0.04	mg/m3
Selenium (Se)	OSHA ID 121/125G		<0.01	mg/m3
Silver (Ag)	OSHA ID 121/125G		<0.01	mg/m3
Sodium (Na)	OSHA ID 121/125G		1.95	mg/m3
Thallium (Tl)	OSHA ID 121/125G		<0.01	mg/m3
Zinc (Zn)	OSHA ID 121/125G		0.02	mg/m3

John Pedneault
Lab Director

Reported results are reflective of TOTAL, Metals @ 2L per min/15 min run.

Page 6 of 240
NYS ELAP #10224
MWBE #46075

SUPPLEMENTAL II

CITY_21MC100_002851317

CALCULATION FOR OSHA ID121/125G-- METALS IN AIR VIA CASSETTE FILTER (37MM MILLIPORE) & MOBILE VACUUM PUMPS

A= Concentration of Analyte in sample solution (µg/ml) or (mg/L)
 B=Concentration of Blank in sample solution (µg/ml) or (mg/L)
 SSV= Sample Solution Volume ASSV= Analyte concentration x Sample Solution Volume
 BSV=Blank Sample Volume BBSV=Blank concentration x Blank Sample Volume
 RAB= Reagent Blank Concentration (µg/ml) or (mg/L)
 RABSV= Reagent Blank Sample Volume
 D= Dilution Factor (NONE)
 NO GRAVIMETRIC FACTORS
 AV= Air Volume Sampled
 AR=Analytical Result
 IARR=Analytical Reportable Result in mg/m³ (rounded off to 3-sigma)

$$AR = \frac{(A \times SSV) - (B \times BSV)}{AV}$$

For the Trip Blank Analytical Value:

$$AR = \frac{(B \times BSV) - (RAB \times RABSV)}{AV}$$

A (mg/L)	SSV (mL)	A x SSV	ASSV	B (mg/L)	BSV (mL)	B x BSV	BBSV	ASSV-BBSV	AR	AV Liters	AR/AV	ANALYTE	IARR mg/m ³
0.102	100	10.2		0.086	100	8.6		1.6		30	0.0533333	Aluminum-Al	0.05
0.063	100	6.3		0.058	100	5.8		0.5		30	0.0166667	Antimony-Sb	0.02
-0.005	100	-0.5		-0.005	100	-0.5		0		30	0	Arsenic-As	<0.01
0.003	100	0.3		0.003	100	0.3		0		30	0	Barium-Ba	<0.01
0	100	0		0	100	0		0		30	0	Beryllium-Be	<0.01
0.001	100	0.1		0.001	100	0.1		0		30	0	Cadmium-Cd	<0.01
0.548	100	54.8		0.422	100	42.2		12.6		30	0.42	Calcium-Ca	0.42
0.006	100	0.6		0.007	100	0.7		-0.1		30	-0.0033333	Chromium-Cr	<0.01
0.009	100	0.9		0.009	100	0.9		0		30	0	Copper-Cu	<0.01
0.121	100	12.1		0.104	100	10.4		1.7		30	0.0566667	Iron-Fe	0.06
0.006	100	0.6		0.006	100	0.6		0		30	0	Lead-Pb	<0.01
0.084	100	8.4		0.077	100	7.7		0.7		30	0.0233333	Magnesium-Mg	0.02
0.032	100	3.2		0.039	100	3.9		-0.7		30	-0.0233333	Manganese-Mn	<0.01
	100				100					30		Mercury-Hg	<0.01
0	100	0		-0.001	100	-0.1		0.1		30	0.0033333	Nickel-Ni	<0.01
0.161	100	16.1		0.148	100	14.8		1.3		30	0.0433333	Potassium-K	0.04
0.001	100	0.1		0.001	100	0.1		0		30	0	Selenium-Se	<0.01
0.001	100	0.1		0.001	100	0.1		0		30	0	Silver-Ag	<0.01
2.734	100	273.4		2.15	100	215		58.4		30	1.9466667	Sodium-Na	1.95
-0.011	100	-1.1		-0.011	100	-1.1		0		30	0	Thallium-Tl	<0.01
0.023	100	2.3		0.016	100	1.6		0.7		30	0.0233333	Zinc-Zn	0.02

