



United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

June 16, 2011

Ted Bazenas - Mail Code OSRR02-2

US EPA New England R1

Project Number: 11040090

Project: A & J Floral - Benton, ME

Analysis: Metals in Soil Medium Level by ICP

EPA Chemist: Janet Paquin
J.P. 6/16/11

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Samples were analyzed following the EPA Region I SOP, EIASOP-INGDVICP1.

Samples were prepared following the EPA Region I SOP, EIASOP-INGMETALSPREP7

Preparation and analysis SOP's are based on "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition, Revision 2, Final Update III, Methods 3050B and 6010B," respectively. Samples were analyzed using a Perkin Elmer 4300 Dual View Inductively Coupled Plasma - Optical Emission Spectrometer.

Samples were prepared and analyzed by ESAT contractors working at the USEPA New England Laboratory.

Date Samples Received by the Laboratory: 04/28/2011

Data were reviewed in accordance with the internal verification procedures described in the EPA New England OEME Chemistry QA Plan.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

Report may contain multiple sections and each section will be numbered independently.

If you have any questions please call me at 617-918-8340

Sincerely,

 6/16/2011

Daniel N. Boudreau
Chemistry Team Leader

Laboratory Qualifiers:

RL	Reporting limit
ND	Not Detected above reporting limit
NA	Not Applicable
NC	Not calculated since analyte concentration is ND
J1	Estimated value due to MS recovery outside acceptance criteria
J2	Estimated value due to LFB result outside acceptance criteria
J3	Estimated value due to RPD result outside acceptance criteria
J4	Estimated value due to LCS result outside acceptance criteria
B	Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 10 times the concentration in the blank.
R	No recovery was calculated since the analyte concentration is greater than four times the spike level.

Sample results are reported in mg/Kg, dry weight basis.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

A & J Floral - Benton, ME

Metals in Soil Medium Level by ICP

Client Sample ID: D30176
Date of Collection: 4/26/2011
Date of Digestion: 6/3/2011
Date of Analysis: 6/8/2011
Volume Digested: N/A

Lab Sample ID: AB16941
Matrix: Soil
Final Volume: 50 mL
Digestate Dilution: 5
pH: N/A

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	19000	55	
7440-36-0	Antimony	ND	10	J1
7440-38-2	Arsenic	25	10	
7440-39-3	Barium	140	10	
7440-41-7	Beryllium	ND	4.0	
7440-43-9	Cadmium	ND	5.0	
7440-70-2	Calcium	17000	50	
7440-47-3	Chromium	300	10	J1
7440-48-4	Cobalt	18	10	
7440-50-8	Copper	140	10	
7439-89-6	Iron	120000	20	
7439-92-1	Lead	120	10	
7439-95-4	Magnesium	35000	50	
7439-96-5	Manganese	770	10	
7440-02-0	Nickel	88	10	
7782-49-2	Selenium	ND	20	J2
7440-22-4	Silver	ND	5.0	
7440-28-0	Thallium	ND	10	
7440-62-2	Vanadium	56	25	
7440-66-6	Zinc	170	10	J1

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

A & J Floral - Benton, ME

Metals in Soil Medium Level by ICP

Client Sample ID: D30178
Date of Collection: 4/26/2011
Date of Digestion: 6/3/2011
Date of Analysis: 6/8/2011
Volume Digested: N/A

Lab Sample ID: AB16943
Matrix: Soil
Final Volume: 50 mL
Digestate Dilution: 3
pH: N/A

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	6400	34	
7440-36-0	Antimony	ND	6.2	
7440-38-2	Arsenic	12	6.2	
7440-39-3	Barium	97	6.2	
7440-41-7	Beryllium	ND	2.5	
7440-43-9	Cadmium	ND	3.1	
7440-70-2	Calcium	3100	31	J3
7440-47-3	Chromium	20	6.2	
7440-48-4	Cobalt	7.0	6.2	
7440-50-8	Copper	33	6.2	
7439-89-6	Iron	19000	12	
7439-92-1	Lead	290	6.2	
7439-95-4	Magnesium	2700	31	
7439-96-5	Manganese	290	6.2	
7440-02-0	Nickel	21	6.2	
7782-49-2	Selenium	ND	12	J2
7440-22-4	Silver	ND	3.1	
7440-28-0	Thallium	ND	6.2	
7440-62-2	Vanadium	21	15	
7440-66-6	Zinc	200	6.2	

