



August 31, 2016

Mr. Jimmy Johnston, Environmental Program Director
Tennessee Department of Environment and Conservation
Division of Air Pollution Control
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, TN 37243

**RE: Carmeuse Lime & Stone – Luttrell Operation
Tertiary Roller Mill Grinding & Dryer Operation – Operating Permit Renewal
Source ID No. 87-0023-05**

Dear Mr. Johnston:

O-N Materials (Luttrell) Company, doing business as Carmeuse Lime and Stone (Carmeuse) operates a tertiary roller mill grinding and dryer operation with baghouse control at the lime crushing facility located in Luttrell, Tennessee. This equipment currently operates under minor source operating permit number 061274P, which expires on November 1, 2016. Carmeuse is hereby submitting an application to renew this operating permit.

If you have any questions regarding this submittal, please contact me at (205) 664-7129, or via email at Jackie.padgett@carmeusena.com.

Sincerely,

Jackie Padgett
Regional Environmental Manager

Enclosure

State of Tennessee
 Department of Environment and Conservation
 Division of Air Pollution Control
 William R. Snodgrass Tennessee Tower
 312 Rosa L. Parks Avenue, 15th Floor
 Nashville, TN 37243
 Telephone: (615) 532-0554



APC 100

SEP 6 2016 PM12:33

NON-TITLE V PERMIT APPLICATION FACILITY IDENTIFICATION

Please type or print and submit in duplicate for each emission source. Attach appropriate source description forms.				
SITE INFORMATION				
1. Organization's legal name O-N Minerals (Luttrell) Company d/b/a Carneuse Lime & Stone		For APC use only	APC Company point no.	
2. Site name (if different from legal name)			APC Log/Permit no.	
3. Site address (St./Rd./Hwy.) 486 Clinch Valley Road		County name Union		
City or distance to nearest town Luttrell		Zip code 37779		4. NAICS or SIC code 3274 & 1422
5. Site location (in lat. /long.)	Latitude 36.22783		Longitude -83.71438	
CONTACT INFORMATION (RESPONSIBLE PERSON)				
6. Responsible person/Authorized contact Harold Collins, Site Operations Manager		Phone number with area code 865-274-2902		
Mailing address (St./Rd./Hwy.) 486 Clinch Valley Road		Fax number with area code		
City Luttrell	State TN	Zip code 37779	Email address Harold.collins@carneusena.com	
CONTACT INFORMATION (TECHNICAL)				
7. Principal technical contact Jackie Padgett		Phone number with area code 205-664-7129		
Mailing address (St./Rd./Hwy.) P.O. Box 37		Fax number with area code 205-664-7138		
City Saginaw	State AL	Zip code 35137	Email address Jackie.Padgett@carneusena.com	
CONTACT INFORMATION (BILLING)				
8. Billing contact Jackie Padgett		Phone number with area code 205-664-7129		
Mailing address (St./Rd./Hwy.) P.O. Box 37		Fax number with area code 205-664-7138		
City Saginaw	State AL	Zip code 35137	Email address Jackie.Padgett@carneusena.com	
EMISSION SOURCE INFORMATION				
9. Emission source no. (number which uniquely identifies this source) 87-0023-05				
10. Brief description of emission source Tertiary roller mill (RM004) grinding and dryer operation with baghouse control				
11. Normal operation:	Hours/Day 24	Days/Week 7	Weeks/Year 52	Days/Year 365
12. Percent annual throughput	Dec. – Feb. 25	March – May 25	June – August 25	Sept. – Nov. 25

(Over)

TYPE OF PERMIT REQUESTED				
13. Operating permit (X)	Date construction started	Date completed	Last permit no. 061274P	Emission source reference number 87-0023-05
Construction permit ()	Last permit no.		Emission source reference number	
If you choose Construction permit, then choose either New Construction, Modification, or Location transfer				
	New Construction ()	Starting date	Completion date	
	Modification ()	Date modification started or will start	Date completed or will complete	
	Location transfer ()	Transfer date	Address of last location	
14. Describe changes that have been made to this equipment or operation since the last construction or operating permit application:				
There have been no changes to the tertiary roller mill grinding and dryer operation since the last renewal application.				
SIGNATURE				
Based upon information and belief formed after a reasonable inquiry, I, as the responsible person of the above mentioned facility, certify that the information contained in this application and any attached application(s) is accurate and true to the best of my knowledge. As specified in TCA Section 39-16-702(a)(4), this declaration is made under penalty of perjury.				
15. Signature (application must be signed before it will be processed)			Date	
<i>Harold Collins</i>			9-2-16	
Signer's name (type of print) Harold Collins		Title Site Operations Manager	Phone number with area code 865-274-2902	

Table of Pollution Reduction Device or Method Codes

Note: For cyclones, settling chambers, wet scrubbers, and electrostatic precipitators; the efficiency ranges correspond to the following percentages:

High: 95-99+%, Medium: 80-95% And Low: Less than 80%.

If the system has several pieces of connected control equipment, indicate the sequence. For example: 008'010.97%

If none of the below codes fit, use 999 as a code for other and specify in the comments.

