

**Missouri
Agricultural Liming
Materials Report**

July 1 to December 31, 2011

Agricultural Experiment Station

University of Missouri-Columbia

This bulletin is a detailed report of official samples obtained under the Missouri Agricultural Liming Materials Law collected from July 1 through December 31, 2011. There were 741 official samples collected in this period. All samples are analyzed to determine fineness of grind, calcium carbonate equivalent (CCE), and magnesium content (Mg). Effective neutralizing material (ENM) and effective magnesium (EMg) are calculated from this information, as prescribed by Rule, for each dry sample which meets the minimum specifications of at least 90% passing a U.S. No. 8 sieve and minimum 65% CCE. Products not meeting minimum specifications cannot be sold as agricultural liming materials. Forty-eight deficient samples are reported, forty-two for excessive coarseness and six for low CCE. There were four "stop sale" order's issued against producer stockpiles: all for excessive coarseness and none of the issued stop sales were released.

Table 1 lists registered producers and samples obtained at production sites.
Table 2 lists samples obtained from retail distributor stockpiles, by producer.

MISSOURI AGRICULTURAL LIMING MATERIALS TONNAGE
REPORTED SINCE AUGUST 13, 1976

YEAR	SPRING	FALL	TOTAL
1976	-----	2,514,500	-----
1977	1,590,700	1,166,600	2,757,300
1978	1,116,100	2,546,250	3,662,350
1979	975,300	3,068,900	4,044,200
1980	1,431,000	2,266,900	3,697,900
1981	1,336,750	1,228,350	2,565,100
1982	825,100	1,029,000	1,854,100
1983	872,700	1,154,700	2,027,400
1984	595,725	899,459	1,495,185
1985	611,050	783,575	1,394,625
1986	967,375	646,115	1,613,490
1987	1,104,358	1,558,171	2,662,529
1988	1,036,917	1,605,444	2,642,361
1989	939,831	1,586,398	2,526,229
1990	504,100	1,204,551	1,708,651
1991	646,864	835,603	1,482,467
1992	859,648	771,536	1,631,184
1993	397,607	686,345	1,083,952
1994	681,464	967,450	1,648,914
1995	720,140	1,207,663	1,927,803
1996	704,151	886,627	1,590,778
1997	779,876	1,063,760	1,843,636
1998	626,186	1,048,308	1,674,494
1999	606,847	1,557,259	2,164,106
2000	886,861	996,123	1,882,984
2001	512,964	1,311,614	1,824,578
2002	696,473	1,079,130	1,775,603
2003	596,438	829,574	1,426,012
2004	629,642	748,503	1,378,145
2005	667,212	659,215	1,326,427
2006	839,305	774,665	1,613,969
2007	481,973	1,085,571	1,567,544
2008	373,490	727,861	1,101,351
2009	681,600	583,025	1,264,626
2010	446,530	1,321,861	1,768,392
2011	377,505	990,317*	1,367,822*

* PRELIMINARY ESTIMATE

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TABLE 1

AGRICULTURAL LIMING MATERIALS SAMPLED FROM
JULY 1 THROUGH DECEMBER 31, 2011

Distributor	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
76 QUARRY, MANSFIELD, MO										
Stockpile #1										
Lab #0868	09-19-11	0.7	50.4	6.6	42.3	83.7	10.2	58.9	394	120
Lab #1035	11-07-11	0.6	51.7	8.4	39.3	84.6	10.2	57.3	388	117
ADRIAN QUARRY LLC, ADRIAN, MO										
ALBY QUARRY, CARLINVILLE, IL										
ALLEN QUARRIES INC, LOCKWOOD, MO										
Stockpile #1										
Lab #0526	08-04-11	0.5	46.1	13.9	39.5	96.1	0.2	59.4	456	2
Lab #1108	12-07-11	1.7	53.3	11.4	33.6	92.0	0.5	53.8	396	5
AMERICAN ROCK, LLC, HOLLISTER, MO										
Stockpile #1										
Lab #0521	08-2--11	0.1	40.5	16.0	43.4	95.7	0.1	63.1	483	1
Lab #0869	09-21-11	0.0	43.1	17.3	39.6	96.2	0.1	60.8	468	1
Lab #1042	11-17-11	0.2	45.7	16.6	37.5	96.0	0.1	58.9	452	1
APAC - KANSAS, INC. - CAMERON, PLATTSBURG, MO										
Stockpile #1										
Lab #0469	07-06-11	2.0	44.5	9.4	44.1	76.1	1.7	60.9	371	21
Lab #0483	07-26-11	1.6	45.1	9.9	43.4	73.1	1.9	60.6	354	23
Lab #0621	08-24-11	1.2	45.5	10.2	43.1	75.9	1.7	60.6	368	21
Lab #0667	09-13-11	1.4	46.3	10.2	42.1	76.7	1.8	59.8	367	22
Lab #0880	10-13-11	1.5	46.7	10.1	41.7	77.3	1.7	59.4	368	20
Lab #1028	11-16-11	0.6	45.7	11.1	42.6	78.0	1.4	60.7	379	17
Lab #1132	12-12-11	1.0	42.8	9.9	46.3	77.8	1.7	62.9	392	21
Stockpile #2										
Lab #0470	07-06-11	0.4	46.8	10.2	42.6	72.2	2.3	60.4	349	28
Lab #0482	07-26-11	0.5	48.7	11.1	39.7	70.9	2.3	58.5	332	27
Lab #0622	08-24-11	0.6	48.0	11.0	40.4	73.8	2.1	59.0	348	25
Lab #0668	09-13-11	0.5	47.8	10.4	41.3	73.2	2.3	59.5	348	27
Lab #0881	10-13-11	0.6	48.1	10.8	40.5	74.8	2.1	59.0	353	25
Lab #1029	11-16-11	0.6	43.1	10.0	46.3	79.3	1.7	63.1	400	21
APAC - KANSAS, INC. - GOWER, PLATTSBURG, MO										
Stockpile #3										
Lab #0478	07-25-11	0.7	51.2	10.1	38.0	82.1	1.1	56.9	373	13
Lab #0590	08-17-11	1.0	50.8	11.1	37.1	81.8	0.7	56.5	369	8
Lab #0670	09-14-11	0.9	52.5	10.6	36.0	81.4	0.9	55.5	361	10
Lab #0835	10-05-11	0.9	53.5	10.2	35.4	82.0	0.7	54.9	360	8
Lab #1025	11-10-11	0.8	51.4	11.0	36.8	82.4	0.8	56.3	371	9
Lab #1131	12-13-11	0.5	48.5	10.9	40.1	82.8	1.1	58.8	389	13
APAC - KANSAS, INC. - KINGSTON, PLATTSBURG, MO										
Stockpile #1										
Lab #0532	08-09-11	0.4	46.0	10.1	43.5	88.1	1.8	61.1	430	22
Lab #0635	09-02-11	0.7	47.2	11.1	41.0	87.2	1.5	59.5	415	18
Lab #0731	09-22-11	0.9	45.6	11.8	41.7	88.0	1.5	60.2	424	18
Lab #0915	10-19-11	0.4	45.8	10.6	43.2	87.7	1.9	61.0	428	23
Lab #1121	12-09-11	0.2	46.0	11.8	42.0	88.5	1.6	60.6	429	19
APAC - KANSAS, INC. - LATHROP, PLATTSBURG, MO										
Stockpile #1										
Lab #0792	10-03-11	0.7	52.2	10.9	36.2	84.8	0.9	55.8	378	10
Lab #0921	10-21-11	0.7	53.7	10.8	34.8	84.6	0.9	54.7	370	10
Lab #1030	11-16-11	0.8	49.3	10.4	39.5	84.7	1.0	58.1	393	12
Lab #1136	12-13-11	0.5	48.5	12.1	38.9	86.0	0.8	58.3	401	9
Stockpile #2										
Lab #0471	07-06-11	0.4	46.5	9.9	43.2	83.3	1.0	60.8	405	12
Lab #0477	07-25-11	0.5	47.6	10.8	41.1	84.3	0.9	59.5	401	11
Lab #0589	08-17-11	0.5	47.0	11.0	41.5	81.1	1.0	59.9	388	12
Lab #0669	09-14-11	0.5	48.5	10.9	40.1	84.8	0.9	58.8	399	11
Lab #0831	10-03-11	0.4	47.5	11.0	41.1	83.0	1.0	59.6	396	12
Lab #0922	10-21-11	0.7	48.3	11.7	39.3	83.3	1.0	58.4	389	12
Lab #1031	11-16-11	0.5	48.1	11.2	40.2	85.5	0.8	58.9	403	9
Lab #1135	12-13-11	0.3	49.9	11.9	37.9	87.9	0.7	57.5	404	8
APAC - KANSAS, INC. - STANBERRY, PLATTSBURG, MO										
Stockpile #1										
Lab #1167	12-16-11	3.3	47.5	9.6	39.6	73.8	2.0	57.2	338	23
Stockpile #2										
Lab #0703	09-15-11	0.0	47.6	11.4	41.0	72.3	2.0	59.7	346	24
Lab #0928	10-28-11	0.0	46.0	11.4	42.6	72.2	1.9	60.9	352	23
APAC-CENTRAL INC.-N.HARRISON QUARRY, FAYETTEVILLE, AR										
Stockpile #1										
Lab #0760	09-28-11	1.2	54.3	12.6	31.9	91.9	0.2	53.0	390	2
Lab #0950	10-26-11	0.7	50.5	14.0	34.8	93.5	0.2	55.8	418	2

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JULY 1 THROUGH DECEMBER 31, 2011

Distributor	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
APAC-CENTRAL INC.-N.HARRISON QUARRY, FAYETTEVILLE, AR (Continued)										
Stockpile #1										
Lab #1106	12-06-11	1.0	49.2	12.8	37.0	92.5	0.2	57.0	422	2
APAC-CENTRAL INC. -VALLEY SPRINGS, FAYETEVILLE, AR										
Stockpile #1										
Lab #0761	09-28-11	0.5	47.5	13.1	38.9	95.3	0.2	58.6	447	2
Lab #0949	10-26-11	0.3	46.7	15.6	37.4	96.7	0.2	58.4	452	2
Lab #1105	12-06-11	0.3	45.8	14.8	39.1	97.6	0.1	59.4	464	1
APAC-MISSOURI, INC - BAGNELL 13, COLUMBIA, MO										
Stockpile #1										
Lab #0680	09-12-11	4.3	42.3	14.6	38.8	91.8	11.2	58.1	427	130
Lab #1068	11-22-11	5.9	45.1	13.1	35.9	93.6	11.3	55.0	412	124
APAC-MISSOURI, INC. - BOONVILLE, COLUMBIA, MO										
Stockpile #1										
Lab #0515	08-04-11	4.2	46.2	13.5	36.1	94.1	0.6	55.8	420	7
Lab #0630	08-30-11	3.5	48.0	12.8	35.7	95.2	0.5	55.4	422	6
Lab #0840	10-12-11	4.4	46.9	12.6	36.1	93.0	0.3	55.4	412	3
Lab #1000	11-15-11	4.3	51.2	12.2	32.3	95.1	0.7	52.4	399	7
Lab #1104	12-05-11	7.1	49.7	12.6	30.6	94.1	0.3	50.6	381	3
APAC - BRICKEY'S STONE, BLOOMSDALE, MO										
Stockpile #1										
Lab #0686	09-14-11	17.3*	34.7	10.3	37.7	96.8	0.6	52.6	0	0
Lab #0958	11-02-11	21.0*	33.1	9.9	36.0	96.3	0.8	50.2	0	0
Stockpile #2										
Lab #0687	09-14-11	20.4*	37.7	10.8	31.1	97.4	0.7	47.0	0	0
Stockpile #3										
Lab #0688	09-14-11	0.4	37.2	13.9	48.5	97.7	0.6	66.1	517	8
Stockpile #4										
Lab #0689	09-14-11	12.6*	34.4	10.9	42.1	95.7	0.5	57.2	0	0
Lab #0959	11-02-11	12.8*	35.8	11.7	39.7	93.0	0.7	55.7	0	0
APAC-MISSOURI GALLATIN, GALLATIN, MO										
Stockpile #1										
Lab #0575	08-15-11	9.1	53.0	8.1	29.8	81.2	0.3	47.9	311	3
Lab #0578	08-18-11	8.0	51.6	7.7	32.7	75.6	0.6	50.2	304	6
Lab #0581	08-19-11	7.1	51.9	8.1	32.9	73.8	1.0	50.7	300	10
Lab #0726	09-20-11	5.3	48.9	9.1	36.7	63.9*	1.6	54.4	0	0
Lab #0944	10-24-11	9.0	49.7	8.1	33.2	68.2	1.5	50.5	275	15
Lab #0977	11-07-11	8.7	50.2	7.4	33.7	74.8	0.8	50.7	303	8
Lab #1077	11-29-11	7.9	47.8	8.2	36.1	70.5	1.4	53.0	299	15
APAC-MISSOURI, INC. - LINN CREEK, LINN CREEK, MO										
Stockpile #2										
Lab #0679	09-12-11	15.7*	54.5	9.8	20.0	56.3*	6.8	39.5	0	0
Lab #1067	11-22-11	12.5*	54.4	9.8	23.3	50.0*	6.2	42.8	0	0
APAC-CENTRAL, INC. - BUSIEK, FAYETTEVILLE, AR										
Stockpile #1										
Lab #0815	10-05-11	8.1	52.2	6.1	33.6	88.9	10.5	50.3	358	106
APAC-MISSOURI, INC. - MARSHALL, MARSHALL, MO										
Stockpile #5										
Lab #0516	08-05-11	1.5	44.6	12.6	41.3	80.6	1.4	60.0	387	17
Lab #0644	09-02-11	2.1	47.0	12.0	38.9	87.6	2.1	57.9	405	24
Lab #0849	10-14-11	6.8	53.9	9.7	29.6	90.9	1.3	48.9	356	13
Lab #0965	11-04-11	6.3	45.9	10.8	37.0	74.7	0.5	55.0	328	5
Lab #1080	12-02-11	6.7	45.5	10.5	37.3	71.9	0.6	55.0	316	7
APAC-MISSOURI, INC.-MARSHALL (WEST), COLUMBIA, MO										
APAC-MISSOURI, INC - PETTIS QUARRY, COLUMBIA, MO										
APAC-CENTRAL INC. - ROARK CREEK, FAYETTEVILLE, AR										
ARKANSAS LIME COMPANY, INC., BATESVILLE, AR										
Stockpile #1										
Lab #1040	11-15-11	2.9	38.3	13.4	45.4	97.8	0.7	63.0	493	9
MINERALS PROCESSING, MAUMEE, OH										
ASH GROVES AGGREGATES-DEVER, BUTLER, MO										
Stockpile #1										
Lab #0573	08-18-11	0.3	36.0	15.9	47.8	88.1	2.8	66.3	468	37
Lab #0681	09-15-11	0.8	37.5	15.9	45.8	93.9	1.8	64.7	486	23
Lab #0890	10-17-11	0.0	33.0	18.6	48.4	90.3	0.5	67.8	490	7
Lab #1085	11-30-11	0.3	33.0	16.5	50.2	87.6	1.8	68.4	479	25
ASH GROVE AGGREGATES-FAIR GROVE, BUTLER, MO										
Stockpile #2										
Lab #0598	08-22-11	6.0	52.6	8.6	32.8	87.1	10.3	51.1	356	105
Lab #0759	09-26-11	5.6	49.8	6.6	38.0	87.8	10.5	54.4	382	114
Lab #1073	11-28-11	5.3	50.8	6.1	37.8	88.9	10.9	54.2	385	118

