



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: E17482 Date Received: 2/1/2016 Date Sampled: 2/1/2016 Report Date: 2/12/2016 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
@ 23.2 C	— %					% (dry weight basis)						
8.0	69.02	73.14	2.23	1.62	0.61	1.69	0.48	0.50	4.71	0.07	0.61	2.01
Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB ¹	Reactive CN
mg/kg (dry weight basis)												
244.7	4.02	< 0.50	11.7	257.8	13.9	0.30	4.3	10.2	<2.49	309.2	< .04	< 1

NR-Not Requested One dry ton of this material is equivalent to 347 gallons of wet material or 1.4 tons of wet material

PRIMARY NUTRIENT CONTENT

% (dry wt basis)		
Total N	2.23	2.24 dry tons of this biosolid will supply 100 lbs of total N.
P ₂ O ₅	3.88	2.95 dry tons of this biosolid will supply 100 lbs of P
K ₂ O	0.58	

ANALYSIS INFORMATION FOR EPA 503 POLLUTANTS

Analyte	EPA SW-846 Method	Analyst	Date	Time
Cd,Cu,Mo,Pb,Ni, Zn	3050B + 6010	Brooks	2/5/2016	15:40:58
As	3050B + 6010	Brooks	2/5/2016	15:40:58
Se	3050B + 6010	Brooks	2/5/2016	15:40:58
Hg	7473	Rishel	2/1/2016	3:16:02 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)	0.727	0.727	0.727	0.232	0.727	0.727	0.727	0.727	0.727
Analyte conc. in sample/digest (mg/L except Hg)	0.040	0.005	2.59	0.048 ug	0.04	0.10	0.14	0.02	3.10
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 = 151.56 mg/kg	Hand-delivered after sampling
2.88	39.3		1.54			



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: E17660 Date Received: 4/4/2016 Date Sampled: 4/4/2016 Report Date: 4/18/2016 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)						
7.3	74.69	70.43	2.77	2.34	0.44	2.00	0.46	0.38	2.56	0.07	0.34	2.34
Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB ¹	Reactive CN
mg/kg (dry weight basis)												
278.9	2.41	< 0.49	9.9	245.1	8.1	0.09	3.8	8.8	2.65	289.1	< .04	< 1

NR-Not Requested One dry ton of this material is equivalent to 321 gallons of wet material or 1.3 tons of wet material

PRIMARY NUTRIENT CONTENT

% (dry wt basis)		
Total N	2.77	1.80 dry tons of this biosolid will supply 100 lbs of total N.
P ₂ O ₅	4.57	2.50 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	4/8/2016	12:34:42
As	3050B + 6010	Stecko	4/8/2016	12:34:42
Se	3050B + 6010	Stecko	4/8/2016	12:34:42
Hg	7473	Brooks	4/7/2016	2:41:46 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)	0.679	0.679	0.679	0.188	0.679	0.679	0.679	0.679	0.679
Analyte conc. in sample/ digest (mg/L except Hg)	0.024	0.004	2.49	0.013 ug	0.04	0.09	0.08	0.03	2.93
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 = 164.87 mg/kg	Hand-delivered after sampling
2.53	39.8		1.79			



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: E17750 Date Received: 6/7/2016 Date Sampled: 6/7/2016 Report Date: 6/27/2016 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
@ 24.6 C	%					% (dry weight basis)						
7.4	77.15	73.35	3.14	2.80	0.34	1.56	0.35	0.40	3.07	0.06	0.39	1.92
Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB ¹	Reactive CN
						mg/kg (dry weight basis)						
270.4	1.88	< 0.59	10.3	221.3	7.8	0.38	4.3	11.1	<2.97	234.9	< .01	< 1

NR-Not Requested One dry ton of this material is equivalent to 311 gallons of wet material or 1.3 tons of wet material

PRIMARY NUTRIENT CONTENT

% (dry wt basis)		
Total N	3.14	1.59 dry tons of this biosolid will supply 100 lbs of total N.
P ₂ O ₅	3.56	3.21 dry tons of this biosolid will supply 100 lbs of P
K ₂ O	0.42	

ANALYSIS INFORMATION FOR EPA 503 POLLUTANTS

Analyte	EPA SW-846 Method	Analyst	Date	Time
Cd,Cu,Mo,Pb,Ni, Zn	3050B + 6010	Stecko	6/24/2016	8:30:42
As	3050B + 6010	Stecko	6/24/2016	8:30:42
Se	3050B + 6010	Stecko	6/24/2016	8:30:42
Hg	7473	Brooks	6/17/2016	9:29:11 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)	0.545	0.545	0.545	0.208	0.545	0.545	0.545	0.545	0.545
Analyte conc. in sample/digest (mg/L except Hg)	0.016	0.004	1.86	0.061 ug	0.04	0.09	0.07	0.02	1.98
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 = 135.19 mg/kg	Hand-delivered after sampling
2.35	35.4		1.27			



