



Analysis Report for Use of Biosolids on Cropland

Jason Brown University Area Joint Auth 1576 Spring Valley Rd State College PA 16801	Lab Sample ID: E16887 Date Received: February 9, 2015 Date Sampled: 2/6/2015 Report Date: 2/23/15 Sample type: Grab County: Centre Customer Sample ID: Compost
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RESULTS

pH	Solids	Volatile	Tot-N	Org-N	NH ₄ N	P	K	Mg	Ca	Na	Fe	Al
@ 22.3 C	— % —					% (dry weight basis)						
7.9	66.86	71.48	3.47	3.02	0.45	1.81	0.49	0.39	3.44	0.09	0.49	2.32
Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB ¹	Reactive CN
mg/kg (dry weight basis)												
207.0	3.46	0.54	25.2	287.6	12.3	0.26	4.8	11.4	2.04	320.3	< .04	< 1

NR-Not Requested One dry ton of this material is equivalent to 359 gallons of wet material or 1.5 tons of wet material

PRIMARY NUTRIENT CONTENT

% (dry wt basis)		
Total N	3.47	1.44 dry tons of this biosolid will supply 100 lbs of total N.
P ₂ O ₅	4.14	2.76 dry tons of this biosolid will supply 100 lbs of P
K ₂ O	0.59	

ANALYSIS INFORMATION FOR EPA 503 POLLUTANTS

Analyte	EPA SW-846 Method	Analyst	Date	Time
Cd,Cu,Mo,Pb,Ni, Zn	3050B + 6010	Brooks/Stecko	2/13/2015	14:40:38
As	3050B + 6010	Brooks/Stecko	2/13/2015	14:40:38
Se	3050B + 6010	Brooks/Stecko	2/13/2015	14:40:38
Hg	7473	Brooks	2/17/2015	12:40:01 PM
PCB ¹	8082			

¹Subcontracted to Fairway Laboratories, Inc. (ID 7-00062)

RAW LABORATORY BENCH DATA FOR EPA 503 POLLUTANTS

	As	Cd	Cu	Hg	Mo	Ni	Pb	Se	Zn
Wet Wt. aliquot (g)	1.002	1.002	1.002	0.248	1.002	1.002	1.002	1.002	1.002
Analyte conc. in sample/ digest (mg/L except Hg)	0.046	0.007	3.85	0.042 ug	0.06	0.15	0.16	0.03	4.29
Method limit (mg/L except Hg)	0.015	0.005	0.015	0.0010 ug	0.015	0.010	0.025	0.025	0.050

Optional Analyses: Results (except soluble salts) on dry weight basis						Sample Receipt
Nitrate-N (mg/kg)	Total Carbon (%)	CCE Calcium Carbonate Equivalent (%)	Soluble Salts (mmhos/cm)	Other:	Ba = 169.46 mg/kg	Hand-delivered after sampling
2.42	37.4		1.89			



Analysis Report for Use of Biosolids on Cropland

Jason Brown University Area Joint Auth 1576 Spring Valley Rd State College PA 16801	Lab Sample ID: E16984 Date Received: 4/13/2015 Date Sampled: 4/13/2015 Report Date: 4/28/2015 Sample type: Grab County: Centre Customer Sample ID: Compost
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RESULTS

pH	Solids	Volatile	Tot-N	Org-N	NH ₄ N	P	K	Mg	Ca	Na	Fe	Al
@ 23.9 C	%					% (dry weight basis)						
7.5	74.38	72.59	3.62	3.10	0.52	1.97	0.46	0.41	3.29	0.11	0.50	2.38
Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB ¹	Reactive CN
mg/kg (dry weight basis)												
174.1	2.66	0.53	25.2	285.2	14.2	1.00	4.6	12.1	2.75	339.8	< .04	< 1

NR-Not Requested One dry ton of this material is equivalent to 322 gallons of wet material or 1.3 tons of wet material

PRIMARY NUTRIENT CONTENT

% (dry wt basis)		
Total N	3.62	1.38 dry tons of this biosolid will supply 100 lbs of total N.
P ₂ O ₅	4.51	2.54 dry tons of this biosolid will supply 100 lbs of P
K ₂ O	0.55	