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AGRICULTURAL LIMING MATERIALS SAMPLED FROM
JULY 1 THROUGH DECEMBER 31, 2011

Distributor	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
ASH GROVE AGGREGATES-FAIR PLAY, BUTLER, MO										
Stockpile #1										
Lab #0616	08-23-11	1.5	42.6	16.1	39.8	95.1	0.1	60.1	457	1
Lab #0766	09-28-11	1.3	43.9	15.2	39.6	95.9	0.1	59.7	458	1
Lab #1009	11-14-11	2.6	44.7	13.6	39.1	89.7	0.2	58.4	419	2
Lab #1164	12-15-11	1.9	44.0	14.8	39.3	94.0	0.1	59.2	445	1
ASH GROVE AGGREGATES INC-S&K, BUTLER, MO										
Stockpile #1										
Lab #0548	08-11-11	2.0	55.4	11.4	31.2	82.2	0.5	51.9	341	5
Lab #0895	10-20-11	7.4	56.8	9.9	25.9	85.1	0.3	46.0	313	3
Lab #1113	12-08-11	6.1	54.6	9.4	29.9	77.9	0.5	49.2	307	5
ASH GROVE AGGREGATES INC-LACYGNE, BUTLER, MO										
ASH GROVE AGGREGATES INC-MARSHFIELD, BUTLER, MO										
Stockpile #3										
Lab #0524	08-03-11	0.9	45.2	11.4	42.5	95.6	11.6	60.6	464	141
Lab #0889	10-19-11	1.2	44.9	11.2	42.7	93.3	11.5	60.6	453	139
ASH GROVE AGGREGATES INC-MONTEVALLO, BUTLER, MO										
Stockpile #1										
Lab #0514	08-04-11	0.3	38.0	15.9	45.8	86.1	0.2	64.8	447	3
Lab #0933	10-25-11	0.6	40.3	15.1	44.0	83.8	0.4	63.1	423	5
Lab #1157	12-12-11	0.5	38.6	15.7	45.2	90.7	0.2	64.3	466	3
ASH GROVE AGGREGATES INC-OSCEOLA, BUTLER, MO										
Stockpile #1										
Lab #0572	08-15-11	1.6	47.6	11.8	39.0	85.7	1.1	58.0	398	13
Lab #0816	10-07-11	1.2	47.5	12.1	39.2	88.9	1.8	58.3	415	21
Lab #1069	11-23-11	1.9	48.5	12.7	36.9	90.9	2.5	56.6	412	28
ASH GROVE AGGREGATES, INC-SEAGRAVES, BUTLER, MO										
ASH GROVE AGGREGATES INC.-STOCKTON, BUTLER, MO										
ASH GROVE AGGREGATES INC-WHEATLAND, BUTLER, MO										
Stockpile #1										
Lab #0570	08-15-11	0.1	41.3	15.6	43.0	95.4	0.2	62.7	478	3
Lab #0747	09-20-11	8.6	46.3	10.5	34.6	96.5	0.2	52.5	405	2
Lab #0892	10-19-11	6.3	47.4	11.0	35.3	96.5	0.2	53.8	415	2
Lab #1012	11-16-11	0.5	42.4	14.5	42.6	96.6	0.1	61.9	478	1
Lab #1161	12-14-11	7.5	47.2	10.6	34.7	97.3	0.2	52.9	411	2
Stockpile #2										
Lab #0571	08-15-11	0.2	45.9	13.8	40.1	94.6	0.1	59.9	453	1
Lab #0748	09-20-11	0.3	46.5	13.5	39.7	95.7	0.1	59.4	455	1
Lab #0893	10-19-11	0.3	43.5	13.9	42.3	95.7	0.3	61.5	471	4
Lab #1013	11-16-11	0.3	45.7	14.0	40.0	96.0	0.1	59.8	459	1
Lab #1162	12-14-11	0.4	45.5	14.4	39.7	96.7	0.1	59.7	462	1
ASH GROVE AGGREGATES INC-BOLIVAR, BUTLER, MO										
ASH GROVE AGGREGATES - KIFER, BUTLER, MO										
ASH GROVE AGGREGATES INC-BUFFALO, BUTLER, MO										
Stockpile #1										
Lab #0544	08-10-11	9.8	43.9	8.8	37.5	93.1	11.2	53.8	400	120
Lab #0853	10-10-11	6.7	42.8	10.7	39.8	91.8	11.3	56.9	418	129
Lab #1109	12-05-11	5.8	43.3	11.7	39.2	91.0	11.1	57.0	415	127
BAILEY QUARRIES INC-CHESAPEAKE Q., MT VERNON, MO										
Stockpile #1										
Lab #0522	08-02-11	0.1	42.1	11.3	46.5	92.5	11.2	63.8	472	143
Lab #0870	09-21-11	0.1	35.6	12.6	51.7	90.6	10.9	68.2	494	149
Lab #1043	11-17-11	0.1	38.0	12.4	49.5	92.0	11.1	66.4	489	147
Stockpile #4										
Lab #0871	09-21-11	6.1	37.8	7.6	48.5	91.0	11.0	62.5	455	138
Lab #1044	11-17-11	4.4	38.1	8.0	49.5	90.3	11.1	63.8	461	142
BAILEY QUARRIES INC-JANE, REPUBLIC, MO										
Stockpile #2										
Lab #0639	08-31-11	1.3	48.1	8.9	41.7	87.9	10.3	59.1	415	122
BAILEY QUARRIES, INC.-MADRY QUARRY, VERONA, MO										
Stockpile #2										
Lab #0601	08-26-11	3.6	55.2	10.1	31.1	86.0	1.2	51.0	351	12
Lab #1075	12-02-11	3.1	58.1	8.7	30.1	81.5	1.4	49.8	325	14
BAILEY QUARRIES - SARCOXIE, REPUBLIC, MO										
Stockpile #1										
Lab #0559	08-09-11	1.9	51.0	12.0	35.1	87.0	0.1	55.1	383	1
Lab #0961	10-31-11	2.2	51.6	11.7	34.5	89.3	0.1	54.4	389	1
BAILEY QUARRIES INC-STOCKTON, STOCKTON, MO										
Stockpile #1										
Lab #0513	08-04-11	0.8	47.1	14.7	37.4	95.4	0.1	58.0	443	1
Lab #0764	09-26-11	1.7	48.3	13.6	36.4	94.9	0.1	56.6	430	1

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TABLE 1

AGRICULTURAL LIMING MATERIALS SAMPLED FROM
JULY 1 THROUGH DECEMBER 31, 2011

Distributor	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
BAILEY QUARRIES INC-STOCKTON, STOCKTON, MO (Continued)										
Stockpile #1										
Lab #0932	10-25-11	1.6	50.4	13.8	34.2	95.2	0.1	55.1	419	1
Lab #1155	12-12-11	1.0	48.4	13.3	37.3	94.1	0.1	57.4	432	1
Stockpile #2										
Lab #1156	12-12-11	0.0	49.6	14.4	36.0	92.7	0.1	57.0	423	1
BARBER & SONS AGGREGATES, LEE'S SUMMIT, MO										
Stockpile #1										
Lab #0479	08-01-11	10.8*	46.1	7.2	35.9	84.1	0.4	51.7	0	0
Lab #0619	08-29-11	7.2	36.9	12.0	43.9	83.2	1.0	60.3	402	12
Lab #0654	09-06-11	10.7*	46.2	7.5	35.6	76.4	1.7	51.7	0	0
Lab #0839	10-11-11	12.9*	47.4	7.9	31.8	82.5	1.4	48.4	0	0
Lab #0920	10-25-11	8.1	47.1	10.9	33.9	80.5	1.6	52.2	336	17
Lab #0988	11-07-11	14.2*	48.9	7.7	29.2	83.3	1.4	46.0	0	0
Lab #0999	11-14-11	14.8*	47.5	7.0	30.7	83.8	1.1	46.8	0	0
BARRETT MATERIALS INC, NEW HAVEN, MO										
Stockpile #1										
Lab #0684	09-12-11	0.4	22.0	11.8	65.8	41.9*	5.1	78.4	0	0
Lab #0909	10-17-11	0.1	49.7	13.7	36.5	85.0	10.2	57.1	389	117
Stockpile #2										
Lab #0886	10-12-11	0.1	49.4	13.9	36.6	84.6	10.3	57.3	388	118
Lab #1005	11-15-11	0.1	50.5	12.3	37.1	84.2	10.4	57.1	385	119
BASE ROCK MINERALS, BONNE TERRE, MO										
Stockpile #1										
Lab #0567	08-17-11	0.4	39.1	13.8	46.7	98.2	11.5	64.8	509	149
Lab #0702	09-15-11	0.6	45.4	14.7	39.3	98.7	11.5	59.5	470	137
Lab #0797	10-05-11	0.1	38.6	15.5	45.8	94.4	10.5	64.8	489	136
BELLE PLANT FOODS, BELLE, MO										
Stockpile #1										
Lab #0552	08-09-11	1.1	20.9	14.0	64.0	91.0	4.7	77.6	565	73
Lab #0938	10-25-11	0.6	21.3	15.3	62.8	92.3	3.1	77.3	571	48
BOONE QUARRIES INC - WEST, COLUMBIA, MO										
BOONE QUARRIES INC - NORTH, COLUMBIA, MO										
BOONE QUARRIES - EAST, COLUMBIA, MO										
Stockpile #1										
Lab #0788	10-04-11	1.4	23.2	15.5	59.9	84.9	2.8	75.0	509	42
Lab #1200	12-29-11	1.6	15.9	12.8	69.7	94.3	3.1	81.4	614	50
Stockpile #3										
Lab #0787	10-04-11	24.3*	48.8	7.1	19.8	86.7	2.2	36.3	0	0
Lab #1201	12-29-11	17.5*	42.1	8.9	31.5	93.6	2.8	47.4	0	0
Stockpile #4										
Lab #1202	12-29-11	10.4*	42.6	10.1	36.9	94.0	2.1	53.6	0	0
BUSSEN QUARRIES, INC.-ANTIRE QUARRY, ST LOUIS, MO										
Stockpile #1										
Lab #0936	10-24-11	0.0	0.3	0.9	98.8	102.2	9.6	99.4	813	191
Lab #0957	11-02-11	0.0	1.1	6.0	92.9	98.0	6.4	96.8	759	124
Lab #0984	11-08-11	0.0	0.9	1.9	97.2	98.5	6.9	98.6	777	136
Lab #1062	11-21-11	0.0	0.8	1.1	98.1	102.2	10.4	99.0	809	206
CALCIUM PRODUCTS, INC., GILMORE CITY, IA										
CAPITAL QUARRIES CO., INC.-ARCADIA, JEFFERSON CITY, MO										
Stockpile #1										
Lab #0564	08-17-11	1.9	49.0	12.5	36.6	100.4	11.9	56.4	453	134
Lab #0800	10-05-11	1.6	45.2	15.7	37.5	98.6	11.2	58.2	459	130
Lab #1144	12-14-11	2.6	50.6	13.0	33.8	100.0	11.7	54.3	434	127
CAPITAL QUARRIES, INC.- DANVILLE, JEFFERSON CITY, MO										
Stockpile #1										
Lab #0499	08-03-11	2.7	50.8	9.8	36.7	94.6	3.4	55.3	418	38
Lab #0905	10-20-11	2.2	59.1	11.3	27.4	95.3	0.5	49.0	373	5
Lab #1086	11-28-11	5.8	54.8	8.4	31.0	91.0	2.0	49.7	362	20
CAPITAL QUARRIES CO., INC- EUGENE, JEFFERSON CITY, MO										
Stockpile #1										
Lab #0497	08-01-11	0.8	37.6	8.8	52.8	69.4	8.6	67.5	375	116
Lab #0775	09-28-11	13.3*	43.3	8.8	34.6	91.6	7.7	50.7	0	0
Lab #0910	10-18-11	1.2	40.2	9.1	49.5	74.3	9.2	65.0	386	120
Lab #1129	12-08-11	0.8	40.8	9.2	49.2	75.0	9.1	64.9	390	118
Lab #1148	12-15-11	0.8	39.4	9.6	50.2	75.1	9.5	65.8	395	125
CAPITAL QUARRIES CO., INC.-OWENSVIL, JEFFERSON CITY, MO										
Stockpile #1										
Lab #0554	08-09-11	1.4	43.7	8.4	46.5	90.6	10.9	62.5	453	136
Lab #0713	09-20-11	3.1	46.4	8.7	41.8	88.2	10.7	58.6	414	125