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

A & J Floral - Benton, ME

Metals in Soil Medium Level by ICP

Client Sample ID: D30180
Date of Collection: 4/26/2011
Date of Digestion: 6/3/2011
Date of Analysis: 6/8/2011
Volume Digested: N/A

Lab Sample ID: AB16945
Matrix: Soil
Final Volume: 50 mL
Digestate Dilution: 1
pH: N/A

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	20000	11	
7440-36-0	Antimony	ND	2.0	
7440-38-2	Arsenic	18	2.0	
7440-39-3	Barium	230	2.0	
7440-41-7	Beryllium	ND	0.80	
7440-43-9	Cadmium	1.9	1.0	
7440-70-2	Calcium	6000	10	
7440-47-3	Chromium	42	2.0	
7440-48-4	Cobalt	13	2.0	
7440-50-8	Copper	44	2.0	
7439-89-6	Iron	28000	4.0	
7439-92-1	Lead	580	2.0	
7439-95-4	Magnesium	6800	10	
7439-96-5	Manganese	820	2.0	
7440-02-0	Nickel	34	2.0	
7782-49-2	Selenium	ND	4.0	J2
7440-22-4	Silver	ND	1.0	
7440-28-0	Thallium	ND	2.0	
7440-62-2	Vanadium	35	5.0	
7440-66-6	Zinc	570	2.0	

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

A & J Floral - Benton, ME

Metals in Soil Medium Level by ICP

Client Sample ID: D30189
Date of Collection: 4/26/2011
Date of Digestion: 6/3/2011
Date of Analysis: 6/8/2011
Volume Digested: N/A

Lab Sample ID: AB16954
Matrix: Soil
Final Volume: 50 mL
Digestate Dilution: 1
pH: N/A

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	11000	11	
7440-36-0	Antimony	ND	2.0	
7440-38-2	Arsenic	24	2.0	
7440-39-3	Barium	240	2.0	
7440-41-7	Beryllium	1.5	0.80	
7440-43-9	Cadmium	ND	1.0	
7440-70-2	Calcium	5500	10	
7440-47-3	Chromium	13	2.0	
7440-48-4	Cobalt	15	2.0	
7440-50-8	Copper	45	2.0	
7439-89-6	Iron	15000	4.0	
7439-92-1	Lead	22	2.0	
7439-95-4	Magnesium	950	10	
7439-96-5	Manganese	110	2.0	
7440-02-0	Nickel	27	2.0	
7782-49-2	Selenium	2.4	4.0	J2
7440-22-4	Silver	ND	1.0	
7440-28-0	Thallium	ND	2.0	
7440-62-2	Vanadium	25	5.0	
7440-66-6	Zinc	19	2.0	

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

A & J Floral - Benton, ME

Metals in Soil Medium Level by ICP

Client Sample ID: D30196
Date of Collection: 4/26/2011
Date of Digestion: 6/3/2011
Date of Analysis: 6/8/2011
Volume Digested: N/A

Lab Sample ID: AB16961
Matrix: Soil
Final Volume: 50 mL
Digestate Dilution: 1
pH: N/A

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	13000	11	
7440-36-0	Antimony	ND	2.0	
7440-38-2	Arsenic	11	2.0	
7440-39-3	Barium	64	2.0	
7440-41-7	Beryllium	ND	0.78	
7440-43-9	Cadmium	ND	0.98	
7440-70-2	Calcium	1900	9.8	
7440-47-3	Chromium	30	2.0	
7440-48-4	Cobalt	7.6	2.0	
7440-50-8	Copper	38	2.0	
7439-89-6	Iron	18000	3.9	
7439-92-1	Lead	97	2.0	
7439-95-4	Magnesium	5300	9.8	
7439-96-5	Manganese	370	2.0	
7440-02-0	Nickel	27	2.0	
7782-49-2	Selenium	ND	3.9	J2
7440-22-4	Silver	ND	0.98	
7440-28-0	Thallium	ND	2.0	
7440-62-2	Vanadium	24	4.9	
7440-66-6	Zinc	380	2.0	

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

A & J Floral - Benton, ME

Laboratory Reagent Blank

Client Sample ID: N/A
Date of Collection: N/A
Date of Digestion: 6/3/2011
Date of Analysis: 6/8/2011
Volume Digested: N/A

Lab Sample ID: N/A
Matrix: Water
Final Volume: 50 mL
Digestate Dilution: 1
pH: N/A

