Triangle Brick

6523 NC Highway 55
Durham, NC 27713
Durham: (919) 544-1796
Raleigh: (919) 828-2070

July 15, 2014

North Carolina Department of Environment and Natural Resources

Division of Waste Management

1646 Mail Service Center

Raleigh, NC 27699-1646

Dear Mr. Brad Bailey,

I am writing to submit an annual report on behalf of Triangle Brick Company, Merry Oaks Plant, for the land application of the limestone by-product that we generate. This is in accordance with the BMP plan that was approved on June 2, 2009 by Michael E. Scott.

Triangle Brick Company has distributed 24 tons of limestone by-product from July 1, 2013 thru June 30, 2014. Mr. Tony Ragan has land applied 96 tons of material during this time (see attached documentation provided by Mr. Ragan). 130 tons of material is currently held in storage to be applied in the current year.

Please find enclosed Waste Analysis Reports from North Carolina Department of Agriculture & Consumer Services.

Sincerely,

Ricky Merritt

Director of Manufacturing Operations

Triangle Brick Company

Ragan Farms
4507 Lower River Rd
Sanford, N C 27330

Record of Lime Spread
July 2013-----July 2014

Date	Field	Land used for	Tons/acre	Storage
7-24-13	Davenport (96ac)	hay	1T/ac (96 tons)	
7-9-14				130 tons

3/8 Chemical Stone Deliveries - Triangle Brick Company Merry Oaks

Date	Quantity	PO	Distributor	Bill of Lading
6/9/2014	24	54591	Lhoist North America	170633

Predictive

Waste Report

Client: Triangle Brick Co.
294 King Rd
Moncure, NC 27559
Chatham County

Advisor: Ricky Merritt
294 King Rd
Moncure, NC 27559

Sampled: **Received:** 07/25/2013 **Completed:** 08/07/2013 *Farm:* **Links to Helpful Information**

Sample Information

Sample ID: TBCDLA
Waste Code: SAC
Description:
Indust.-Stack Ash

Comments:

Nutrient and Other Measurements

Nitrogen (N) (ppm)	*P (ppm)*	*K (ppm)*	*Ca (ppm)*	*Mg (ppm)*	*S (ppm)*	*Fe (ppm)*	*Mn (ppm)*	*Zn (ppm)*	*Cu (ppm)*	*B (ppm)*	*Na (ppm)*	*C (ppm)*
Total N 157	77.9	1620	351000	3820	12100	1550	155	292	2.38	1210	2000	56700

Total Kjeldahl N

Inorganic N	*pH*	*DM (%)*	*SS (10^{-5}S/cm)*	*EC (mS/cm)*	*CCE (%)*	*ALE*(tons)	*C:N*
NH4-N	7.38	97.9	872	8.72	42.8	2.15	362 : 1
NO3-N							

Organic N	*Ni (ppm)*	*Cd (ppm)*	*Pb (ppm)*	*Al (ppm)*	*Se (ppm)*	*Li (ppm)*	*As (ppm)*	*Cr (ppm)*	*Co (ppm)*	*Cl (ppm)*	*Mo (ppm)*
Urea	1.89	0.76	1.86								

Application Method
Broadcast

Estimate of Nutrients Available for First Crop (lb / ton)

N	*P2O5*	*K2O*	*Ca*	*Mg*	*S*	*Fe*	*Mn*	*Zn*	*Cu*	*B*	*Mo*
0.15	0.24	3.05	482	5.23	16.6	2.13	0.21	0.40	T	1.66	

Other Elements (lb / ton)

Cl	*Na*	*Ni*	*Cd*	*Pb*	*Al*	*Se*	*Li*
	3.92	T	T	T			

Agronomist's Comments:

Aaron Pettit 8/7/2013 8:01 AM

Reprogramming of the laboratory-information-management system that makes this report possible is being funded through a grant from the North Carolina Tobacco Trust Fund Commission.

Thank you for using agronomic services to manage nutrients and safeguard environmental quality.
- Steve Troxler, Commissioner of Agriculture.

Predictive

Waste Report

Client: Triangle Brick Co.
294 King Rd
Moncure, NC 27559
Chatham County

Advisor: Ricky Merritt
294 King Rd
Moncure, NC 27559

Sampled: **Received:** 10/28/2013 **Completed:** 11/05/2013 *Farm:*

Links to Helpful Information

Sample Information

Sample ID: TBCDLA
Waste Code: SAO
Description:
Indust.-Stack Ash

Comments:

Nutrient and Other Measurements

Nitrogen (N) (ppm)		P (ppm)	K (ppm)	Ca (ppm)	Mg (ppm)	S (ppm)	Fe (ppm)	Mn (ppm)	Zn (ppm)	Cu (ppm)	B (ppm)	Na (ppm)	C (ppm)
Total N	0	48.3	1570	316000	3230	6930	1790	132	332	3.84	4.14	559	
Total Kjeldahl N													

Inorganic N	pH	DM (%)	SS (10^{-5}S/cm)	EC (mS/cm)	CCE (%)	ALE (tons)	C:N
NH4-N	7.57	97.9	476	4.76	46.5	1.98	
NO3-N							

Organic N	Ni (ppm)	Cd (ppm)	Pb (ppm)	Al (ppm)	Se (ppm)	Li (ppm)	As (ppm)	Cr (ppm)	Co (ppm)	Cl (ppm)	Mo (ppm)
Urea	3.98	1.30	3.88								

Estimate of Nutrients Available for First Crop (lb / ton)