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AGRICULTURAL LIMING MATERIALS SAMPLED FROM
JULY 1 THROUGH DECEMBER 31, 2011

Distributor	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
CAPITAL QUARRIES CO., INC.-OWENSVIL, JEFFERSON CITY, MO (Continued)										
Stockpile #2										
Lab #0714	09-20-11	1.6	49.0	8.6	40.8	90.4	11.0	58.2	421	128
CAPITAL QUARRIES, INC-STADIUM WEST, JEFFERSON CITY, MO										
CAPITAL QUARRIES INC-ROLLA Q #4, JEFFERSON CITY, MO										
Stockpile #1										
Lab #0610	08-22-11	3.4	37.9	9.8	48.9	74.0	8.7	64.3	380	112
Lab #0903	10-19-11	6.9	42.9	8.6	41.6	79.6	9.8	57.5	366	113
Lab #1125	12-07-11	6.1	39.0	8.2	46.7	77.3	9.3	61.4	380	114
Stockpile #2										
Lab #0602	08-22-11	1.2	12.2	11.9	74.7	88.2	10.3	84.9	599	175
Lab #0904	10-19-11	0.9	11.1	11.3	76.7	87.4	10.7	86.3	603	185
Lab #1126	12-07-11	1.5	12.0	11.4	75.1	85.0	10.3	84.9	578	175
CAPITAL QUARRIES INC-CALIFORNIA Q#5, JEFFERSON CITY, MO										
Stockpile #1										
Lab #0528	08-09-11	5.2	51.6	9.8	33.4	87.4	2.5	52.2	365	26
Lab #0655	09-08-11	6.4	49.9	10.2	33.5	89.9	2.4	52.1	375	25
Lab #0785	09-28-11	5.8	49.6	10.3	34.3	91.5	1.6	52.9	387	17
Lab #0918	10-24-11	5.6	50.1	11.2	33.1	88.0	2.6	52.3	369	27
Lab #1047	11-16-11	5.9	49.4	10.0	34.7	89.2	2.8	53.1	379	30
Lab #1123	12-08-11	5.3	50.3	10.3	34.1	89.5	2.3	52.9	378	24
CAPITAL QUARRIES INC.-HERMANN #14, JEFFERSON CITY, MO										
Stockpile #1										
Lab #0561	08-15-11	1.8	47.1	8.5	42.6	88.0	10.6	59.5	419	126
Lab #0716	09-22-11	2.0	47.9	7.7	42.4	87.4	10.6	59.0	412	125
Lab #0908	10-21-11	1.6	47.5	8.6	42.3	87.0	10.6	59.3	413	126
CAPITAL QUARRIES, INC - SALEM, JEFFERSON CITY, MO										
CAPITAL QUARRIES INC-SULLIVAN, JEFFERSON CITY, MO										
Stockpile #1										
Lab #0605	08-23-11	6.6	44.9	13.9	34.6	98.2	11.4	54.2	426	123
Lab #0973	11-08-11	7.2	46.1	13.0	33.7	99.0	12.1	53.0	420	128
Lab #1145	12-14-11	8.6	43.2	13.0	35.2	101.9	11.9	53.8	439	128
Stockpile #2										
Lab #0606	08-23-11	0.1	0.5	13.2	86.2	97.9	11.3	94.2	738	213
Lab #0974	11-08-11	0.1	0.5	6.2	93.2	95.0	11.4	97.0	738	221
Lab #1146	12-14-11	1.2	0.9	8.1	89.8	93.8	10.7	94.9	712	203
CARROLL COUNTY STONE, INC., REPUBLIC, MO										
Stockpile #1										
Lab #0586	08-19-11	1.0	45.3	11.4	42.3	83.0	10.0	60.5	401	121
Lab #0951	10-26-11	2.7	47.7	9.3	40.3	92.1	11.2	57.8	426	129
Lab #1107	12-06-11	5.1	50.7	8.8	35.4	89.1	10.8	53.4	380	115
CARTHAGE CRUSHED LIMESTONE, CARTHAGE, MO										
Stockpile #1										
Lab #0557	08-08-11	1.3	24.5	6.1	68.1	95.5	0.1	77.9	595	2
Lab #0963	11-03-11	0.2	2.7	3.1	94.0	96.3	0.1	96.5	744	2
Stockpile #2										
Lab #0558	08-08-11	0.0	0.3	2.5	97.2	95.5	0.1	98.8	755	2
Lab #0964	11-03-11	0.0	0.6	0.4	99.0	95.9	0.1	99.4	763	2
CENTRAL STONE COMPANY - HUNTINGTON, HANNIBAL, MO										
Stockpile #2										
Lab #1192	12-28-11	0.5	33.4	16.7	49.4	93.3	0.9	67.8	506	12
Stockpile #3										
Lab #1191	12-28-11	0.1	5.0	17.6	77.3	91.2	1.0	89.1	650	18
CENTRAL STONE COMPANY-ANTONIA, HANNIBAL, MO										
CENTRAL STONE COMPANY - BETHEL, SHELBYVILLE, MO										
Stockpile #3										
Lab #1199	12-28-11	1.1	44.5	11.9	42.5	91.8	1.0	60.8	446	12
CENTRAL STONE COMPANY - FARMINGTON, FARMINGTON, MO										
Stockpile #1										
Lab #0566	08-17-11	3.5	47.7	8.4	40.4	92.0	11.1	57.4	422	127
Lab #0699	09-14-11	0.9	47.2	10.5	41.4	92.2	11.1	59.5	439	132
Lab #0700	09-15-11	1.6	47.5	9.3	41.6	89.2	11.0	59.1	421	130
Lab #0798	10-05-11	1.7	47.4	8.6	42.3	90.9	10.4	59.3	431	123
Stockpile #2										
Lab #0701	09-15-11	2.0	47.8	9.3	40.9	91.6	11.2	58.4	428	131
Lab #0799	10-05-11	1.2	46.0	10.7	42.1	92.1	10.9	60.0	442	131
CENTRAL STONE CO - FORT BELLE - #31, FLORISSANT, MO										
Stockpile #1										
Lab #1171	12-21-11	0.0	0.5	3.7	95.8	94.1	2.2	98.1	739	43
Lab #1182	12-27-11	0.0	1.0	3.9	95.1	93.9	2.5	97.7	734	49

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Distributor	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
CENTRAL STONE COMPANY - PARIS, PARIS, MO										
Stockpile #2										
Lab #1206	12-29-11	7.9	46.8	10.9	34.4	91.5	0.6	52.6	385	6
CENTRAL STONE COMPANY - CURRYVILLE, CURRYVILLE, MO										
Stockpile #1										
Lab #1187	12-28-11	0.5	42.3	12.2	45.0	90.4	1.1	62.9	455	14
CENTRAL STONE COMPANY - PERRY, HANNIBAL, MO										
Stockpile #1										
Lab #1209	12-29-11	6.3	45.6	8.9	39.2	88.0	2.3	55.9	394	26
CENTRAL STONE COMPANY - EWING, HANNIBAL, MO										
Stockpile #2										
Lab #1193	12-28-11	2.7	39.9	10.4	47.0	83.2	0.1	63.2	421	1
Stockpile #3										
Lab #1194	12-28-11	3.2	45.5	11.2	40.1	89.0	0.1	58.2	414	1
CENTRAL STONE COMPANY - TAYLOR, TAYLOR, MO										
Stockpile #2										
Lab #1173	12-22-11	2.3	39.7	13.1	44.9	83.7	1.4	62.7	420	18
CLEVER STONE CO, CLEVER, MO										
Stockpile #1										
Lab #1052	11-22-11	0.8	53.0	12.6	33.6	92.7	0.1	54.4	404	1
Lab #1143	12-14-11	1.6	50.7	11.3	36.4	93.5	0.1	55.9	418	1
CONCO QUARRIES INC Q US 160, WILLARD, MO										
Stockpile #1										
Lab #0599	08-22-11	0.1	10.3	13.3	76.3	96.9	0.2	86.9	673	3
Lab #0757	09-26-11	0.0	14.2	15.3	70.5	97.3	0.2	83.2	648	3
Stockpile #4										
Lab #0600	08-22-11	0.1	12.0	13.6	74.3	95.9	0.1	85.5	656	2
Lab #0758	09-26-11	0.1	16.8	17.4	65.7	97.8	0.2	80.3	629	3
COUNTY LINE QUARRY, WELLSVILLE, MO										
Stockpile #1										
Lab #1181	12-27-11	4.0	45.5	10.9	39.6	85.8	3.5	57.5	395	40
COUNTY LINE STONE, CASSVILLE, MO										
CRAWFORD LIME & MATERIAL CO, CUBA, MO										
Stockpile #1										
Lab #0955	11-03-11	14.2*	57.5	5.6	22.7	90.5	11.3	40.4	0	0
Lab #1127	12-08-11	5.2	52.2	8.5	34.1	92.3	11.2	52.3	386	117
Stockpile #2										
Lab #0956	11-03-11	0.0	2.3	10.3	87.4	54.2*	6.6	94.2	0	0
CRIDER BROTHERS LIME CO., INC., EMINENCE, MO										
Stockpile #1										
Lab #0721	09-19-11	2.5	40.4	15.9	41.2	91.6	10.6	60.8	446	129
Lab #1039	11-16-11	9.2	45.8	12.5	32.5	98.8	11.4	51.5	407	117
D & D SUPPLY, LONE JACK, MO										
DELEWARE STONE LLC, WINONA, MO										
DOSS & HARPER STONE CO., HOUSTON, MO										
Stockpile #2										
Lab #0636	08-29-11	0.8	44.7	13.9	40.6	87.1	10.4	60.1	419	125
DOSS & HARPER STONE CO, WEST PLAINS, MO										
DOUBLE EAGLE AGGREGATES, MILLER, MO										
DOUBLE EAGLE AGGREGATES CO., INC, MILLER, MO										
Stockpile #1										
Lab #0638	08-30-11	0.2	46.2	10.1	43.5	80.3	9.2	61.1	393	112
Lab #0762	09-29-11	0.5	48.9	9.7	40.9	82.9	9.7	58.9	391	114
Lab #0887	10-17-11	0.9	50.1	10.8	38.2	89.3	10.8	57.2	409	124
EVERETT QUARRIES #1-LATHROP, PLATTSBURG, MO										
EVERETT QUARRIES #6-KING, PLATTSBURG, MO										
EVERETT QUARRIES #53-CAMERON, PLATTSBURG, MO										
EVERETT QUARRIES #54-GOWER, PLATTSBURG, MO										
EVERETT QUARRIES #59-STANBERRY, PLATTSBURG, MO										
FALL VALLEY STONE, INC., MT. VERNON, MO										
FISCHER QUARRIES LLC, HUGHESVILLE, MO										
Stockpile #1										
Lab #0518	08-05-11	0.8	47.6	12.0	39.6	95.8	2.1	58.7	450	25
Lab #0646	09-02-11	0.9	47.8	13.1	38.2	97.6	1.2	58.0	453	14
Lab #0851	10-14-11	1.1	48.3	12.3	38.3	97.2	1.2	57.8	449	14
Lab #0968	11-04-11	0.8	47.0	13.0	39.2	96.5	1.5	58.8	454	18
Lab #1083	12-02-11	0.7	47.2	12.9	39.2	97.1	1.5	58.7	456	18
Stockpile #4										
Lab #0519	08-05-11	1.1	47.1	11.7	40.1	95.3	1.5	58.9	449	18
Lab #0647	09-02-11	1.1	44.7	13.7	40.5	95.8	1.5	59.9	459	18
Lab #0852	10-14-11	0.5	44.5	12.9	42.1	96.1	1.4	61.0	469	17