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: E17819 Date Received: 8/1/2016 Date Sampled: 8/1/2016 Report Date: 8/15/2016 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
@ 24.8 C	— %					% (dry weight basis)						
6.7	77.29	70.76	2.71	2.41	0.30	1.68	0.44	0.45	3.29	0.06	0.40	2.06
Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB ¹	Reactive CN
mg/kg (dry weight basis)												
206.8	2.13	< 0.65	10.5	239.2	9.1	0.38	3.9	9.7	<3.23	266.8	< .01	< 1

NR-Not Requested One dry ton of this material is equivalent to 310 gallons of wet material or 1.3 tons of wet material

PRIMARY NUTRIENT CONTENT

% (dry wt basis)		
Total N	2.71	1.84 dry tons of this biosolid will supply 100 lbs of total N.
P ₂ O ₅	3.85	2.97 dry tons of this biosolid will supply 100 lbs of P
K ₂ O	0.53	

ANALYSIS INFORMATION FOR EPA 503 POLLUTANTS

Analyte	EPA SW-846 Method	Analyst	Date	Time
Cd,Cu,Mo,Pb,Ni, Zn	3050B + 6010	Stecko	8/5/2016	8:37:19
As	3050B + 6010	Stecko	8/5/2016	8:37:19
Se	3050B + 6010	Stecko	8/5/2016	8:37:19
Hg	7473	Brooks	8/4/2016	3:17:43 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)	0.501	0.501	0.501	0.162	0.501	0.501	0.501	0.501	0.501
Analyte conc. in sample/ digest (mg/L except Hg)	0.016	0.003	1.85	0.047 ug	0.03	0.07	0.07	0.02	2.07
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 = 138.96 mg/kg	Hand-delivered after sampling
4.26	36.4		2.04			



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: E17950 Date Received: 10/3/2016 Date Sampled: 10/3/2016 Report Date: 10/18/2016 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 C	— % —					% (dry weight basis)						
6.9	75.94	75.46	2.63	2.30	0.33	1.50	0.46	0.56	4.76	0.07	0.54	2.03
Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB ¹	Reactive CN
mg/kg (dry weight basis)												
243.2	3.65	< 0.59	11.7	234.1	13.4	0.34	4.1	9.2	<2.96	283.4	<.01	< 1

NR-Not Requested One dry ton of this material is equivalent to 316 gallons of wet material or 1.3 tons of wet material

PRIMARY NUTRIENT CONTENT

% (dry wt basis)		
Total N	2.63	1.90 dry tons of this biosolid will supply 100 lbs of total N.
P ₂ O ₅	3.43	3.34 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	10/7/2016	12:00:33
As	3050B + 6010	Stecko	10/7/2016	12:00:33
Se	3050B + 6010	Stecko	10/7/2016	12:00:33
Hg	7473	Spargo	10/7/2016	11:54:05 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)	0.556	0.556	0.556	0.210	0.556	0.556	0.556	0.556	0.556
Analyte conc. in sample/ digest (mg/L except Hg)	0.031	0.004	1.98	0.055 ug	0.03	0.08	0.11	0.01	2.39
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 = 151.15 mg/kg	Hand-delivered after sampling
22.70	39.1		2.08			



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: E18041
Date Received: 12/1/2016
Date Sampled: 12/1/2016
Report Date: 12/20/2016
Sample type: Composite
County: Centre
Customer Sample ID: Compost

RESULTS

pH	Solids	Volatile	Tot-N	Org-N	NH ₄ N	P	K	Mg	Ca	Na	Fe	Al
@ 22 C	— % —					% (dry weight basis)						
7.2	72.52	60.29	2.69	2.18	0.51	2.00	0.48	0.54	5.53	0.06	0.54	2.51
Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB ¹	Reactive CN
mg/kg (dry weight basis)												
237.3	3.13	< 0.76	12.3	274.0	12.0	0.29	4.6	9.9	<3.79	330.8	<.01	< 1

NR-Not Requested One dry ton of this material is equivalent to 331 gallons of wet material or 1.4 tons of wet material

PRIMARY NUTRIENT CONTENT

% (dry wt basis)

Total N	2.69	1.86	dry tons of this biosolid will supply 100 lbs of total N.
P ₂ O ₅	4.57	2.51	dry tons of this biosolid will supply 100 lbs of P
K ₂ O	0.57		

ANALYSIS INFORMATION FOR EPA 503 POLLUTANTS

Analyte	EPA SW-846 Method	Analyst	Date	Time
Cd,Cu,Mo,Pb,Ni, Zn	3050B + 6010	Stecko	12/9/2016	9:31:41
As	3050B + 6010	Stecko	12/9/2016	9:31:41
Se	3050B + 6010	Stecko	12/9/2016	9:31:41
Hg	7473	Spargo	12/7/2016	12:55:45 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)	0.455	0.455	0.455	0.252	0.455	0.455	0.455	0.455	0.455
Analyte conc. in sample/ digest (mg/L except Hg)	0.021	0.005	1.81	0.052 ug	0.03	0.07	0.08	0.02	2.18
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 = 158.57 mg/kg	Hand-delivered after sampling
55.19	37.1		2.10		