No Equipment.....	000	Limestone Injection - Dry.....	041
Activated Carbon Adsorption.....	048	Limestone Injection - Wet.....	042
Afterburner - Direct Flame.....	021	Liquid Filtration System.....	049
Afterburner - Direct Flame with Heat Exchanger.....	022	Mist Eliminator - High Velocity.....	014
Afterburner - Catalytic.....	019	Mist Eliminator - Low Velocity.....	015
Afterburner - Catalytic with Heat Exchanger.....	020	Process Change.....	046
Alkalized Alumina.....	040	Process Enclosed.....	054
Catalytic Oxidation - Flue Gas Desulfurization.....	039	Process Gas Recovery.....	060
Cyclone - High Efficiency.....	007	Settling Chamber - High Efficiency.....	004
Cyclone - Medium Efficiency.....	008	Settling Chamber - Medium Efficiency.....	005
Cyclone - Low Efficiency.....	009	Settling Chamber - Low Efficiency.....	006
Dust Suppression by Chemical Stabilizers or Wetting Agents.....	062	Spray Tower (Gaseous Control Only).....	052
Electrostatic Precipitator - High Efficiency.....	010	Sulfuric Acid Plant - Contact Process.....	043
Electrostatic Precipitator - Medium Efficiency.....	011	Sulfuric Acid Plant - Double Contact Process.....	044
Electrostatic Precipitator - Low Efficiency.....	012	Sulfur Plant.....	045
Fabric Filter - High Temperature.....	016	Vapor Recovery System (Including Condensers, Hooding and Other Enclosures).....	047
Fabric Filter - Medium Temperature.....	017	Venturi Scrubber (Gaseous Control Only).....	053
Fabric Filter - Low Temperature.....	018	Wet Scrubber - High Efficiency.....	001
Fabric Filter - Metal Screens (Cotton Gins).....	059	Wet Scrubber - Medium Efficiency.....	002
Flaring.....	023	Wet Scrubber - Low Efficiency.....	003
Gas Adsorption Column - Packed.....	050	Wet Suppression by Water Sprays.....	061
Gas Adsorption Column - Tray Type.....	051		
Gas Scrubber (General: Not Classified).....	013		

Table of Emission Estimation Method Codes

Not application / Emissions are known to be zero.....	0
Emissions based on source testing.....	1
Emissions based on material balance using engineering expertise and knowledge of process.....	2
Emissions calculated using emission factors from EPA publications No. AP-42 Compilation of Air Pollution Emissions Factors.....	3
Judgment.....	4
Emissions calculated using a special emission factor different from that in AP-42.....	5
Other (Specify in comments).....	6

ATTACHMENT 1

Emission Calculations

**Carmeuse Lime Stone
Luttrell, TN**

Table 1. Source Information

Maximum Heat Input ¹ (MMBtu/hr)	12.00
Maximum Fuel Usage ² (gal/hr)	86.6
Maximum Fuel Sulfur Content ³ (%wt)	0.50
Annual Operating Hours ⁴	8,760

1. Per Operating Permit No. 061274P, Condition 3.
2. Per Operating Permit No. 061274P, Condition 16.
3. Per Operating Permit No. 061274P, Condition 17.
4. Confirmed per 7/13/2016 email from Jackie Padgett.

Table 2. Dryer Emissions

Fuel	Pollutant	Emission Factor ¹ (lb/Mgal)	Emissions	
			(lb/hr)	(tpy)
Fuel Oil No. 2	Filterable PM	2	0.17	0.76
	Condensable PM	1.3	0.11	0.49
	NO _x	20	1.73	7.59
	NMTOC	0.2	0.02	0.08
	CO	5	0.43	1.90
	SO ₂	71	6.15	26.93
Residual Fuel Oil No. 6	Filterable PM	7.80	0.68	2.96
	Condensable PM	1.5	0.13	0.57
	NO _x	55	4.76	20.86
	NMTOC	0.28	0.02	0.11
	CO	5	0.43	1.90
	SO ₂	78.5	6.80	29.78

1. Emission factors per AP-42, Chapter 1.3, Tables 1.3-1, 1.3-2, and 1.3-3.

Table 3. Roller Mill Emissions

Emission Unit	PM Emission Factor ¹		Emissions (tpy)	
	(lb/hr)	(tpy)	PM ₁₀	PM _{2.5}
Dust Collector	0.6	2.63	1.21	0.48

1. Emission factor per Condition 4 of Permit No. 061274P.
2. Per AP-42, Chapter 11.19.2, Table 11.19.2-4 (August 2004), the following speciations for classifiers (dry) with fabric filter control of PM₁₀ and PM_{2.5} of Total PM are assumed as follows:

PM ₁₀ =	46%	of PM
PM _{2.5} =	18%	of PM

**Carmeuse Lime Stone
Luttrell, TN**

Table 4. Emissions Summary

Pollutant	Emissions (tpy)			
	Dryer - Fuel Oil No. 2¹	Dryer - Recycle Oil¹	Roller Mill	Facility²
Filterable PM	0.76	2.96	2.63	5.58
Filterable PM ₁₀	0.76	2.96	1.21	4.17
Filterable PM _{2.5}	0.76	2.96	0.48	3.44
Condensable PM	0.49	0.57	-	0.57
Total PM ₁₀ ³	1.25	3.53	1.21	4.74
Total PM _{2.5} ³	1.25	3.53	0.48	4.00
NO _x	7.59	20.86	-	20.86
NMTOC	0.08	0.11	-	0.11
CO	1.90	1.90	-	1.90
SO ₂	26.93	29.78	-	29.78

1. Emissions of filterable PM₁₀ and filterable PM_{2.5} are assumed to be equal to filterable PM.
2. Facility emissions are calculated as the maximum of fuel oil or recycle oil emissions from the dryer and emissions from the roller mill.
3. Emissions of total PM₁₀/PM_{2.5} are equal to the sum of filterable PM₁₀/PM_{2.5}, respectively, and condensable PM.

**Carmeuse Lime Stone
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	Condensable PM	1.5	0.13	0.57
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3. Emissions of total PM₁₀/PM_{2.5} are equal to the sum of filterable PM₁₀/PM_{2.5}, respectively, and condensable PM.

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