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		+8	-8+40	-40+60	-60				ENM	EMg
FISCHER QUARRIES LLC, HUGHESVILLE, MO (Continued)										
Stockpile #4										
Lab #0967	11-04-11	0.9	48.6	13.5	37.0	96.4	1.4	57.3	442	16
Lab #1082	12-02-11	0.9	48.3	14.1	36.7	96.6	1.6	57.2	442	18
FISCHER QUARRY & HAULING, LLC, ST. MARY, MO										
Stockpile #1										
Lab #0698	09-14-11	2.3	53.1	13.8	30.8	98.1	0.1	52.4	411	1
Lab #0813	10-04-11	5.9	40.4	17.9	35.8	98.3	0.1	56.6	445	1
Lab #1087	11-29-11	3.1	51.9	14.0	31.0	98.8	0.1	52.4	414	1
Stockpile #2										
Lab #1088	11-29-11	0.1	34.4	19.2	46.3	98.8	0.2	66.4	525	3
GABEL STONE COMPANY INC., WILLOW SPRINGS, MO										
HIGGINS - MEEKER QUARRIES LLC, DEEPWATER, MO										
Stockpile #1										
Lab #0931	10-24-11	1.1	48.8	11.2	38.9	79.6	4.5	57.8	368	52
Lab #0948	10-28-11	1.5	46.7	11.8	40.0	81.0	4.3	58.8	381	51
Lab #1015	11-18-11	3.2	47.7	10.1	39.0	82.3	5.6	57.0	375	64
Lab #1066	11-21-11	0.6	35.8	14.5	49.1	76.1	4.5	66.8	406	60
HIGGINS QUARRY, LLC, LOOSE CREEK, MO										
Stockpile #2										
Lab #0500	08-04-11	0.7	48.6	9.8	40.9	90.9	10.9	58.9	429	128
Lab #0776	09-29-11	0.1	44.6	10.5	44.8	96.7	11.6	62.3	482	144
Lab #0986	11-10-11	1.2	55.3	8.6	34.9	87.2	10.9	53.9	376	117
HILTY QUARRIES, INC. - QUARLES, CLINTON, MO										
HILTY QUARRIES, INC - LEETON, CLINTON, MO										
Stockpile #3										
Lab #0512	08-03-11	3.2	42.9	11.0	42.9	89.7	0.5	60.2	432	6
Lab #0765	09-27-11	3.5	42.1	11.6	42.8	91.1	0.4	60.3	439	5
Lab #0997	11-08-11	5.3	41.7	10.7	42.3	89.1	0.4	59.1	422	5
HILTY QUARRIES, INC. - MONTROSE, CLINTON, MO										
Stockpile #1										
Lab #0540	08-09-11	3.8	55.0	10.8	30.4	83.4	0.5	50.6	338	5
Lab #0745	09-19-11	2.1	55.0	11.6	31.3	86.8	0.3	52.0	361	3
Lab #0763	09-26-11	0.7	39.3	15.8	44.2	88.3	0.4	63.5	449	5
Lab #0929	10-24-11	1.0	59.0	11.1	28.9	85.9	0.3	50.3	346	3
Lab #1064	11-21-11	15.1*	50.9	9.0	25.0	73.8	1.1	43.1	0	0
Stockpile #3										
Lab #0541	08-09-11	2.6	40.8	11.3	45.3	86.6	0.3	62.3	431	4
Lab #0746	09-19-11	3.5	43.1	10.5	42.9	89.5	0.3	60.0	429	4
Lab #0930	10-24-11	2.6	41.8	12.7	42.9	93.3	0.4	61.0	455	5
Lab #1065	11-21-11	3.4	39.9	13.3	43.4	94.5	0.3	61.4	464	4
HILTY QUARRIES, INC - SOUTH DELL, CLINTON, MO										
Stockpile #1										
Lab #0535	08-08-11	5.6	51.8	11.4	31.2	94.3	0.4	51.0	385	4
Lab #0750	09-20-11	5.9	51.9	11.2	31.0	94.5	0.3	50.7	383	3
Lab #0856	10-12-11	6.2	52.1	10.5	31.2	94.4	0.4	50.5	382	4
Lab #1112	12-07-11	6.1	51.7	10.4	31.8	95.2	0.4	51.0	388	4
HILTY QUARRIES, INC - TIGHTWAD, CLINTON, MO										
Stockpile #1										
Lab #0537	08-08-11	0.6	42.3	13.0	44.1	93.2	0.5	62.5	466	6
Lab #0752	09-22-11	3.5	42.8	10.6	43.1	92.5	0.6	60.2	445	7
Lab #0857	10-12-11	4.0	41.7	12.5	41.8	93.1	0.3	59.7	445	4
Lab #1158	12-13-11	2.5	39.0	12.3	46.2	92.9	0.3	63.3	471	4
Stockpile #2										
Lab #0753	09-22-11	1.3	48.6	10.7	39.4	75.8	3.8	58.0	352	44
Lab #0538	08-08-11	1.6	52.7	9.6	36.1	74.8	3.6	55.0	329	40
Lab #0858	10-12-11	0.2	49.9	9.0	40.9	72.7	4.1	58.8	342	48
Lab #1159	12-13-11	0.3	45.4	9.5	44.8	72.1	3.7	61.9	357	46
Stockpile #3										
Lab #0539	08-08-11	1.3	43.0	11.5	44.2	91.6	0.4	61.9	453	5
Lab #0754	09-22-11	1.0	42.2	12.6	44.2	92.4	0.4	62.3	461	5
Lab #0859	10-12-11	0.6	42.5	11.6	45.3	94.7	0.8	62.9	476	10
Lab #1160	12-13-11	4.6	43.5	10.7	41.2	92.8	0.3	58.5	434	4
HILTY QUARRIES, INC. - URICH, CLINTON, MO										
Stockpile #1										
Lab #0542	08-09-11	9.1	53.9	7.9	29.1	75.2	0.8	47.3	285	8
Lab #0743	09-19-11	9.6	53.7	7.2	29.5	78.6	0.8	47.2	297	8
Stockpile #2										
Lab #0543	08-09-11	7.4	54.2	7.9	30.5	76.4	0.9	48.8	298	9
Lab #0744	09-19-11	6.1	52.0	7.8	34.1	78.4	0.8	51.8	325	8
Lab #1063	11-21-11	6.3	51.6	8.3	33.8	72.0	1.0	51.7	298	10

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TABLE 1

AGRICULTURAL LIMING MATERIALS SAMPLED FROM

JULY 1 THROUGH DECEMBER 31, 2011

Distributor	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
HILTY QUARRIES, INC. - URICH, CLINTON, MO (Continued)										
Stockpile #2										
Lab #1084	11-29-11	6.0	50.3	8.2	35.5	72.7	0.8	53.0	308	8
HILTY QUARRIES INC.- WARRENSBURG, CLINTON, MO										
HOSTETTLER QUARRY, LLC, BUFFALO, MO										
Stockpile #1										
Lab #0546	08-10-11	4.0	47.3	7.0	41.7	85.2	10.3	57.7	393	119
Lab #0854	10-10-11	4.3	46.0	8.4	41.3	86.1	10.5	57.8	398	121
Lab #1111	12-05-11	2.8	56.3	7.1	33.8	83.8	10.1	52.1	350	105
HORN QUARRY, LLC, BRECKENRIDGE, MO										
Stockpile #1										
Lab #0583	08-19-11	0.7	43.1	11.8	44.4	89.6	1.0	62.3	446	12
Lab #0678	09-16-11	1.0	42.1	10.7	46.2	89.1	1.0	63.1	450	13
Lab #0914	10-18-11	1.3	41.3	10.7	46.7	82.0	1.3	63.4	416	16
Lab #0983	11-11-11	1.2	46.4	10.8	41.6	86.0	1.4	59.7	411	17
Lab #1122	12-09-11	1.3	47.0	10.1	41.6	81.5	1.3	59.4	387	15
HUNT-MARTIN MATERIALS, PARKVILLE, MO										
HUNT-MARTIN MATERIALS - STAMPER, KANSAS CITY, MO										
Stockpile #2										
Lab #0473	07-20-11	1.4	33.0	14.1	51.5	89.2	0.7	68.2	487	10
Lab #0626	08-25-11	0.1	29.0	15.1	55.8	91.5	0.8	72.1	528	12
Lab #0742	09-27-11	0.6	25.8	16.5	57.1	90.2	0.8	73.5	530	12
Lab #0899	10-20-11	0.0	28.9	15.1	56.0	90.5	0.8	72.3	523	12
Lab #1058	11-23-11	0.7	32.8	16.9	49.6	91.1	0.7	67.9	495	10
Lab #1154	12-16-11	0.3	30.6	15.9	53.2	91.6	0.7	70.4	516	10
Stockpile #3										
Lab #0474	07-20-11	4.8	10.2	3.0	82.0	66.6	0.9	86.4	460	16
HUNTER STONE CO, ELLSINORE, MO										
Stockpile #1										
Lab #0511	08-03-11	0.0	40.0	14.4	45.6	95.2	11.3	64.2	489	145
Lab #0627	09-01-11	0.0	41.9	13.6	44.5	96.3	11.0	63.1	486	139
Lab #0783	09-29-11	0.0	42.1	15.4	42.5	96.9	11.6	62.3	483	144
HUTCHENS CONSTRUCTION-PURDY, CASSVILLE, MO										
HUTCHENS CONSTRUCTION-EAGLE ROCK, CASSVILLE, MO										
Stockpile #2										
Lab #0872	09-23-11	1.7	41.4	8.5	48.4	90.2	11.0	63.9	461	140
Lab #1045	11-18-11	2.0	39.2	10.1	48.7	89.3	11.0	64.6	461	142
HUTCHENS CONSTRUCTION CO-SHELL KNOB, CASSVILLE, MO										
Stockpile #1										
Lab #0587	08-19-11	1.6	50.8	9.9	37.7	90.6	11.1	56.3	408	125
Lab #1046	11-18-11	4.0	52.6	8.8	34.6	97.0	11.7	53.0	412	124
HUTCHENS CONSTRUCTION-WASHBURN, CASSVILLE, MO										
JASPER STONE LLC, JASPER, MO										
Stockpile #1										
Lab #0664	09-08-11	0.1	38.7	17.9	43.3	92.8	0.1	63.7	473	1
Lab #0863	10-11-11	0.6	36.5	18.2	44.7	95.6	0.1	64.7	495	1
Lab #1051	11-21-11	5.7	42.7	15.4	36.2	97.6	0.1	56.1	438	1
JENKINS QUARRY, CASSVILLE, MO										
JIMMY SANDERS, INC, LEACHVILLE, AR										
JOPLIN STONE CO Q DUENWEG, JOPLIN, MO										
Stockpile #2										
Lab #0520	08-01-11	0.7	29.9	15.4	54.0	77.0	0.1	70.7	436	1
Lab #0683	09-14-11	0.1	32.5	20.8	46.6	84.3	0.1	67.2	453	1
Lab #0814	10-04-11	0.5	29.9	18.2	51.4	81.1	0.1	69.8	453	1
Lab #1041	11-15-11	0.3	28.8	20.1	50.8	82.8	0.1	70.1	464	1
LEO JOURNAGAN CONSTRUCTION CO, INC, SPRINGFIELD, MO										
Stockpile #1										
Lab #0585	08-18-11	1.9	50.2	13.9	34.0	96.6	0.2	54.9	424	2
Lab #0962	11-01-11	1.8	51.7	13.6	32.9	97.1	0.2	54.0	419	2
KELLY LIMESTONE LLC, KIRKSVILLE, MO										
Stockpile #2										
Lab #1178	12-22-11	1.3	20.7	8.8	69.2	71.7	4.3	79.7	457	69
Lab #1197	12-28-11	2.1	22.3	9.6	66.0	70.9	5.8	77.3	439	90
Stockpile #3										
Lab #1177	12-22-11	1.1	16.0	8.6	74.3	88.6	1.6	83.5	592	27
Lab #1196	12-28-11	1.2	17.7	8.5	72.6	88.1	1.6	82.1	579	26
KELLEY QUARRY, CROCKER, MO										
KEMP STONE, INC, PRYOR, OK										
Stockpile #1										
Lab #0584	08-15-11	8.5	49.1	9.5	32.9	67.1	0.1	50.9	273	1
Lab #0860	10-10-11	9.8	43.9	10.1	36.2	75.0	0.1	53.2	319	1

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TABLE 1

AGRICULTURAL LIMING MATERIALS SAMPLED FROM

JULY 1 THROUGH DECEMBER 31, 2011

Distributor	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
KEMP STONE, INC, PRYOR, OK (Continued)										
Stockpile #1										
Lab #1074	12-01-11	0.3	41.0	15.5	43.2	85.9	0.5	62.8	432	6
KERFORD LIMESTONE CO, WEEPING WATER, NE										
Stockpile #1										
Lab #0666	09-12-11	0.0	0.5	0.2	99.3	87.6	0.8	99.5	698	16
Lab #0994	11-09-11	0.0	0.2	0.2	99.6	86.5	1.1	99.8	690	22
Lab #1152	12-14-11	0.0	0.3	0.3	99.4	91.1	0.8	99.7	726	16
KNOX COUNTY STONE CO, EDINA, MO										
Stockpile #2										
Lab #1195	12-28-11	1.1	42.3	12.7	43.9	91.5	3.0	62.1	455	37
L & W QUARRIES, INC - CLARKDALE #8, CENTERVILLE, IA										
L & W QUARRIES, INC - WALNUT CITY, CENTERVILLE, IA										
Stockpile #2										
Lab #0633	08-31-11	7.4	48.9	8.9	34.8	81.3	0.3	52.4	341	3
Lab #0634	09-01-11	5.7	50.5	8.9	34.9	83.7	0.3	52.9	354	3
Lab #0661	09-08-11	7.3	47.9	8.7	36.1	80.0	0.3	53.3	341	3
Lab #0818	10-10-11	5.4	46.4	8.0	40.2	74.7	0.2	56.6	338	2
L & W QUARRIES INC., CENTERVILLE, IA										
Stockpile #1										
Lab #1175	12-22-11	5.7	46.1	8.4	39.8	86.2	2.3	56.4	389	26
Lab #1207	12-29-11	3.8	45.6	8.7	41.9	85.4	2.0	58.5	400	23
Stockpile #2										
Lab #1208	12-29-11	8.6	47.7	10.3	33.4	92.2	0.4	51.5	380	4
LILE QUARRY INC., STRAFFORD, MO										
Stockpile #2										
Lab #0525	08-03-11	0.0	47.5	9.3	43.2	80.4	9.9	60.7	390	120
Lab #0888	10-19-11	0.0	47.4	10.7	41.9	86.9	10.7	60.2	418	129
MAGRUDER LIMESTONE CO-ASHLEY, BOWLING GREEN, MO										
Stockpile #1										
Lab #1188	12-28-11	0.8	45.0	12.9	41.3	95.9	0.9	60.3	463	11
MAGRUDER LIMESTONE CO, INC.-BOWLING, BOWLING GREEN, MO										
MAGRUDER LIMESTONE CO-FRANKFORD, BOWLING GREEN, MO										
Stockpile #1										
Lab #1190	12-28-11	0.8	41.4	14.0	43.8	97.6	1.8	62.6	488	23
MAGRUDER LIMESTONE CO. - SHELBY, TROY, MO										
MAGRUDER LIMESTONE - SILEX QUARRY, TROY, MO										
Stockpile #2										
Lab #1185	12-27-11	6.0	48.6	8.7	36.7	89.6	2.7	54.1	388	29
MAGRUDER LIMESTONE CO Q TROY, TROY, MO										
Stockpile #1										
Lab #1186	12-27-11	7.8	56.4	7.7	28.1	84.5	3.2	46.8	317	30
MANSFIELD LIME & STONE, MANSFIELD, MO										
MARTIN MARIETTA AGG - APPLETON, PERRYVILLE, MO										
MARTIN MARIETTA AGGREGATE-FREDONIA, FREDONIA, KY										
MARTIN MARIETTA AGG-PERRYVILLE, PERRYVILLE, MO										
Stockpile #1										
Lab #0696	09-14-11	0.0	0.5	0.5	99.0	92.9	1.9	99.4	739	38
Lab #0811	10-04-11	0.0	0.6	0.9	98.5	95.4	3.8	99.2	757	75
Lab #1089	11-29-11	0.1	3.3	3.7	92.9	94.8	2.6	95.9	727	50
Stockpile #2										
Lab #0697	09-14-11	0.4	63.8	9.5	26.3	92.0	1.9	48.0	353	18
Lab #0812	10-04-11	4.3	56.3	8.6	30.8	92.5	2.8	50.0	370	28
Lab #1090	11-29-11	0.3	57.2	12.3	30.2	93.6	1.9	51.9	389	20
MERTENS CONST CO-AUXVASSE, KINGDOM CITY, MO										
Stockpile #2										
Lab #1180	12-27-11	9.0	50.1	8.1	32.8	90.6	4.7	50.2	364	47
Stockpile #3										
Lab #1179	12-27-11	2.7	51.6	9.7	36.0	98.6	6.6	54.7	432	72
MERTENS CONST CO-Q-REFORM, KINGDOM CITY, MO										
Stockpile #1										
Lab #0507	08-05-11	8.1	52.5	10.0	29.4	88.3	1.7	48.5	343	16
Lab #0778	09-30-11	7.8	54.1	10.0	28.1	90.6	1.3	47.6	345	12
Lab #1003	11-14-11	8.7	52.7	9.7	28.9	89.5	1.5	47.9	343	14
Stockpile #2										
Lab #0508	08-05-11	4.6	45.7	10.6	39.1	80.4	3.8	56.9	366	43
Lab #0779	09-30-11	4.7	46.1	9.6	39.6	87.3	4.6	56.9	397	52
Lab #1002	11-14-11	5.1	45.2	11.8	37.9	81.9	3.5	56.3	369	39
MFA INC, COLUMBIA, MO										