CAS Number	Parameter	Concentration ug/L	RL ug/L	Qualifier
7429-90-5	Aluminum	ND	110	
7440-36-0	Antimony	ND	20	
7440-38-2	Arsenic	ND	20	
7440-39-3	Barium	ND	20	
7440-41-7	Beryllium	ND	8.0	
7440-43-9	Cadmium	ND	10	
7440-70-2	Calcium	ND	100	
7440-47-3	Chromium	ND	20	
7440-48-4	Cobalt	ND	20	
7440-50-8	Copper	ND	20	
7439-89-6	Iron	ND	40	
7439-92-1	Lead	ND	20	
7439-95-4	Magnesium	ND	100	
7439-96-5	Manganese	ND	20	
7440-02-0	Nickel	ND	20	
7782-49-2	Selenium	ND	40	
7440-22-4	Silver	ND	10	
7440-28-0	Thallium	ND	20	
7440-62-2	Vanadium	ND	50	
7440-66-6	Zinc	ND	20	

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

METALS MATRIX SPIKE (MS) RESULTS

A & J Floral - Benton, ME

Sample ID: AB16941

PARAMETER	SPIKE ADDED mg/Kg	SAMPLE CONCENTRATION mg/Kg	MS CONCENTRATION mg/Kg	MS % REC	QC LIMITS (% REC)
Antimony	100	ND	21.6	22	75 - 125
Arsenic	100	25	132	107	75 - 125
Barium	100	140	227	87	75 - 125
Beryllium	40.0	ND	39.1	98	75 - 125
Cadmium	40.0	ND	49.5	124	75 - 125
Chromium	100	300	367	67	75 - 125
Cobalt	100	18	115	97	75 - 125
Copper	100	140	234	94	75 - 125
Lead	100	120	218	98	75 - 125
Manganese	100	770	879	R	75 - 125
Nickel	100	88	179	91	75 - 125
Selenium	100	ND	92.2	92	75 - 125
Silver	20.0	ND	19.6	98	75 - 125
Thallium	100	ND	97.5	98	75 - 125
Vanadium	100	56	145	89	75 - 125
Zinc	100	170	227	57	75 - 125

Comments:

Samples in Batch: AB16941, AB16943, AB16945, AB16954, AB16961

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Laboratory Duplicate Results

A & J Floral - Benton, ME

Sample ID: AB16943

PARAMETER	SAMPLE RESULT mg/Kg	SAMPLE DUPLICATE RESULT mg/Kg	PRECISION RPD %	QC LIMITS
Aluminum	6400	5800	10	30
Antimony	ND	ND	NC	30
Arsenic	12	12	0	30
Barium	97	110	13	30
Beryllium	ND	ND	NC	30
Cadmium	ND	ND	NC	30
Calcium	3100	2000	43	30
Chromium	20	27	30	30
Cobalt	7.0	6.9	1	30
Copper	33	42	24	30
Iron	19000	24000	23	30
Lead	290	270	7	30
Magnesium	2700	2900	7	30
Manganese	290	270	7	30
Nickel	21	23	9	30
Selenium	ND	ND	NC	30
Silver	ND	ND	NC	30
Thallium	ND	ND	NC	30
Vanadium	21	21	0	30
Zinc	200	180	11	30

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Laboratory Fortified Blank (LFB) Results

A & J Floral - Benton, ME

PARAMETER	LFB AMOUNT SPIKED ug/L	LFB RESULT ug/L	LFB RECOVERY %	QC LIMITS %
Aluminum	1000	1040	104	85 - 115
Antimony	1000	963	96	85 - 115
Arsenic	1000	995	100	85 - 115
Barium	1000	976	98	85 - 115
Beryllium	400	382	96	85 - 115
Cadmium	500	470	94	85 - 115
Calcium	10000	9900	99	85 - 115
Chromium	1000	1010	101	85 - 115
Cobalt	1000	986	99	85 - 115
Copper	1000	1020	102	85 - 115
Iron	1000	1010	101	85 - 115
Lead	1000	948	95	85 - 115
Magnesium	10000	9950	100	85 - 115
Manganese	1000	1000	100	85 - 115
Nickel	1000	977	98	85 - 115
Selenium	1000	829	83	85 - 115
Silver	200	195	98	85 - 115
Thallium	1000	967	97	85 - 115
Vanadium	1000	1010	101	85 - 115
Zinc	1000	897	90	85 - 115

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Solid Laboratory Control Sample (LCS) Results

