

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



SEP 8 2018 PM12:33

NON-TITLE V PERMIT APPLICATION FACILITY IDENTIFICATION

Please	type or print and submit in d	uplicate for e	ach emission source. Atta	ach appropriate	source description forms	s.
·	·· ·	SITI	E INFORMATION	<u> </u>	·	
Organization's legal name O-N Minerals (Luttrell) Company d/b/a Carmeuse Lime & Stone				For	APC Company point no	j. , , , , , , , , , , , , , , , , , , ,
2. Site name (if different from legal name)			APC use only	APC Log/Permit no.		
3. Site address (St./Rd./Hwy			 	County n	ame .	
486 Clinch Valley Road	.)		,	Union	ime	
City or distance to nearest	town		Zip code		CS or SIC code	
Luttrell			37779	3274 &	1422	
5. Site location	Latitude			Longitud		
(in lat. /long.)	36.22783		-	-83.714	38	
	CONTACT	INFORM	ATION (RESPONSI	BLE PERSO	ON)	
6. Responsible person/Auth			· -	1	mber with area code	
Harold Collins, Site Opera	_	_		865-274	-2902	
Mailing address (St./Rd./I	Hwy.)			Fax num	er with area code	
486 Clinch Valley Road			,			
City		State	Zip code	Email ad	 -	
Luttrell		TN	37779		collins@carmeusena.	.com
		TACT INF	ORMATION (TEC	•	1	
7. Principal technical contact Jackie Padgett	ct			Phone number with area code 205-664-7129		
Mailing address (St./Rd./						
P.O. Box 37	hwy.)			Fax number with area code 205-664-7138		
City		State	Zip code	Email ad		
Saginaw		AL	35137	Jackie.Padgett@carmeusena.com		
		NTACT II	NFORMATION (BIL	LING)		
8. Billing contact			(-11		mber with area code	
Jackie Padgett				205-664	-7129	
Mailing address (St./Rd./	Hwy.)	-		Fax number with area code		
P.O. Box 37				205-664-7138		
City		State	Zip code	Email address		
Saginaw	<u> </u>	AL	35137		adgett@carmeusena	.com
·			SOURCE INFORMA	TION		
9. Emission source no. (num 87-0023-05	ber which uniquely identifie	s this source)	1			
10. Brief description of emiss	sion source					
Tertiary roller mill (RM00	(4) grinding and dryer (peration v	vith baghouse contro	ol		
11. Normal operation:	Hours/Day	Days/\	Week	Wecks/Year		/s/Year
	24	7		52	365	
12. Percent annual	Dec Feb.	March	– May	June - Augu	I -	t. – Nov.
throughput	25	25		25	25	

13. Operating permit	Date construction star		RMIT REQUESTE te completed		t permit no.	Emission source	ce referer
(X)					274P	number 87-0023-05	o lololol
Construction permit	Last permit no.			Em	ission source ref	ference number	6150.6
()							
W						Calle organically	English .
II you choose Construction	permit, then choose either New Construction			tion transfer	10 10 1		
	New Construction	Sta	arting date		Completion de	ate	
	()						
	Modification	Da	te modification started	or will start	Date complete	ed or will complete	
		100	ic modification surred	Or Will State	Date complete	ad of will complete	
	()						
	Location transfer	Tra	ansfer date		Address of las	st location	
	()						
4. Describe changes that have	we been made to this equipm	ent or operation	n since the last constr	uction or oper	ating permit ap	oplication:	
There have been no change	es to the tertiary roller n	nill grinding a	and dryer operation	since the l	ast renewal a	pplication.	
		SIG	NATURE		CONCERN TO		CHARLE.
Based upon information and	belief formed after a reaso	CONTRACTOR STATE	The second secon	person of the	above mentio	ned facility certif	v that th
information contained in this							
Section 39-16-702(a)(4), this						-S No opposition	
15. Signature (application mu		Carlo Control Control Control Control	3-3.	Date			
13. Signature (application ind	st be signed before it will be p	processed)					
House Cal	0260			9-	2-16		
Signer's name (type of pri	int)	Title			umber with are	ea code	
Harold Collins			ons Manager	865-27			
			-				
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ATTACHMENT 1

Emission Calculations

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)	Emis (lb/hr)	sions (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

	PM Emission Factor ¹		Emissio	ns (tpy)
Emission Unit	(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.

 $PM_{10} = 46\%$ of PM $PM_{2.5} = 18\%$ of PM

^{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 PM_{10} and $PM_{2.5}$ of Total PM are assumed as follows:

Table 4. Emissions Summary

	Dryer - Fuel Oil	Emissions (Dryer - Recycle	tpy)	
Pollutant	No. 2 ¹	Oil ¹	Roller Mill	Facility ²
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 PM_{10} 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 $PM_{10}/PM_{2.5}$ are equal to the sum of filterable $PM_{10}/PM_{2.5}$, respectively, and condensable PM.

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)	Emis (lb/hr)	sions (tpy)
	Filterable PM	2	0.17	0.76
	Condensable PM	1.3	0.11	0.49
Englos Na 2	NO _X	20	1.73	7.59
Fuel Oil No. 2	NMTOC	0.2	0.02	0.08
	СО	5	0.43	1.90
	SO ₂	71	6.15	26.93
	Filterable PM	7.80	0.68	2.96
	Condensable PM	1.5	0.13	0.57
D 11 12 107N 6	NO _X	55	4.76	20.86
Residual Fuel Oil No. 6	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

	PM Emission Factor ¹		Emissio	ns (tpy)
Emission Unit	(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 PM_{10} and $PM_{2.5}$ of Total PM are assumed as follows:

$PM_{10} =$	46%	of PM
PM25 =	18%	of PM

Table 4. Emissions Summary

	Dryer - Fuel Oil	Emissions (Dryer - Recycle	tpy)	
Pollutant	No. 2 ¹	Oil ¹	Roller Mill	Facility ²
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 PM_{10} 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 $PM_{10}/PM_{2.5}$ are equal to the sum of filterable $PM_{10}/PM_{2.5}$, respectively, and condensable PM.

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