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AGRICULTURAL LIMING MATERIALS SAMPLED FROM

JULY 1 THROUGH DECEMBER 31, 2011

Distributor	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
MID-COUNTY MATERIALS, WAYNESVILLE, MO										
Stockpile #1										
Lab #0611	08-22-11	2.9	14.2	19.9	63.0	96.1	2.8	78.5	603	44
Lab #0900	10-18-11	0.1	4.3	1.6	94.0	71.9	8.8	96.0	552	169
Lab #1006	11-16-11	0.1	3.5	1.3	95.1	71.3	9.1	96.8	552	176
MID-MISSOURI LIMESTONE, INC-BIG SPR, KINGDOM CITY, MO										
Stockpile #1										
Lab #0875	10-12-11	9.3	57.2	8.2	25.3	92.0	0.4	44.5	328	4
Lab #0877	10-14-11	4.7	56.5	10.0	28.8	91.9	0.3	48.9	360	3
Lab #0906	10-20-11	6.0	58.1	8.5	27.4	91.6	0.2	47.0	345	2
Lab #1004	11-15-11	9.1	58.6	7.8	24.5	92.4	0.3	43.8	324	3
MID-MISSOURI LIMESTONE INC-MBQ, KINGDOM CITY, MO										
Stockpile #1										
Lab #0506	08-05-11	2.8	52.6	12.7	31.9	86.9	0.1	52.7	366	1
Lab #0711	09-19-11	6.2	52.2	11.5	30.1	92.7	0.2	50.1	371	2
Lab #1097	12-02-11	5.4	51.3	12.1	31.2	91.2	0.1	51.3	374	1
MID-MISSOURI LIMESTONE, INC.-HOUSTO, KINGDOM CITY, MO										
Stockpile #1										
Lab #0517	08-05-11	5.6	52.8	8.2	33.4	83.8	5.2	51.5	345	54
Lab #0645	09-02-11	5.0	50.4	11.1	33.5	90.1	0.4	52.8	380	4
Lab #0850	10-14-11	4.4	49.4	12.0	34.2	91.7	0.4	53.8	394	4
Lab #0966	11-04-11	4.6	49.9	12.5	33.0	90.7	0.2	53.0	384	2
Lab #1210	12-30-11	6.0	50.7	11.3	32.0	93.8	0.1	51.5	386	1
Stockpile #2										
Lab #1081	12-02-11	19.1*	42.7	10.0	28.2	91.6	0.2	44.9	0	0
MID-MISSOURI LIMESTONE-RIGGS, KINGDOM CITY, MO										
Stockpile #2										
Lab #1203	12-29-11	4.6	53.2	7.6	34.6	89.0	6.0	52.5	374	63
Stockpile #3										
Lab #1204	12-29-11	3.1	45.4	9.4	42.1	91.0	3.1	59.1	430	37
MIDWEST MINERALS, INC - FORT SCOTT, PITTSBURG, KS										
Stockpile #1										
Lab #0855	10-11-11	0.1	51.8	11.9	36.2	88.6	0.3	56.3	399	3
Lab #0998	11-09-11	0.2	55.9	12.9	31.0	91.6	0.4	52.7	386	4
Lab #1011	11-15-11	0.3	55.1	13.1	31.5	92.4	0.5	53.1	393	5
MIDWEST MINERALS INC - JASPER, PITTSBURG, KS										
Stockpile #1										
Lab #0662	09-08-11	1.1	42.5	13.6	42.8	97.4	0.1	61.6	480	1
Lab #0861	10-11-11	0.7	42.3	13.4	43.6	96.8	0.1	62.2	482	1
Lab #1053	11-21-11	0.9	42.9	13.3	42.9	97.6	0.1	61.6	481	1
MIDWEST STONE LLC-WHITEWATER, WENTZVILLE, MO										
MISSISSIPPI LIME COMPANY, STE. GENEVIEVE,, MO										
Stockpile #1										
Lab #0694	09-14-11	0.0	0.4	0.6	99.0	98.7	0.3	99.5	785	6
Lab #0809	10-04-11	0.0	0.3	0.6	99.1	98.4	0.3	99.5	784	6
Lab #1091	11-30-11	0.1	0.5	0.9	98.5	99.0	0.3	99.2	786	6
Stockpile #3										
Lab #0695	09-14-11	0.0	41.8	29.9	28.3	98.0	0.2	56.7	444	2
Lab #0810	10-04-11	0.0	44.7	29.0	26.3	98.4	0.2	54.9	432	2
Lab #1092	11-30-11	0.0	43.2	29.1	27.7	98.5	0.2	56.0	441	2
MISSOURI LIME AND MATERIAL CO., INC, EUREKA, MO										
Stockpile #1										
Lab #0609	08-24-11	0.0	0.6	3.8	95.6	94.7	6.8	98.0	743	133
Lab #0656	09-08-11	0.0	0.9	5.0	94.1	98.9	6.7	97.3	770	130
MK MINERALS INC., WATHENA, KS										
Stockpile #1										
Lab #0487	07-27-11	0.0	1.6	2.9	95.5	88.5	0.6	97.6	691	12
Lab #0620	08-23-11	0.0	1.6	3.3	95.1	87.8	0.6	97.5	685	12
Lab #0737	09-23-11	0.0	0.2	1.1	98.7	89.2	0.7	99.4	709	14
Lab #0884	10-17-11	0.0	0.7	1.9	97.4	89.5	0.7	98.7	707	14
Lab #0993	11-08-11	0.0	0.3	1.6	98.1	89.9	0.7	99.1	713	14
Lab #1153	12-15-11	0.0	0.4	1.6	98.0	89.0	0.5	99.1	705	10
MO VALLEY GRAIN & PELLETIZING, MISSOURI VALLEY, IA										
MORRIS ROCK, DEERFIELD, MO										
MOUNTAIN GROVE QUARRY, MOUNTAIN GROVE, MO										
KEITH MURRAY, PLATO, MO										
Stockpile #1										
Lab #0637	08-30-11	6.2	13.3	4.1	76.4	102.6	1.3	82.2	675	21
NELSON BROS. QUARRIES, JASPER, MO										
Stockpile #1										
Lab #0663	09-08-11	0.0	43.2	15.2	41.6	94.8	0.2	61.5	467	2

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JULY 1 THROUGH DECEMBER 31, 2011

Distributor	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
NELSON BROS. QUARRIES, JASPER, MO (Continued)										
Stockpile #1										
Lab #0862	10-11-11	0.0	37.6	16.5	45.9	96.5	0.4	65.2	503	5
Lab #1054	11-21-11	0.0	46.8	15.8	37.4	96.8	0.4	58.6	454	5
NEMO SAND & GRAVEL, QUARRY, PITTSBURG, MO										
Stockpile #1										
Lab #0569	08-15-11	1.6	41.1	6.5	50.8	83.1	10.2	65.0	432	133
Lab #0749	09-20-11	2.1	41.7	7.7	48.5	83.4	10.2	63.5	424	130
Lab #0891	10-19-11	2.3	43.4	7.7	46.6	84.7	10.2	62.1	421	127
Lab #1014	11-16-11	1.7	41.3	8.0	49.0	83.9	10.3	64.1	430	132
Lab #1163	12-14-11	2.3	38.7	7.6	51.4	83.4	9.5	65.6	438	125
NORRIS AGGREGATE PRODUCT CO.-AMAZONI, AMAZONIA, MO										
Stockpile #2										
Lab #0706	09-16-11	1.2	53.8	10.8	34.2	81.6	1.3	54.1	353	14
Lab #0736	09-22-11	1.8	53.0	10.3	34.9	79.9	1.3	54.3	347	14
Lab #0834	10-04-11	1.4	53.6	10.3	34.7	80.6	1.4	54.3	350	15
Lab #0924	10-25-11	1.6	53.4	10.2	34.8	81.3	1.5	54.3	353	16
Lab #1102	12-01-11	1.3	51.3	10.5	36.9	82.3	1.4	56.0	369	16
NORRIS AGGREGATE PROD. CO.-BARNARD, BARNARD, MO										
NORRIS AGGREGATES PROD. CO.-BETHANY, BETHANY, MO										
Stockpile #5										
Lab #0577	08-17-11	0.0	37.7	13.2	49.1	71.5	1.9	66.4	380	25
Lab #0674	09-12-11	1.2	46.5	10.6	41.7	76.2	1.7	59.7	364	20
Lab #0822	10-03-11	0.3	36.1	12.1	51.5	74.8	1.6	67.8	406	22
Lab #0917	10-20-11	11.3*	45.8	9.4	33.5	80.9	1.6	50.6	0	0
Lab #0981	11-09-11	9.2	50.2	8.4	32.2	81.3	1.4	49.8	324	14
Lab #1016	11-15-11	6.8	42.4	9.6	41.2	76.2	1.8	57.6	351	21
Lab #1018	11-16-11	6.8	44.2	10.7	38.3	78.0	1.6	55.8	348	18
NORRIS AGGREGATE PROD. CO. - BREIT, SAVANNAH, MO										
Stockpile #2										
Lab #0707	09-16-11	16.0*	46.8	6.8	30.4	79.9	1.4	46.2	0	0
Lab #0739	09-23-11	13.8*	44.5	7.3	34.4	74.8	1.5	49.9	0	0
Lab #0741	09-26-11	15.3*	47.2	7.2	30.3	76.7	1.5	46.4	0	0
Lab #0791	09-30-11	9.3	45.7	9.1	35.9	77.9	1.5	52.8	329	16
Stockpile #3										
Lab #0882	10-17-11	5.6	50.2	8.4	35.8	79.8	1.6	53.4	341	17
Lab #0925	10-25-11	4.0	49.4	9.7	36.9	81.7	1.5	55.1	360	17
Lab #0991	11-04-11	6.1	50.0	8.4	35.5	72.4	2.4	53.0	307	25
Lab #1032	11-17-11	5.7	52.0	8.4	33.9	85.7	1.4	51.9	356	15
Stockpile #5										
Lab #0665	09-08-11	14.4*	48.4	7.7	29.5	87.4	1.8	46.2	0	0
Stockpile #6										
Lab #0738	09-23-11	8.5	53.1	8.0	30.4	80.0	1.6	48.5	310	16
Lab #0740	09-26-11	5.1	49.9	10.7	34.3	81.2	1.6	53.2	346	17
Lab #0790	09-30-11	7.8	51.3	9.2	31.7	80.3	1.5	50.0	321	15
Lab #0883	10-17-11	9.8	47.8	8.3	34.1	79.8	1.6	51.0	326	16
Lab #0926	10-25-11	9.0	47.5	8.3	35.2	79.3	1.6	52.1	330	17
Lab #1101	12-01-11	7.7	51.4	8.0	32.9	83.5	1.6	50.6	338	16
NORRIS AGGREGATE PRDCTS-BLUE MOUND, DAWN, MO										
Stockpile #1										
Lab #0531	08-09-11	0.6	55.1	10.0	34.3	90.1	1.0	54.1	390	11
NORRIS AGGREGATE PROD. CO.-GALLATIN, GALLATIN, MO										
Stockpile #1										
Lab #0576	08-15-11	3.0	58.5	9.6	28.9	83.3	0.9	49.3	328	9
Lab #0727	09-20-11	2.7	56.1	10.3	30.9	81.5	1.2	51.1	333	12
Lab #0945	10-24-11	2.8	55.1	9.4	32.7	79.3	1.2	52.1	331	13
Lab #0978	11-07-11	4.5	57.0	9.2	29.3	85.9	0.7	49.1	337	7
Lab #1137	12-12-11	7.1	50.4	9.4	33.1	82.1	1.1	51.3	337	11
NORRIS AGGREGATE PROD. CO.-GOODEN, RAVENWOOD, MO										
Stockpile #1										
Lab #0488	07-28-11	7.1	42.0	8.8	42.1	79.2	1.7	57.9	367	20
Lab #0481	08-02-11	15.8*	35.9	7.6	40.7	77.0	1.7	54.2	0	0
Lab #0588	08-11-11	10.0	42.5	8.8	38.7	80.2	1.7	54.6	350	19
Lab #0591	08-18-11	5.7	44.6	8.8	40.9	78.1	1.9	57.3	358	22
Lab #0625	08-24-11	8.1	44.9	9.5	37.5	80.0	1.8	54.4	348	20
Lab #0651	08-31-11	7.3	46.9	9.4	36.4	80.3	1.7	53.8	345	18
Lab #0704	09-15-11	10.1*	43.4	8.8	37.7	80.2	1.6	53.8	0	0
Lab #0789	09-28-11	12.4*	41.2	9.6	36.8	79.4	1.6	52.9	0	0
Stockpile #2										
Lab #0923	10-24-11	2.1	49.9	11.2	36.8	86.1	1.1	56.0	386	12
Lab #0927	10-28-11	0.9	49.8	11.9	37.4	83.4	1.6	57.0	380	18