PED ID # 01100027-006

NYCDEP - BAY STR & VICTORY BLVD. SI

<p><i>Prepared Exclusively For:</i></p> <p>NYCDEP-Emergency Response & Tech Assmt.</p> <p>96-05 Horace Harding Expressway</p> <p>Corona, NY 11368</p> <p>(718) 595-4650</p> <p>MR. M.FAWZY, DIRECTOR</p>	<p>PEDNEAULT ASSOCIATES, INC.</p> <p>1615 NINTH AVENUE, BOX 205, BOHEMIA, N.Y. 11716</p> <p>LAB NUMBER: 01100027</p> <p>PROJECT ID : WORLD TRADE CENTER-5 Boro Sampling</p>
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DATE RECEIVED		RELEASE DATE		REPORT DATE	
10/2/01		10/3/01		10/3/01	
COLLECT DATE:		SAMPLE ID#:		MATRIX:	
10/1/01 5:00 PM		01100027-007		AIR\GAS	
				SAMPLE ORIGIN:	
				TRIP BLANKS	
PARAMETER		METHOD		RESULT	UNITS
Aluminum (Al)		OSHA ID 121/125G		<0.01	mg/m3
Antimony (Sb)		OSHA ID 121/125G		<0.01	mg/m3
Arsenic (As)		OSHA ID 121/125G		0.02	mg/m3
Barium (Ba)		OSHA ID 121/125G		<0.01	mg/m3
Beryllium (Be)		OSHA ID 121/125G		<0.01	mg/m3
Cadmium (Cd)		OSHA ID 121/125G		<0.01	mg/m3
Calcium (Ca)		OSHA ID 121/125G		<0.01	mg/m3
Chromium (Cr)		OSHA ID 121/125G		0.02	mg/m3
Copper (Cu)		OSHA ID 121/125G		<0.01	mg/m3
Iron (Fe)		OSHA ID 121/125G		0.20	mg/m3
Lead (Pb)		OSHA ID 121/125G		0.02	mg/m3
Magnesium (Mg)		OSHA ID 121/125G		0.02	mg/m3
Manganese (Mn)		OSHA ID 121/125G		0.06	mg/m3
Mercury (Hg)		OSHA ID 121/245.5		<0.01	mg/m3
Nickel (Ni)		OSHA ID 121/125G		<0.01	mg/m3
Potassium (K)		OSHA ID 121/125G		0.04	mg/m3
Selenium (Se)		OSHA ID 121/125G		<0.01	mg/m3
Silver (Ag)		OSHA ID 121/125G		<0.01	mg/m3
Sodium (Na)		OSHA ID 121/125G		<0.01	mg/m3
Thallium (Tl)		OSHA ID 121/125G		<0.01	mg/m3
Zinc (Zn)		OSHA ID 121/125G		<0.01	mg/m3

John Pedneault
Lab Director

Reported results are reflective of TOTAL, Metals @ 2L per min/15 min run.

SUPPLEMENTAL II

Page 7 of 240
NYS ELAP #10224
MWBE #46075

CALCULATION FOR OSHA ID121/125G-- METALS IN AIR VIA CASSETTE FILTER (37MM MILLIPORE) & MOBILE VACUUM PUMPS

A= Concentration of Analyte in sample solution (µg/ml) or (mg/L)
 B=Concentration of Blank in sample solution (µg/ml) or (mg/L)
 SSV= Sample Solution Volume ASSV= Analyte concentration x Sample Solution Volume
 BSV=Blank Sample Volume BBSV=Blank concentration x Blank Sample Volume
 RAB= Reagent Blank Concentration (µg/ml) or (mg/L)
 RABSV= Reagent Blank Sample Volume
 D= Dilution Factor (NONE)
 NO GRAVIMETRIC FACTORS TB= TRIP/FIELD BLANK
 AV= Air Volume Sampled
 AR=Analytical Result
 IARR=Analytical Reportable Result in mg/m³ (rounded off to 3-sigma)

$$AR = \frac{(A \times SSV) - (B \times BSV)}{AV}$$

For the Trip Blank Analytical Value:

$$AR = \frac{(B \times BSV) - (RAB \times RABSV)}{AV}$$

TB (mg/L)	BSV (mL)	TB x BSV	BBSV	RAB (mg/L)	RABSV (mL)	RAB x RABSV	RABSV	TB-RAB = AR	AV Liters	AR/AV	ANALYTE	ARR mg/m
0.086	100	8.6	0.098	100	9.8	-1.2	30	-0.04	Aluminum-Al	<0.01		
0.058	100	5.8	0.064	100	6.4	-0.6	30	-0.02	Antimony-Sb	<0.01		
-0.005	100	-0.5	-0.012	100	-1.2	0.7	30	0.0233333	Arsenic-As	0.02		
0.003	100	0.3	0.003	100	0.3	0	30	0	Barium-Ba	<0.01		
0	100	0	0	100	0	0	30	0	Beryllium-Be	<0.01		
0.001	100	0.1	0.001	100	0.1	0	30	0	Cadmium-Cd	<0.01		
0.422	100	42.2	0.442	100	44.2	-2	30	-0.0666667	Calcium-Ca	<0.01		
0.007	100	0.7	0.001	100	0.1	0.6	30	0.02	Chromium-Cr	0.02		
0.009	100	0.9	0.016	100	1.6	-0.7	30	-0.0233333	Copper-Cu	<0.01		
0.104	100	10.4	0.045	100	4.5	5.9	30	0.1966667	Iron-Fe	0.2		
0.006	100	0.6	0.001	100	0.1	0.5	30	0.0166667	Lead-Pb	0.02		
0.077	100	7.7	0.072	100	7.2	0.5	30	0.0166667	Magnesium-Mg	0.02		
0.039	100	3.9	0.02	100	2	1.9	30	0.0633333	Manganese-Mn	0.06		
	100			100			30		Mercury-Hg	<0.01		
-0.001	100	-0.1	-0.001	100	-0.1	0	30	0	Nickel-Ni	<0.01		
0.148	100	14.8	0.135	100	13.5	1.3	30	0.0433333	Potassium-K	0.04		
0.001	100	0.1	0.008	100	0.8	-0.7	30	-0.0233333	Selenium-Se	<0.01		
0.001	100	0.1	0.001	100	0.1	0	30	0	Silver-Ag	<0.01		
2.15	100	215	2.155	100	215.5	-0.5	30	-0.0166667	Sodium-Na	<0.01		
-0.011	100	-1.1	-0.013	100	-1.3	0.2	30	0.0066667	Thallium-Tl	<0.01		
0.016	100	1.6	0.029	100	2.9	-1.3	30	-0.0433333	Zinc-Zn	<0.01		

PED ID #01100027-007

NYCDEP - TRIP/FIELD BLANK

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