ANALYSIS INFORMATION FOR EPA 503 POLLUTANTS

Analyte	EPA SW-846 Method	Analyst	Date	Time
Cd,Cu,Mo,Pb,Ni, Zn	3050B + 6010	Stecko	4/22/2015	8:59:13
As	3050B + 6010	Stecko	4/22/2015	8:59:13
Se	3050B + 6010	Stecko	4/22/2015	8:59:13
Hg	7473	Rishel	4/17/2015	1:23:26 PM
PCB ¹	8082			

¹Subcontracted to Fairway Laboratories, Inc. (ID 7-00062)

RAW LABORATORY BENCH DATA FOR EPA 503 POLLUTANTS

	As	Cd	Cu	Hg	Mo	Ni	Pb	Se	Zn
Wet Wt. aliquot (g)	1.075	1.075	1.075	0.232	1.075	1.075	1.075	1.075	1.075
Analyte conc. in sample/digest (mg/L except Hg)	0.043	0.009	4.56	0.172 ug	0.07	0.19	0.23	0.04	5.43
Method limit (mg/L except Hg)	0.015	0.005	0.015	0.0010 ug	0.015	0.010	0.025	0.025	0.050

Optional Analyses: Results (except soluble salts) on dry weight basis						Sample Receipt
Nitrate-N (mg/kg)	Total Carbon (%)	CCE Calcium Carbonate Equivalent (%)	Soluble Salts (mmhos/cm)	Other:	Ba = 187.75 mg/kg	Hand-delivered after sampling
5.99	36.0		2.13			



Analysis Report for Use of Biosolids on Cropland

Jason Brown University Area Joint Auth 1576 Spring Valley Rd State College PA 16801	Lab Sample ID: E17070 Date Received: 6/8/2015 Date Sampled: 6/8/2015 Report Date: 6/24/2015 Sample type: Grab County: Centre Customer Sample ID: Compost
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RESULTS

pH	Solids	Volatile	Tot-N	Org-N	NH ₄ N	P	K	Mg	Ca	Na	Fe	Al
@ 24.7 C	— %					% (dry weight basis)						
7.6	75.10	68.58	2.64	2.29	0.35	1.49	0.42	0.30	3.35	0.09	0.39	2.01
Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB ¹	Reactive CN
mg/kg (dry weight basis)												
367.7	2.08	< 0.60	19.6	213.3	12.1	0.21	3.9	10.8	4.04	220.8	< .04	< 1

NR-Not Requested One dry ton of this material is equivalent to 319 gallons of wet material or 1.3 tons of wet material

PRIMARY NUTRIENT CONTENT

% (dry wt basis)		
Total N	2.64	1.90 dry tons of this biosolid will supply 100 lbs of total N.
P ₂ O ₅	3.41	3.36 dry tons of this biosolid will supply 100 lbs of P
K ₂ O	0.51	

ANALYSIS INFORMATION FOR EPA 503 POLLUTANTS

Analyte	EPA SW-846 Method	Analyst	Date	Time
Cd,Cu,Mo,Pb,Ni, Zn	3050B + 6010	Stecko	6/16/2015	15:45:12
As	3050B + 6010	Stecko	6/16/2015	15:45:12
Se	3050B + 6010	Stecko	6/16/2015	15:45:12
Hg	7473	Spargo	6/11/2015	1:37:18 PM
PCB ¹	8082			

¹Subcontracted to Fairway Laboratories, Inc. (ID 7-00062)

RAW LABORATORY BENCH DATA FOR EPA 503 POLLUTANTS

	As	Cd	Cu	Hg	Mo	Ni	Pb	Se	Zn
Wet Wt. aliquot (g)	0.556	0.556	0.556	0.126	0.556	0.556	0.556	0.556	0.556
Analyte conc. in sample/digest (mg/L except Hg)	0.017	0.004	1.78	0.020 ug	0.03	0.09	0.10	0.03	1.84
Method limit (mg/L except Hg)	0.015	0.005	0.015	0.0010 ug	0.015	0.010	0.025	0.025	0.050

Optional Analyses: Results (except soluble salts) on dry weight basis						Sample Receipt
Nitrate-N (mg/kg)	Total Carbon (%)	CCE Calcium Carbonate Equivalent (%)	Soluble Salts (mmhos/cm)	Other:	Ba = 169.35 mg/kg	Hand-delivered after sampling
1.98	38.6		2.39			