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TABLE 1

AGRICULTURAL LIMING MATERIALS SAMPLED FROM

JULY 1 THROUGH DECEMBER 31, 2011

Distributor	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
NORRIS AGGREGATE PROD. CO.- GOODEN, RAVENWOOD, MO (Continued)										
Stockpile #2										
Lab #0992	11-07-11	2.6	50.2	10.0	37.2	84.3	1.5	55.8	376	17
Lab #1056	11-17-11	2.2	46.7	10.8	40.3	83.4	1.5	58.5	390	18
Lab #1100	11-30-11	1.6	48.1	10.4	39.9	82.0	1.6	58.2	382	19
Stockpile #3										
Lab #0879	10-12-11	8.5	40.1	8.4	43.0	78.2	1.9	58.1	363	22
Stockpile #4										
Lab #1057	11-17-11	0.2	30.3	11.6	57.9	74.1	1.9	72.4	429	28
NORRIS AGGREGATE PRODUCTS CO - EAST, HUNTSVILLE, MO										
Stockpile #2										
Lab #0533	08-10-11	5.9	49.8	12.0	32.3	92.8	0.5	52.0	386	5
Lab #0612	08-22-11	6.7	49.0	12.8	31.5	92.7	0.3	51.4	381	3
Lab #0732	09-27-11	2.0	45.6	12.5	39.9	80.4	1.4	58.8	378	16
Lab #0820	10-11-11	2.2	48.4	13.5	35.9	85.6	0.4	56.1	384	4
Lab #0979	11-08-11	5.7	49.1	12.0	33.2	82.3	0.2	52.7	347	2
NORRIS AGGREGATE PROD. CO.-JEFFRIES, BLYTHEDALE, MO										
NORRIS AGGREGATE PROD. CO.-MAITLAND, MAITLAND, MO										
Stockpile #1										
Lab #0832	10-04-11	7.6	48.7	9.9	33.8	88.5	0.4	51.9	368	4
Lab #0836	10-10-11	5.8	48.5	10.7	35.0	88.8	0.3	53.5	380	3
Lab #0896	10-18-11	5.3	51.0	10.2	33.5	86.6	0.4	52.4	363	4
Lab #0952	10-31-11	2.9	46.4	11.1	39.6	85.2	0.3	57.9	394	3
Lab #1055	11-17-11	2.3	48.2	11.8	37.7	89.2	1.4	56.8	406	16
Stockpile #3										
Lab #0476	07-22-11	10.7*	47.8	8.6	32.9	88.9	0.5	50.0	0	0
Lab #0480	08-02-11	6.4	49.0	9.8	34.8	87.9	0.6	52.9	372	6
Lab #0593	08-18-11	4.9	48.0	10.3	36.8	88.0	0.7	55.0	387	8
Lab #0653	09-01-11	15.2*	47.1	8.4	29.3	88.2	0.8	46.1	0	0
Lab #0705	09-16-11	11.1*	48.0	9.9	31.0	87.1	0.8	48.9	0	0
Lab #0735	09-22-11	19.2*	45.7	8.6	26.5	86.9	0.7	43.1	0	0
NORRIS AGGREGATE PROD CO-PRINCETON, PRINCETON, MO										
Stockpile #1										
Lab #0491	08-01-11	6.6	46.3	8.4	38.7	75.9	1.6	55.3	336	18
Lab #0632	08-30-11	5.0	46.5	9.0	39.5	81.3	1.4	56.5	368	16
Lab #0724	09-19-11	19.1*	42.1	8.1	30.7	79.0	1.5	46.1	0	0
Stockpile #2										
Lab #0826	10-06-11	4.8	47.3	9.3	38.6	80.8	1.3	56.0	362	15
Lab #0830	10-07-11	3.1	49.1	10.4	37.4	81.0	1.6	55.9	362	18
Lab #0819	10-10-11	3.6	47.7	9.7	39.0	79.9	1.2	56.7	363	14
Lab #0971	11-02-11	0.1	50.0	11.1	38.8	76.6	1.9	58.0	355	22
Lab #1021	11-16-11	0.9	52.0	10.3	36.8	82.3	1.5	56.0	369	17
NORRIS AGGREGATE PROD. CO.- TRENTON, TRENTON, MO										
NORRIS AGGREGATE PRODUCTS-NEW POINT, OREGON, MO										
OAKLEY FERTILIZER, INC, NORTH LITTLE ROCK, AR										
OSAGE QUARRIES, INC, KINGDOM CITY, MO										
Stockpile #1										
Lab #0502	08-04-11	1.8	45.2	9.1	43.9	90.6	11.0	60.7	440	133
Lab #0941	10-25-11	0.2	44.0	13.1	42.7	88.0	9.3	61.6	433	115
PELLETIZING COMPANY INC, GORDONVILLE, TN										
PHENIX ROCK, ASH GROVE, MO										
Stockpile #3										
Lab #1036	11-09-11	0.6	33.6	12.3	53.5	66.9	0.1	69.3	371	1
PRESTAGE QUARRIES INC, TIPTON, MO										
Stockpile #1										
Lab #0529	08-09-11	0.1	42.4	10.5	47.0	80.6	5.5	63.9	412	70
Lab #0673	09-15-11	0.2	43.5	10.6	45.7	75.9	5.7	62.9	382	72
Lab #0838	10-10-11	0.0	45.7	11.1	43.2	77.4	5.1	61.3	379	63
PRAIRIE CREEK TERMINAL SERVICES INC, ELWOOD, IL										
RAY COUNTY STONE, RICHMOND, MO										
Stockpile #1										
Lab #0786	09-29-11	5.6	59.6	10.6	24.2	82.7	0.9	45.5	301	8
Lab #0878	10-16-11	9.6	60.9	7.9	21.6	78.3	0.5	41.6	260	4
Lab #0919	10-25-11	10.2*	63.5	6.3	20.0	79.8	0.5	39.7	0	0
Lab #1048	11-17-11	4.1	64.0	12.4	19.5	87.6	0.5	42.9	301	4
Lab #1049	11-18-11	3.2	54.6	16.7	25.5	86.7	0.6	49.2	341	6
Lab #1059	11-22-11	3.7	48.4	17.6	30.3	87.4	0.6	53.0	370	6
ROCK QUARRIES, LLC, MOUNTAIN GROVE, MO										
S & A CONSTRUCTION LTD, ALLENDALE, MO										

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TABLE 1

AGRICULTURAL LIMING MATERIALS SAMPLED FROM
JULY 1 THROUGH DECEMBER 31, 2011

Distributor	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
SHILDBERG CONST. CO.-DECATUR QUARRY, GREENFIELD, IA										
Stockpile #1										
Lab #0485	07-26-11	3.5	45.5	10.3	40.7	78.5	1.2	58.3	366	14
Lab #0624	08-24-11	4.1	45.4	9.5	41.0	79.2	1.1	58.1	368	13
Lab #0709	09-21-11	6.2	45.9	9.6	38.3	77.3	1.3	55.5	343	14
Lab #0897	10-19-11	5.6	44.9	10.0	39.5	76.3	1.4	56.7	346	16
Lab #1026	11-11-11	3.7	43.0	8.7	44.6	72.7	1.6	60.6	352	19
Lab #1134	12-12-11	3.2	45.2	9.3	42.3	77.0	1.3	59.2	365	15
Stockpile #2										
Lab #0484	07-26-11	2.7	46.5	10.4	40.4	79.2	1.0	58.3	369	12
Lab #0623	08-24-11	1.2	47.0	10.7	41.1	79.5	0.6	59.3	377	7
Lab #0710	09-21-11	1.1	46.7	11.2	41.0	78.7	0.6	59.4	374	7
Lab #0898	10-19-11	2.8	48.6	10.6	38.0	80.8	1.1	56.5	365	12
Lab #1027	11-11-11	1.9	50.2	10.9	37.0	81.3	1.0	56.1	365	11
Lab #1133	12-12-11	2.7	47.9	10.2	39.2	80.3	1.1	57.3	368	13
SCHILDBERG CONST. CO.-GRAHAM MO Q, GREENFIELD, IA										
Stockpile #1										
Lab #0475	07-22-11	3.6	47.2	10.3	38.9	86.0	0.7	56.9	391	8
Lab #0592	08-18-11	3.5	51.4	10.5	34.6	86.5	0.6	53.8	372	6
SCHILDBERG CONST. CO.-SHAMBAUGH Q, GREENFIELD, IA										
Stockpile #2										
Lab #0472	07-14-11	5.3	47.8	9.1	37.8	89.5	0.9	55.2	395	10
Lab #0486	07-26-11	2.7	47.6	10.9	38.8	87.6	1.0	57.2	401	11
Lab #0530	08-09-11	4.2	49.1	9.6	37.1	88.4	1.7	55.1	390	19
Lab #0594	08-22-11	2.5	46.8	11.8	38.9	89.4	0.9	57.7	413	10
Lab #0652	08-31-11	0.3	46.5	12.6	40.6	85.8	1.2	59.8	410	14
Lab #0708	09-20-11	5.5	40.3	9.9	44.3	88.2	0.9	60.3	426	11
Lab #0837	10-10-11	1.0	43.3	13.1	42.6	87.0	0.9	61.3	427	11
Lab #0954	11-02-11	1.9	51.0	12.2	34.9	87.4	1.0	55.0	384	11
Lab #1099	11-29-11	3.0	46.3	11.3	39.4	87.8	0.9	57.8	406	10
SCHILDBERG CONST. CO.-WATTERSON, GREENFIELD, IA										
SHAWNEE STONE - CYPRESS PLANT, CYPRESS, IL										
SHAWNEE STONE - JONESBORO PLANT, ANNA, IL										
Stockpile #2										
Lab #0509	08-04-11	11.1*	39.9	10.3	38.7	97.5	0.7	54.9	0	0
Lab #0648	08-30-11	9.1	42.6	10.9	37.4	97.9	1.2	54.6	428	13
Lab #0649	09-02-11	7.9	40.4	12.6	39.1	98.1	0.7	56.8	445	8
Lab #0650	09-06-11	9.4	41.8	11.8	37.0	97.8	0.7	54.5	427	8
Lab #0864	10-10-11	9.5	46.1	10.0	34.4	98.7	0.4	51.9	410	4
SIEGEL GRAVEL & EXCAVATING, VERSAILLES, MO										
Stockpile #1										
Lab #0596	08-23-11	6.1	39.2	9.3	45.4	89.3	10.4	60.8	434	126
Lab #0671	09-15-11	9.7	40.6	8.5	41.2	87.2	10.8	56.5	394	122
Lab #0841	10-10-11	9.6	44.2	8.2	38.0	88.4	10.7	54.0	382	115
Lab #0995	11-11-11	7.8	42.5	7.9	41.8	84.2	10.5	57.2	385	120
Lab #1079	12-01-11	11.6*	35.3	13.8	39.3	88.2	10.7	56.4	0	0
Stockpile #2										
Lab #0597	08-23-11	5.4	40.2	8.6	45.8	85.3	10.2	61.0	416	124
Lab #0672	09-15-11	4.3	37.7	10.5	47.5	81.7	10.2	63.2	413	129
Lab #0842	10-10-11	2.6	34.0	10.2	53.2	88.6	10.8	67.8	481	146
Lab #0996	11-11-11	1.0	44.0	10.0	45.0	79.3	9.9	62.0	393	123
Lab #1078	12-01-11	2.4	41.5	9.8	46.3	84.0	10.3	62.6	421	129
SCAGGS ROCK-N-LIME, INC., PATTERSON, MO										
Stockpile #3										
Lab #0510	08-03-11	3.7	18.3	33.1	44.9	99.8	12.0	69.3	554	166
Lab #0628	08-31-11	2.9	19.2	33.1	44.8	99.0	11.5	69.5	550	160
Lab #0782	09-30-11	2.1	16.4	32.2	49.3	98.0	11.7	72.7	570	170
Lab #1070	11-21-11	1.6	19.8	36.2	42.4	98.6	12.2	69.1	545	169
SKYLINE MATERIALS - NEWARK, DECORAH, IA										
Stockpile #1										
Lab #1176	12-22-11	4.0	42.4	7.1	46.5	91.5	2.9	61.4	449	36
Lab #1198	12-28-11	3.7	41.8	8.1	46.4	91.0	3.2	61.7	449	39
SKYLINE MATERIALS-GLASGOW, GLASGOW, MO										
Stockpile #1										
Lab #0560	08-15-11	1.4	49.6	10.1	38.9	83.7	5.4	57.4	384	62
Lab #0733	09-26-11	2.8	48.4	9.9	38.9	86.4	5.9	56.9	394	67
Lab #0885	10-20-11	4.9	48.7	8.8	37.6	87.3	5.8	55.1	385	64
Lab #1001	11-15-11	8.7	45.8	7.4	38.1	88.2	6.2	54.0	381	67
Lab #1103	12-05-11	8.9	46.0	7.0	38.1	90.1	6.7	53.8	388	72