Application Method	N	P_2O_5	K_2O	Ca	Mg	S	Fe	Mn	Zn	Cu	B	Mo
Broadcast	T	0.15	2.95	433	4.43	9.50	2.45	0.18	0.46	0.01	0.01	
Soil Incorporated	T	0.17	3.32	494	5.07	10.9	2.80	0.21	0.52	0.01	0.01	

Other Elements (lb / ton)

Application Method	Cl	Na	Ni	Cd	Pb	Al	Se	Li
Broadcast		1.10	0.01	T	0.01			
Soil Incorporated		1.10	0.01	T	0.01			

Agronomist's Comments:

* *******NOTE: Values of 0.0 indicate nutrients/metals were below detection limits.******* The ALE (agricultural lime equivalency) indicates the quantity of waste material (in tons) that will provide a liming effect equivalent to one ton of agricultural grade limestone (90% $CaCO_3$). The ALE of this sample is good. Use soil testing to determine the lime rate required for your soil and crop. Over application can lead to high soil pH and reduced availability of some plant nutrients. Brenda R. Cleveland 11/5/2013 11:32 AM

North Carolina Tobacco Trust Fund Commission

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Diagnostic

Waste Report

Client: Triangle Brick Co.
294 King Rd
Moncure, NC 27559
Chatham County

Advisor: Ricky Merritt
294 King Rd
Moncure, NC 27559

Sampled: **Received:** 01/24/2014 **Completed:** 01/28/2014 *Farm:* **Links to Helpful Information**

Sample Information

Sample ID: TBCDLA
Waste Code: SAO
Description:
Indust.-Stack Ash

Comments:

Nutrient and Other Measurements

Nitrogen (N) (ppm)		*P (ppm)*	*K (ppm)*	*Ca (ppm)*	*Mg (ppm)*	*S (ppm)*	*Fe (ppm)*	*Mn (ppm)*	*Zn (ppm)*	*Cu (ppm)*	*B (ppm)*	*Na (ppm)*	*C (ppm)*
Total N	316	58.1	1530	327000	4330	14100	2530	193	263	2.22	5.48	815	
Total Kjeldahl N													

	pH	*DM (%)*	*SS (10^{-5}S/cm)*	*EC (mS/cm)*	*CCE (%)*	*ALE*(tons)	*C:N*
Inorganic N							
NH_4-N	7.73	96.8			48.0	1.94	
NO_3-N							

Organic N	*Ni (ppm)*	*Cd (ppm)*	*Pb (ppm)*	*Al (ppm)*	*Se (ppm)*	*Li (ppm)*	*As (ppm)*	*Cr (ppm)*	*Co (ppm)*	*Cl (ppm)*	*Mo (ppm)*
Urea	1.83	0.69	1.84								

Estimate of Nutrients Available for First Crop (lb / ton) **Other Elements** (lb / ton)

Application Method	*N*	*P_2O_5*	*K_2O*	*Ca*	*Mg*	*S*	*Fe*	*Mn*	*Zn*	*Cu*	*B*	*Mo*	*Cl*	*Na*	*Ni*	*Cd*	*Pb*	*Al*	*Se*	*Li*
Broadcast	0.24	0.18	2.85	443	5.88	19.1	3.43	0.26	0.36	T	0.01			1.58	T	T	T			
Soil Incorporated	0.31	0.21	3.21	506	6.71	21.8	3.92	0.30	0.41	T	0.01			1.58	T	T	T			

Agronomist's Comments:

Aaron Pettit 1/28/2014 11:13 AM

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Diagnostic

Waste Report

Client: Triangle Brick Co.
294 King Rd
Moncure, NC 27559
Chatham County

Advisor: Ricky Merritt
294 King Rd
Moncure, NC

Sampled: **Received:** 04/25/2014 **Completed:** 04/30/2014 *Farm:* **Links to Helpful Information**

Sample Information

Sample ID: TBCDLA
Waste Code: SAO
Description:
Indust.-Stack Ash

Comments:

Nutrient and Other Measurements

Nitrogen (N) (ppm)		*P (ppm)*	*K (ppm)*	*Ca (ppm)*	*Mg (ppm)*	*S (ppm)*	*Fe (ppm)*	*Mn (ppm)*	*Zn (ppm)*	*Cu (ppm)*	*B (ppm)*	*Na (ppm)*	*C (ppm)*
Total N	583	81.4	1780	324000	4100	13000	3420	264	637	4.08	6.59	1480	
Total Kjeldahl N													

Inorganic N	*pH*	*DM (%)*	*SS (10^{-5}S/cm)*	*EC (mS/cm)*	*CCE (%)*	*ALE*(tons)	*C:N*
NH4-N	7.09	99.7			37.0	2.44	
NO3-N							

Organic N	*Ni (ppm)*	*Cd (ppm)*	*Pb (ppm)*	*Al (ppm)*	*Se (ppm)*	*Li (ppm)*	*As (ppm)*	*Cr (ppm)*	*Co (ppm)*	*Cl (ppm)*	*Mo (ppm)*
Urea	2.76	0.67	2.56								

Estimate of Nutrients Available for First Crop (lb / ton) **Other Elements** (lb / ton)

Application Method	*N*	*P_2O_5*	*K_2O*	*Ca*	*Mg*	*S*	*Fe*	*Mn*	*Zn*	*Cu*	*B*	*Mo*	*Cl*	*Na*	*Ni*	*Cd*	*Pb*	*Al*	*Se*	*Li*
Broadcast	0.47	0.26	3.42	452	5.73	18.2	4.78	0.37	0.89	0.01	0.01			2.96	0.01	T	0.01			

Agronomist's Comments:

*Brenda R. Cleveland 4/30/2014 11:29 AM

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