A & J Floral - Benton, ME

PARAMETER	LCS RESULTS mg/Kg	CONTROL LIMITS mg/Kg
Aluminum	7980	3420 - 13400
Antimony	86.4	9.78 - 203
Arsenic	102	90.4 - 128
Barium	198	172 - 240
Beryllium	82.2	73.9 - 102
Cadmium	70.6	67.4 - 93
Calcium	6280	5570 - 7830
Chromium	115	95.6 - 138
Cobalt	123	105 - 148
Copper	118	98 - 136
Iron	11900	6240 - 18400
Lead	68.3	63.7 - 88.8
Magnesium	2500	2060 - 3220
Manganese	341	289 - 411
Nickel	67.2	59.3 - 83
Selenium	106	102 - 152
Silver	39.4	27.1 - 54.8
Thallium	244	216 - 316
Vanadium	84.4	68.4 - 104
Zinc	240	230 - 330

Comments:

Site #: R01-110426TE

Lab: OEME

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	MS/MSD
	D30176	SS-01	Metals by ICP	Soil	4/26/2011	11:30	1	8 oz. jar	None	Y
	D30176	SS-01	OILID	Soil	4/26/2011	11:30	1	8 oz. jar	None	Y
	D30176	SS-01	Percent Solids	Soil	4/26/2011	11:30	1	40 mL VOA	None	Y
	D30176	SS-01	Pest/PCB (\$PESMS)	Soil	4/26/2011	11:30	2	8 oz. jar	None	Y
	D30176	SS-01	SVOCs (\$BNAMS)	Soil	4/26/2011	11:30	1	8 oz. jar	None	Y
	D30176	SS-01	VOCs (\$VOAHS)	Soil	4/26/2011	11:30	1	40 mL VOA	MeOH	Y
	D30176	SS-01	VOCs (\$VOAHS)	Soil	4/26/2011	11:30	1	40 mL VOA	MeOH	Y
	D30177	SS-02	OILID	Soil	4/26/2011	11:50	1	4 oz. jar	None	N
	D30177	SS-02	Percent Solids	Soil	4/26/2011	11:50	1	40 mL VOA	None	N
	D30177	SS-02	Pest/PCB (\$PESMS)	Soil	4/26/2011	11:50	1	8 oz. jar	None	N
	D30177	SS-02	SVOCs (\$BNAMS)	Soil	4/26/2011	11:50	1	4 oz. jar	None	N
	D30177	SS-02	VOCs (\$VOAHS)	Soil	4/26/2011	11:50	1	40 mL VOA	MeOH	N
	D30178	SS-03	Metals by ICP	Soil	4/26/2011	12:20	1	4 oz. jar	None	N
	D30178	SS-03	OILID	Soil	4/26/2011	12:20	1	4 oz. jar	None	N
	D30178	SS-03	Pest/PCB (\$PESMS)	Soil	4/26/2011	12:20	1	8 oz. jar	None	N
	D30178	SS-03	SVOCs (\$BNAMS)	Soil	4/26/2011	12:20	1	4 oz. jar	None	N
	D30179	SS-04	OILID	Soil	4/26/2011	12:45	1	4 oz. jar	None	N
	D30179	SS-04	Percent Solids	Soil	4/26/2011	12:45	1	40 mL VOA	None	N
	D30179	SS-04	Pest/PCB (\$PESMS)	Soil	4/26/2011	12:45	1	8 oz. jar	None	N

Special Instructions:

SAMPLES TRANSFERRED FROM	CHAIN OF CUSTODY #

[illegible]

[illegible]