Analysis Report for Use of Biosolids on Cropland

Jason Brown University Area Joint Auth 1576 Spring Valley Rd State College PA 16801	Lab Sample ID: E17164 Date Received: 8/10/2015 Date Sampled: 8/10/2015 Report Date: 8/24/2015 Sample type: Grab County: Centre Customer Sample ID: Compost
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RESULTS

pH	Solids	Volatile	Tot-N	Org-N	NH ₄ N	P	K	Mg	Ca	Na	Fe	Al
@ 24.2 C	%					% (dry weight basis)						
7.9	70.77	72.37	2.54	2.02	0.52	1.48	0.42	0.35	3.44	0.08	0.39	1.97
Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB ¹	Reactive CN
mg/kg (dry weight basis)												
237.8	< 1.38	< 0.46	13.8	215.6	9.2	0.41	3.7	9.8	2.68	227.4	< .04	< 1

NR-Not Requested One dry ton of this material is equivalent to 339 gallons of wet material or 1.4 tons of wet material

PRIMARY NUTRIENT CONTENT

% (dry wt basis)		
Total N	2.54	1.97 dry tons of this biosolid will supply 100 lbs of total N.
P ₂ O ₅	3.38	3.39 dry tons of this biosolid will supply 100 lbs of P
K ₂ O	0.50	

ANALYSIS INFORMATION FOR EPA 503 POLLUTANTS

Analyte	EPA SW-846 Method	Analyst	Date	Time
Cd,Cu,Mo,Pb,Ni, Zn	3050B + 6010	Stecko	8/21/2015	8:54:24
As	3050B + 6010	Stecko	8/21/2015	8:54:24
Se	3050B + 6010	Stecko	8/21/2015	8:54:24
Hg	7473	Spargo	8/13/2015	11:50:33 AM
PCB ¹	8082			

¹Subcontracted to Fairway Laboratories, Inc. (ID 7-00062)

RAW LABORATORY BENCH DATA FOR EPA 503 POLLUTANTS

	As	Cd	Cu	Hg	Mo	Ni	Pb	Se	Zn
Wet Wt. aliquot (g)	0.767	0.767	0.767	0.174	0.767	0.767	0.767	0.767	0.767
Analyte conc. in sample/ digest (mg/L except Hg)	0.007	0.004	2.34	0.051 ug	0.04	0.11	0.10	0.03	2.47
Method limit (mg/L except Hg)	0.015	0.005	0.015	0.0010 ug	0.015	0.010	0.025	0.025	0.050

Optional Analyses: Results (except soluble salts) on dry weight basis						Sample Receipt
Nitrate-N (mg/kg)	Total Carbon (%)	CCE Calcium Carbonate Equivalent (%)	Soluble Salts (mmhos/cm)	Other:	Ba = 162.9 mg/kg	Hand-delivered after sampling
1.80	39.3		0.19			



Analysis Report for Use of Biosolids on Cropland

Jason Brown University Area Joint Auth 1576 Spring Valley Rd State College PA 16801	Lab Sample ID: E17323 Date Received: 10/12/2015 Date Sampled: 10/12/2015 Report Date: 10/26/2015 Sample type: Grab County: Centre Customer Sample ID: Compost
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RESULTS

pH	Solids	Volatile	Tot-N	Org-N	NH ₄ N	P	K	Mg	Ca	Na	Fe	Al
@ 20.8 C	%					% (dry weight basis)						
7.5	67.33	61.71	3.07	2.70	0.37	1.15	0.36	0.25	1.68	0.09	0.54	1.80
Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB ¹	Reactive CN
mg/kg (dry weight basis)												
231.9	2.49	< 0.78	10.3	218.9	7.8	0.32	4.7	11.3	<3.88	227.0	< .04	< 1

NR-Not Requested One dry ton of this material is equivalent to 356 gallons of wet material or 1.5 tons of wet material

PRIMARY NUTRIENT CONTENT

% (dry wt basis)		
Total N	3.07	1.63 dry tons of this biosolid will supply 100 lbs of total N.
P ₂ O ₅	2.64	4.34 dry tons of this biosolid will supply 100 lbs of P
K ₂ O	0.44	