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AGRICULTURAL LIMING MATERIALS SAMPLED FROM
JULY 1 THROUGH DECEMBER 31, 2011

Distributor	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
SOUTH CENTRAL COOP, CAINSVILLE, MO										
Stockpile #1										
Lab #0489	08-01-11	0.0	0.0	0.2	99.8	91.4	0.1	99.9	731	2
Lab #0723	09-19-11	0.0	0.1	0.7	99.2	92.3	0.2	99.6	736	4
Lab #0828	10-06-11	0.0	0.4	0.1	99.5	91.4	0.1	99.7	729	2
Lab #1019	11-16-11	0.0	0.3	0.7	99.0	90.7	0.2	99.5	722	4
Lab #1117	12-06-11	0.0	0.2	0.6	99.2	91.6	0.1	99.6	730	2
SMASAL AGGREGATE, LINCOLN, MO										
Stockpile #1										
Lab #0536	08-08-11	0.3	45.1	12.8	41.8	87.0	0.2	60.8	423	2
Lab #0751	09-20-11	0.5	46.0	13.9	39.6	92.3	0.2	59.4	439	2
Lab #0934	10-26-11	0.5	46.5	15.3	37.7	85.4	0.2	58.5	400	2
SPRINGFIELD UNDERGROUND, INC., SPRINGFIELD, MO										
Stockpile #2										
Lab #0527	08-05-11	0.7	11.5	11.4	76.4	98.0	0.2	86.1	675	3
S-S-S INC, LOUISIANA, MO										
Stockpile #1										
Lab #1189	12-28-11	4.6	49.7	11.2	34.5	96.3	0.1	53.6	413	1
STOCKMAN QUARRY, LLC, JEFFERSON CITY, MO										
Stockpile #1										
Lab #0496	08-01-11	0.2	38.0	10.3	51.5	92.8	11.3	67.2	499	152
Lab #0773	09-28-11	0.9	35.9	10.2	53.0	90.1	11.1	68.1	491	151
Stockpile #2										
Lab #0495	08-01-11	1.4	42.4	9.9	46.3	86.8	10.5	62.8	436	132
Lab #0774	09-28-11	2.2	42.7	11.1	44.0	90.2	11.1	61.3	443	136
Lab #0987	11-09-11	1.1	42.6	10.9	45.4	88.0	11.1	62.6	441	139
Stockpile #3										
Lab #0503	08-01-11	0.0	0.0	0.0	100.0	91.2	11.0	100.0	730	220
Stockpile #4										
Lab #0504	08-01-11	0.0	13.3	22.2	64.5	84.0	10.2	81.1	545	166
STRACK STONE, CAPE GIRARDEAU, MO										
STRACK STONE CO. - LODI, LLC, CAPE GIRARDEAU, MO										
T&M STONE QUARRY, LLC, WHITEWATER, MO										
Stockpile #1										
Lab #0720	09-21-11	9.9	56.3	6.6	27.2	94.0	11.6	45.2	340	105
Lab #0865	10-11-11	4.7	56.0	7.4	31.9	93.8	11.3	50.3	378	114
Lab #0911	10-20-11	4.3	56.5	8.8	30.4	95.1	11.5	49.8	379	115
Stockpile #2										
Lab #1168	12-09-11	0.3	57.5	8.0	34.2	92.3	10.8	53.4	394	115
Lab #1169	12-12-11	0.1	44.5	10.9	44.5	92.7	10.9	62.2	461	136
Lab #1170	12-16-11	0.3	60.8	8.0	30.9	92.5	10.9	50.9	377	111
TABLE ROCK ASPHALT CONST CO INC, BRANSON, MO										
Stockpile #1										
Lab #0867	09-19-11	0.2	41.5	13.0	45.3	81.0	9.7	63.5	411	123
Lab #1034	11-07-11	5.2	52.2	8.0	34.6	76.0	8.6	52.5	319	90
Stockpile #2										
Lab #0866	09-19-11	0.0	0.0	0.0	100.0	66.3	1.2	100.0	530	24
Lab #1033	11-07-11	0.0	0.3	1.3	98.4	80.3	0.7	99.3	638	14
TAYLOR QUARRIES, LOCKWOOD, MO										
Stockpile #1										
Lab #1142	12-12-11	0.2	51.2	14.2	34.4	96.0	0.5	55.7	428	6
TOWER ROCK STONE CO, SCOTT CITY, MO										
TOWER ROCK STONE CO, STE GENEVIEVE, MO										
Stockpile #1										
Lab #0690	09-14-11	0.9	49.1	14.1	35.9	96.6	0.7	56.6	438	8
Lab #0805	10-04-11	0.1	39.5	15.2	45.2	96.6	0.9	64.2	496	12
Lab #0793	10-05-11	0.2	42.8	14.7	42.3	97.0	0.8	61.8	480	10
Lab #1093	11-30-11	0.3	45.3	15.4	39.0	95.9	0.8	59.6	457	10
Stockpile #2										
Lab #0693	09-14-11	0.4	43.2	13.7	42.7	95.5	7.8	61.7	472	96
Lab #0806	10-04-11	0.1	47.3	13.3	39.3	94.0	7.8	59.1	444	92
Lab #0794	10-05-11	0.2	49.6	10.9	39.3	94.9	7.1	58.2	442	83
Lab #1094	11-30-11	0.4	41.9	12.3	45.4	95.1	6.9	63.3	482	87
Stockpile #3										
Lab #0691	09-14-11	0.9	33.3	20.2	45.6	98.1	0.2	66.0	518	3
Lab #0807	10-04-11	1.8	41.0	17.3	39.9	96.1	0.3	60.5	465	4
Lab #0795	10-05-11	1.5	38.5	19.7	40.3	96.7	0.4	61.7	478	5
Lab #1095	11-30-11	1.3	51.5	14.5	32.7	97.6	0.7	54.3	424	8
Stockpile #5										
Lab #0692	09-14-11	4.4	55.6	11.2	28.8	91.2	1.5	49.4	361	15
Lab #0808	10-04-11	4.7	52.4	10.6	32.3	93.8	2.1	51.8	388	22

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TABLE 1

AGRICULTURAL LIMING MATERIALS SAMPLED FROM
JULY 1 THROUGH DECEMBER 31, 2011

Distributor	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
TOWER ROCK STONE CO, STE GENEVIEVE, MO (Continued)										
Stockpile #5										
Lab #0796	10-05-11	9.3	48.2	9.1	33.4	95.1	2.7	50.9	387	27
Lab #1096	11-30-11	8.7	48.7	8.9	33.7	94.4	2.2	51.2	387	23
TRAGER LIMESTONE-NETTLETON, CHILLICOTHE, MO										
Stockpile #5										
Lab #0582	08-19-11	0.4	53.7	10.2	35.7	76.7	1.2	55.2	339	13
Lab #0677	09-16-11	0.3	49.5	12.3	37.9	77.8	1.1	57.7	359	13
Lab #0913	10-18-11	0.3	52.1	11.0	36.6	80.4	0.9	56.2	362	10
Lab #0982	11-11-11	0.4	51.8	10.4	37.4	78.4	1.0	56.6	355	11
TRAGER LIMESTONE LLC-GALLATIN, CHILLOTHIE, MO										
Stockpile #1										
Lab #0574	08-15-11	0.2	51.1	11.2	37.5	68.9	1.3	57.0	314	15
Lab #0912	10-18-11	0.3	51.8	10.8	37.1	68.8	1.3	56.5	311	15
Lab #0943	10-24-11	0.2	52.1	11.1	36.6	72.9	1.2	56.3	328	14
Lab #0976	11-07-11	0.1	53.9	10.0	36.0	73.6	1.2	55.5	327	13
Lab #1138	12-12-11	0.3	44.1	9.5	46.1	75.5	1.1	62.8	379	14
TWIN LAKES QUARRIES INC, MOUNTAIN HOME, AR										
UEHLIN QUARRY, AMAZONIA, MO										
UNITED SUPPLIERS, ELDORA, IA										
WADE AG PRODUCTS-MAIN OFC, LACYGNE, KS										
Stockpile #2										
Lab #0547	08-11-11	4.3	51.4	8.9	35.4	80.6	1.2	53.6	346	13
Lab #0894	10-20-11	5.6	48.7	10.9	34.8	90.4	0.5	53.5	387	5
Lab #1114	12-08-11	4.4	49.4	10.2	36.0	90.3	0.5	54.5	393	5
WADE AG PRODUCTS Q DREXEL, LACYGNE, KS										
Stockpile #1										
Lab #0618	08-25-11	5.7	53.0	10.0	31.3	83.2	1.3	50.6	336	13
WASHINGTON COUNTY AGGREGATES, INC., POTOSI, MO										
Stockpile #1										
Lab #0802	10-05-01	1.9	31.5	17.5	49.1	95.8	11.2	67.5	517	151
Lab #0563	08-17-11	1.2	40.0	13.6	45.2	99.8	12.0	63.4	506	152
FRED WEBER INC.-AUBURN QUARRY, ELSBERRY, MO										
FRED WEBER INC.-BLUFF CITY MINERALS, ALTON, IL										
Stockpile #1										
Lab #1172	12-21-11	0.3	8.1	8.3	83.3	89.9	2.0	90.3	649	36
Lab #1183	12-27-11	0.2	8.4	8.5	82.9	90.1	2.1	90.1	649	38
FRED WEBER, INC - FESTUS STONE, FESTUS, MO										
FRED WEBER, INC - FOLEY QUARRY, FOLEY, MO										
FRED WEBER, INC.-NEW MELLE STONE, NEW MELLE, MO										
Stockpile #1										
Lab #0556	08-10-11	13.9*	22.2	8.7	55.2	94.7	2.6	66.0	0	0
Lab #0643	08-30-11	13.1*	21.3	9.6	56.0	93.5	2.5	67.1	0	0
Lab #0780	09-26-11	20.6*	35.9	7.2	36.3	96.0	2.6	49.6	0	0
Lab #0942	10-27-11	3.7	11.8	23.4	61.1	90.1	2.8	78.1	563	44
FRED WEBER INC-NORTH QUARRY, MARYLAND HEIGHTS, MO										
Stockpile #1										
Lab #0642	09-01-11	1.8	10.8	11.4	76.0	93.1	2.4	85.5	637	41
Lab #0876	10-13-11	1.8	14.2	11.8	72.2	91.8	2.0	82.8	608	33
Lab #0935	10-24-11	4.9	9.6	5.2	80.3	92.6	2.9	85.8	636	50
Lab #1098	11-28-11	2.2	7.3	4.8	85.7	92.3	3.1	90.4	668	56
FRED WEBER, INC. - SOUTH STONE, ST. LOUIS, MO										
Stockpile #1										
Lab #1060	11-21-11	0.4	13.5	14.9	71.2	82.6	2.0	83.5	552	33
Lab #1130	12-12-11	0.5	22.0	17.4	60.1	94.7	4.5	76.0	576	68
Lab #1149	12-16-11	0.4	18.6	16.6	64.4	94.3	4.5	79.0	596	71
Stockpile #2										
Lab #1061	11-21-11	15.3*	40.6	9.3	34.8	89.1	3.6	50.5	0	0
WHITE ROCK QUARRIES OF LINCOLN CO, ELSBERRY, MO										
Stockpile #1										
Lab #1184	12-27-11	5.5	48.9	11.6	34.0	97.5	0.1	53.2	415	1
WILKERSON BROS QUARRY, PARIS, MO										
Stockpile #3										
Lab #1205	12-29-11	2.5	48.9	12.2	36.4	86.9	0.9	55.9	389	10
WILLARD ASPHALT - #18 SLEEPER, LEBANON, MO										
Stockpile #1										
Lab #0769	09-29-11	0.0	0.6	2.6	96.8	86.2	10.5	98.5	679	207
WILLARD ASPHALT PAVING,- #19, LEBANON, MO										
Stockpile #1										
Lab #0604	08-22-11	0.2	0.7	1.7	97.4	87.4	10.4	98.6	689	205
Lab #0901	10-18-11	0.0	0.6	1.3	98.1	86.9	10.5	99.0	688	208

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TABLE 1

AGRICULTURAL LIMING MATERIALS SAMPLED FROM

JULY 1 THROUGH DECEMBER 31, 2011

Distributor	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
WILLARD ASPHALT PAVING,- #19, LEBANON, MO (Continued)										
Stockpile #1										
Lab #1007	11-16-11	0.0	0.5	2.0	97.5	83.7	10.5	98.8	662	208
WILLARD QUARRY-SLEEPER, LEBANON, MO										
WILLARD QUARRIES- ST ROBERT, LEBANON, MO										
Stockpile #1										
Lab #0603	08-22-11	7.0	43.6	15.5	33.9	93.5	11.0	54.1	405	119
Lab #0902	10-18-11	4.4	43.1	15.0	37.5	94.9	11.6	57.3	435	133
Lab #1008	11-16-11	6.5	38.3	10.8	44.4	99.1	10.1	60.5	479	122
WILLIAMSVILLE STONE CO, POPLAR BLUFF, MO										
Stockpile #1										
Lab #0629	08-31-11	1.2	43.5	12.1	43.2	92.3	10.9	61.3	453	134
Lab #0784	09-29-11	0.2	27.4	14.8	57.6	91.9	10.9	73.3	539	160
Lab #1071	11-21-11	0.2	32.6	13.8	53.4	94.3	11.6	69.8	527	162