Site #: R01-110426TB
Lab: OEME

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	MS/MSD
	D30193	SS-18	Pest/PCB (\$PESMS)	Soil	4/26/2011	14:00	1	8 oz. jar	None	N
	D30193	SS-18	SVOCs (\$BNAMS)	Soil	4/26/2011	14:00	1	4 oz. jar	None	N
	D30194	SS-19	OILID	Soil	4/26/2011	14:15	1	4 oz. jar	None	N
	D30194	SS-19	SVOCs (\$BNAMS)	Soil	4/26/2011	14:15	1	4 oz. jar	None	N
	D30195	SS-20	OILID	Soil	4/26/2011	14:25	1	4 oz. jar	None	N
	D30195	SS-20	Pest/PCB (\$PESMS)	Soil	4/26/2011	14:25	1	8 oz. jar	None	N
	D30195	SS-20	SVOCs (\$BNAMS)	Soil	4/26/2011	14:25	1	4 oz. jar	None	N
	D30196	SS-21	Metals by ICP	Soil	4/26/2011	15:17	1	4 oz. jar	None	N
	D30196	SS-21	OILID	Soil	4/26/2011	15:17	1	8 oz. jar	None	Y
	D30196	SS-21	Percent Solids	Soil	4/26/2011	15:17	1	40 mL VOA	None	Y
	D30196	SS-21	Pest/PCB (\$PESMS)	Soil	4/26/2011	15:17	2	8 oz. jar	None	Y
	D30196	SS-21	SVOCs (\$BNAMS)	Soil	4/26/2011	15:17	1	8 oz. jar	None	Y
	D30196	SS-21	VOCs (\$VOAHS)	Soil	4/26/2011	15:17	1	40 mL VOA	MeOH	Y
	D30196	SS-21	VOCs (\$VOAHS)	Soil	4/26/2011	15:17	1	40 mL VOA	MeOH	Y
	D30197	SS-22	OILID	Soil	4/26/2011	15:30	1	4 oz. jar	None	N
	D30197	SS-22	Percent Solids	Soil	4/26/2011	15:30	1	40 mL VOA	None	N
	D30197	SS-22	Pest/PCB (\$PESMS)	Soil	4/26/2011	15:30	1	8 oz. jar	None	N
	D30197	SS-22	SVOCs (\$BNAMS)	Soil	4/26/2011	15:30	1	4 oz. jar	None	N
	D30197	SS-22	VOCs (\$VOAHS)	Soil	4/26/2011	15:30	1	40 mL VOA	MeOH	N

SAMPLES TRANSFERRED FROM	CHAIN OF CUSTODY #

US-EPA

Hand Delivered: 4/28/11
Sampler Signature: *[Signature]*

CHAIN OF CUSTODY RECORD

A & J Floral
Ted Bazenas
617-918-4710

No: 1-042611-225156-0001

Site #: R01-110426TB
Lab: OEME

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	MS/MSD
	D30201	SS-26	VOCs (\$VOAHS)	Soil	4/26/2011	15:45	1	40 mL VOA	MeOH	N
	D30202	SS-27	OilID	Soil	4/26/2011	16:00	1	4 oz. jar	None	N
	D30202	SS-27	Percent Solids	Soil	4/26/2011	16:00	1	40 mL VOA	None	N
	D30202	SS-27	Pest/PCB (\$PESMS)	Soil	4/26/2011	16:00	1	8 oz. jar	None	N
	D30202	SS-27	SVOCs (\$BNAMS)	Soil	4/26/2011	16:00	1	4 oz. jar	None	N
	D30202	SS-27	VOCs (\$VOAHS)	Soil	4/26/2011	16:00	1	40 mL VOA	MeOH	N
	D30203	SS-28	OilID	Soil	4/26/2011	16:15	1	4 oz. jar	None	N
	D30203	SS-28	Percent Solids	Soil	4/26/2011	16:15	1	40 mL VOA	None	N
	D30203	SS-28	Pest/PCB (\$PESMS)	Soil	4/26/2011	16:15	1	8 oz. jar	None	N
	D30203	SS-28	SVOCs (\$BNAMS)	Soil	4/26/2011	16:15	1	4 oz. jar	None	N
	D30203	SS-28	VOCs (\$VOAHS)	Soil	4/26/2011	16:15	1	40 mL VOA	MeOH	N
	D30204	SS-29	OilID	Soil	4/26/2011	16:40	1	4 oz. jar	None	N
	D30204	SS-29	Percent Solids	Soil	4/26/2011	16:40	1	40 mL VOA	None	N
	D30204	SS-29	Pest/PCB (\$PESMS)	Soil	4/26/2011	16:40	1	8 oz. jar	None	N
	D30204	SS-29	SVOCs (\$BNAMS)	Soil	4/26/2011	16:40	1	4 oz. jar	None	N
	D30204	SS-29	VOCs (\$VOAHS)	Soil	4/26/2011	16:40	1	40 mL VOA	MeOH	N
	D30205	SS-30	OilID	Soil	4/26/2011	12:45	1	4 oz. jar	None	N
	D30205	SS-30	Percent Solids	Soil	4/26/2011	12:45	1	40 mL VOA	None	N
	D30205	SS-30	Pest/PCB (\$PESMS)	Soil	4/26/2011	12:45	1	8 oz. jar	None	N

Special Instructions:

SAMPLES TRANSFERRED FROM	CHAIN OF CUSTODY #

[illegible]

Site #: R01-110426TB
Lab: OEMF

[illegible]

SAMPLES TRANSFERRED FROM	CHAIN OF CUSTODY #