ANALYSIS INFORMATION FOR EPA 503 POLLUTANTS

Analyte	EPA SW-846 Method	Analyst	Date	Time
Cd,Cu,Mo,Pb,Ni, Zn	3050B + 6010	Brooks/Stecko	10/16/2015	12:20:47
As	3050B + 6010	Brooks/Stecko	10/16/2015	12:20:47
Se	3050B + 6010	Brooks/Stecko	10/16/2015	12:20:47
Hg	7473	Rishel	10/13/2015	1:45:10 PM
PCB ¹	8082			

¹Subcontracted to Fairway Laboratories, Inc. (ID 7-00062)

RAW LABORATORY BENCH DATA FOR EPA 503 POLLUTANTS

	As	Cd	Cu	Hg	Mo	Ni	Pb	Se	Zn
Wet Wt. aliquot (g)	0.478	0.478	0.478	0.233	0.478	0.478	0.478	0.478	0.478
Analyte conc. in sample/digest (mg/L except Hg)	0.016	0.003	1.41	0.050 ug	0.03	0.07	0.05	0.02	1.46
Method limit (mg/L except Hg)	0.015	0.005	0.015	0.0010 ug	0.015	0.010	0.025	0.025	0.050

Optional Analyses: Results (except soluble salts) on dry weight basis						Sample Receipt
Nitrate-N (mg/kg)	Total Carbon (%)	CCE Calcium Carbonate Equivalent (%)	Soluble Salts (mmhos/cm)	Other:	Ba = 131.19 mg/kg	Hand-delivered after sampling
51.32	29.4		2.42			



Analysis Report for Use of Biosolids on Cropland

Jason Brown University Area Joint Auth 1576 Spring Valley Rd State College PA 16801	Lab Sample ID: E17417 Date Received: 12/14/2015 Date Sampled: 12/14/2015 Report Date: 12/22/2015 Sample type: Grab County: Centre Customer Sample ID: Compost
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RESULTS

pH	Solids	Volatile	Tot-N	Org-N	NH ₄ N	P	K	Mg	Ca	Na	Fe	Al
@ 22.5 C	— % —					% (dry weight basis)						
7.0	66.05	65.68	2.95	2.46	0.49	1.78	0.46	0.40	3.60	0.10	0.50	2.32
Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB ¹	Reactive CN
mg/kg (dry weight basis)												
234.2	3.79	0.56	12.3	308.1	13.5	0.38	4.7	10.6	5	381.0	< .04	< 1

NR-Not Requested One dry ton of this material is equivalent to 363 gallons of wet material or 1.5 tons of wet material

PRIMARY NUTRIENT CONTENT

% (dry wt basis)	
Total N	2.95 1.69 dry tons of this biosolid will supply 100 lbs of total N.
P ₂ O ₅	4.08 2.81 dry tons of this biosolid will supply 100 lbs of P
K ₂ O	0.55

ANALYSIS INFORMATION FOR EPA 503 POLLUTANTS

Analyte	EPA SW-846 Method	Analyst	Date	Time
Cd,Cu,Mo,Pb,Ni, Zn	3050B + 6010	Stecko	12/18/2015	8:52:21
As	3050B + 6010	Stecko	12/18/2015	8:52:21
Se	3050B + 6010	Stecko	12/18/2015	8:52:21
Hg	7473	Brooks	12/17/2015	2:52:26 PM
PCB ¹	8082			

¹Subcontracted to Fairway Laboratories, Inc. (ID 7-00062)

RAW LABORATORY BENCH DATA FOR EPA 503 POLLUTANTS

	As	Cd	Cu	Hg	Mo	Ni	Pb	Se	Zn
Wet Wt. aliquot (g)	0.862	0.862	0.862	0.112	0.862	0.862	0.862	0.862	0.862
Analyte conc. in sample/digest (mg/L except Hg)	0.043	0.006	3.51	0.028 ug	0.05	0.12	0.15	0.06	4.34
Method limit (mg/L except Hg)	0.015	0.005	0.015	0.0010 ug	0.015	0.010	0.025	0.025	0.050

Optional Analyses: Results (except soluble salts) on dry weight basis						Sample Receipt
Nitrate-N (mg/kg)	Total Carbon (%)	CCE Calcium Carbonate Equivalent (%)	Soluble Salts (mmhos/cm)	Other:	Ba = 156.05 mg/kg	Hand-delivered after sampling
4.71	36.4		2.15			