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TABLE 2

AGRICULTURAL LIMING MATERIALS SAMPLED FROM

JULY 1 THROUGH DECEMBER 31, 2011

Dealer and Producer	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
BACKES & TOLKE, NEW HAVEN, MO										
FRED WEBER, INC.-NEW MELLE STONE, NEW MELLE, MO										
Lab #0907	10-21-11	1.1	2.8	3.3	92.8	96.3	5.2	95.5	736	99
BACKES & TOLKE, NEW HAVEN, MO										
Lab #0505	08-02-11	13.1*	21.5	9.1	56.3	93.4	2.5	67.1	0	0
BOLIVAR FARMERS EXCHANGE, BOLIVAR, MO										
CONCO QUARRIES INC Q US 160, WILLARD, MO										
Lab #0767	09-28-11	0.2	8.5	12.3	79.0	96.5	0.2	88.5	683	4
Lab #1010	11-14-11	0.1	15.5	16.0	68.4	97.1	0.1	81.9	636	2
BOLIVAR FARMERS EXCHANGE, BOLIVAR, MO										
Lab #0617	08-23-11	0.1	11.4	14.6	73.9	96.3	0.1	85.5	659	2
CTL FARM SERVICE INC., BETHANY, MO										
MK MINERALS INC., WATHENA, KS										
Lab #0821	10-03-11	0.0	1.4	3.4	95.2	88.7	0.6	97.6	692	12
FARMER'S COOP #280, FREEBURG, MO										
KELLY LIMESTONE LLC, KIRKSVILLE, MO										
Lab #0939	10-25-11	0.1	7.4	7.3	85.2	89.8	1.8	91.4	657	33
FARMERS PRODUCERS EXCHANGE-CONWAY, LEBANON, MO										
CONCO QUARRIES INC Q US 160, WILLARD, MO										
Lab #0545	08-10-11	0.1	15.8	18.1	66.0	98.2	0.2	80.8	635	3
Lab #1110	12-05-11	0.2	16.1	15.8	67.9	97.8	0.2	81.4	637	3
FERTILIZER SERVICE CO, FAIRFAX, MO										
MO VALLEY GRAIN & PELLETIZING, MISSOURI VALLEY, IA										
Lab #0953	11-01-11	1.6	13.5	10.4	74.5	86.1	0.5	84.1	579	8
FOWLER ELEVATOR INC, NEWTOWN, MO										
MK MINERALS INC., WATHENA, KS										
Lab #0494	08-03-11	0.0	0.5	3.2	96.3	90.6	0.6	98.3	713	12
Lab #0615	08-26-11	0.0	0.8	3.3	95.9	90.5	0.6	98.1	710	12
Lab #1141	12-14-11	0.0	0.8	3.1	96.1	89.5	0.6	98.2	703	12
FOWLER ELEVATOR -EAST, UNIONVILLE, MO										
MK MINERALS INC., WATHENA, KS										
Lab #0729	09-21-11	0.0	1.1	3.2	95.7	88.7	0.6	97.9	695	12
Lab #0817	10-10-11	0.0	0.8	2.0	97.2	87.6	0.7	98.6	691	14
Lab #0972	11-02-11	0.0	0.2	1.7	98.1	88.2	0.7	99.2	700	14
Lab #1140	12-14-11	0.0	1.0	1.4	97.6	89.6	0.6	98.7	707	12
GAGE'S FERTILIZER & GRAIN INC, SKIDMORE, MO										
MK MINERALS INC., WATHENA, KS										
Lab #0833	10-04-11	0.0	0.4	2.5	97.1	89.5	0.6	98.7	707	12
GIBSON LIME CO-DEXTER, DEXTER, MO										
SHAWNEE STONE - JONESBORO PLANT, ANNA, IL										
Lab #0717	09-20-11	7.2	38.9	11.6	42.3	98.4	0.6	59.0	464	7
Lab #1037	11-10-11	8.5	39.9	10.5	41.1	96.6	0.8	57.4	443	9
SCAGGS ROCK-N-LIME, INC., PATTERSON, MO										
Lab #0718	09-20-11	4.6	19.6	31.7	44.1	100.5	11.5	68.0	547	156
Lab #0975	11-10-11	1.1	16.8	34.7	47.4	98.4	12.1	72.4	570	175
WILLIAMSVILLE STONE CO, POPLAR BLUFF, MO										
Lab #0719	09-20-11	0.4	31.5	14.8	53.3	94.5	11.4	70.1	530	160
Lab #1038	11-10-11	0.6	29.9	13.7	55.8	93.6	11.3	71.5	535	162
HAWK FERTILIZER, BOLIVAR, MO										
CONCO QUARRIES INC Q US 160, WILLARD, MO										
Lab #1165	12-15-11	0.2	16.4	16.3	67.1	97.1	0.2	81.0	629	3
HEIMSOOTH AG SERVICE, CORDER, MO										
MID-MISSOURI LIMESTONE, INC.-HOUSTO, KINGDOM CITY, MO										
Lab #1166	12-15-11	10.3*	45.7	11.2	32.8	90.1	0.2	50.9	0	0
APAC-MISSOURI, INC. - MARSHALL, MARSHALL, MO										
Lab #0682	09-16-11	1.2	46.0	12.4	40.4	77.0	0.6	59.3	366	7
Lab #0848	10-13-11	1.8	49.2	11.3	37.7	85.8	1.9	56.8	390	22
LOUIS HERZTING JR, FREEBURG, MO										
SPRINGFIELD UNDERGROUND, INC., SPRINGFIELD, MO										
Lab #0501	08-04-11	0.4	2.7	7.0	89.9	92.0	11.2	94.8	698	212
Lab #0685	09-13-11	1.9	2.0	2.2	93.9	93.9	0.4	95.7	719	8
Lab #0940	10-25-11	0.9	14.7	15.3	69.1	96.3	0.2	82.0	631	3
HOFFMAN & REED INC, TRENTON, MO										
MK MINERALS INC., WATHENA, KS										
Lab #0579	08-18-11	0.0	0.6	2.4	97.0	89.3	0.6	98.6	704	12
Lab #0728	09-20-11	0.0	1.0	2.1	96.9	89.8	0.7	98.4	707	14
Lab #1017	11-15-11	0.0	0.5	2.1	97.4	88.7	0.9	98.8	701	18
KEENEY FERTILIZER, OWENSVILLE, MO										
MISSOURI LIME AND MATERIAL CO., INC, EUREKA, MO										
Lab #1128	12-08-11	0.0	1.3	4.8	93.9	97.6	6.0	97.1	758	117

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TABLE 2

AGRICULTURAL LIMING MATERIALS SAMPLED FROM

JULY 1 THROUGH DECEMBER 31, 2011

Dealer and Producer	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
JEFFCO FERTILIZER, DESOTO, MO										
LANGE STEGMANN FERTILZIER, ST LOUIS, MO										
Lab #0960	11-02-11	0.0	9.4	8.1	82.5	89.7	2.2	89.7	644	39
LINNEMAN LIME & FERT, SALISBURY, MO										
NORRIS AGGREGATE PRODUCTS CO - EAST, HUNTSVILLE, MO										
Lab #0734	09-26-11	5.3	49.4	13.1	32.2	92.2	0.3	52.4	387	3
Lab #0990	11-08-11	3.4	46.7	12.3	37.6	84.4	0.6	56.7	383	7
LOHMAN PRODUCERS EXCHANGE, LOHMAN, MO										
KELLY LIMESTONE LLC, KIRKSVILLE, MO										
Lab #0498	08-01-11	0.2	5.2	7.3	87.3	87.6	1.4	93.0	652	26
Lab #0873	10-10-11	0.2	5.2	6.9	87.7	87.0	1.8	93.1	648	34
MFA AGRI SERVICE, KIRKSVILLE, MO										
KELLY LIMESTONE LLC, KIRKSVILLE, MO										
Lab #0969	10-31-11	0.4	7.6	8.7	83.3	89.6	2.2	90.4	648	40
MFA EXCHANGE, CHAMMOIS, MO										
HIGGINS QUARRY, LLC, LOOSE CREEK, MO										
Lab #0874	10-11-11	1.1	48.1	8.5	42.3	93.2	11.4	59.4	443	135
MFA EXCHANGE, META, MO										
KELLY LIMESTONE LLC, KIRKSVILLE, MO										
Lab #0550	08-08-11	0.3	10.0	9.3	80.4	88.2	1.9	88.5	624	34
Lab #0803	10-06-11	0.6	8.3	9.1	82.0	87.8	2.0	89.5	629	36
STOCKMAN QUARRY, LLC, JEFFERSON CITY, MO										
Lab #0551	08-08-11	1.3	36.1	9.6	53.0	87.5	10.6	67.8	474	144
Lab #0804	10-06-11	14.5*	41.0	8.2	36.3	92.2	11.0	51.5	0	0
MFA AGRI SERVICE, BETHANY, MO										
MK MINERALS INC., WATHENA, KS										
Lab #0675	09-12-11	0.0	0.3	1.7	98.0	90.0	0.8	99.1	713	16
Lab #0916	10-20-11	0.0	0.3	1.6	98.1	90.2	0.8	99.1	715	16
Lab #0980	11-09-11	0.1	0.6	1.5	97.8	89.7	0.8	98.9	709	16
MFA AGRI SERVICE, BROOKFIELD, MO										
MK MINERALS INC., WATHENA, KS										
Lab #0657	09-06-11	0.0	0.9	3.3	95.8	89.6	0.6	98.0	702	12
Lab #0825	10-04-11	0.0	0.8	1.3	97.9	90.4	0.7	98.9	715	14
MFA AGRI SERVICE, BROWNING, MO										
KELLY LIMESTONE LLC, KIRKSVILLE, MO										
Lab #0824	10-04-11	0.0	9.6	8.5	81.9	89.4	2.1	89.4	639	38
Lab #0970	10-31-11	0.0	11.4	9.1	79.5	89.2	2.2	87.8	627	39
MFA AGRI SERVICES, FARMINGTON, MO										
MFA INC, COLUMBIA, MO										
Lab #0565	08-17-11	0.4	7.4	7.5	84.7	86.1	1.2	91.1	627	22
MFA AGRI SERVICE, JEFFERSON CITY, MO										
MFA INC, COLUMBIA, MO										
Lab #0777	09-29-11	0.2	8.9	10.3	80.6	89.0	2.0	89.0	634	36
Lab #1124	12-05-11	3.7	24.9	9.3	62.1	53.8*	1.4	73.9	0	0
MFA AGRI SERVICE, LANCASTER, MO										
KELLY LIMESTONE LLC, KIRKSVILLE, MO										
Lab #0631	08-29-11	0.3	8.4	9.2	82.1	88.7	2.1	89.7	637	38
Lab #0755	09-28-11	0.2	7.7	8.6	83.5	89.1	2.1	90.6	646	38
Lab #1139	12-13-11	0.2	9.6	8.0	82.2	89.5	1.9	89.4	640	34
FARMERS PRODUCE EXCHANGE, LEBANON, MO										
CONCO QUARRIES INC Q US 160, WILLARD, MO										
Lab #0768	09-29-11	0.3	13.1	14.8	71.8	97.5	0.2	84.0	655	3
MFA AGRI SERVICES, LINEVILLE, IA										
KELLY LIMESTONE LLC, KIRKSVILLE, MO										
Lab #0722	09-19-11	0.2	5.8	5.9	88.1	88.4	1.2	93.1	658	22
Lab #0827	10-06-11	0.2	5.3	4.9	89.6	88.2	1.2	93.9	662	23
Lab #1020	11-16-11	0.2	5.6	5.6	88.6	88.4	1.3	93.4	660	24
Lab #1118	12-06-11	0.3	4.0	5.3	90.4	89.8	1.2	94.6	679	23
MFA INC, COLUMBIA, MO										
Lab #0490	08-01-11	0.0	2.5	3.1	94.4	92.1	0.8	96.9	714	16
MFA AGRI SERVICE, MACON, MO										
KELLY LIMESTONE LLC, KIRKSVILLE, MO										
Lab #0660	09-06-11	0.0	11.9	10.1	78.0	88.8	2.1	87.0	618	37
Lab #0844	10-12-11	0.2	7.1	7.5	85.2	89.8	2.5	91.5	657	46
MFA AGRI SERVICE, MILAN, MO										
MK MINERALS INC., WATHENA, KS										
Lab #0730	09-21-11	0.2	10.0	9.8	80.0	89.6	2.1	88.4	634	37
Lab #1050	11-21-11	0.1	11.4	10.1	78.4	89.5	2.2	87.3	625	38
KELLY LIMESTONE LLC, KIRKSVILLE, MO										
Lab #0823	10-04-11	0.0	9.4	9.0	81.6	88.9	2.1	89.4	635	38

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TABLE 2

AGRICULTURAL LIMING MATERIALS SAMPLED FROM

JULY 1 THROUGH DECEMBER 31, 2011

Dealer and Producer	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
MFA AGRI SERVICE, NEW CAMBRIA, MO KELLY LIMESTONE LLC, KIRKSVILLE, MO										
Lab #0847	10-13-11	0.2	7.9	7.8	84.1	89.2	1.9	90.8	648	34
MFA AGRI SERVICE, ODESSA, MO MK MINERALS INC., WATHENA, KS										
Lab #0595	08-19-11	0.3	0.6	1.8	97.3	89.5	0.6	98.5	705	12
FRED WEBER INC.-BLUFF CITY MINERALS, ALTON, IL										
Lab #1072	11-29-11	0.0	0.5	1.8	97.7	87.2	0.7	98.9	690	14
MFA AGRI SERVICE, OWENSVILLE, MO MFA INC, COLUMBIA, MO										
Lab #0640	08-29-11	0.1	7.0	9.7	83.2	87.7	1.0	90.8	637	18
MISSOURI LIME AND MATERIAL CO., INC, EUREKA, MO										
Lab #0553	08-09-11	0.1	0.7	2.3	96.9	99.8	8.3	98.5	786	163
Lab #0641	08-29-11	0.1	0.9	3.1	95.9	96.0	6.8	98.0	753	133
Lab #0715	09-20-11	0.1	1.4	5.6	92.9	97.3	5.6	96.6	752	108
MFA AGRI SERVICE, ST CLAIR, MO MFA INC, COLUMBIA, MO										
Lab #0607	08-22-11	0.3	4.8	6.9	88.0	89.3	2.1	93.3	667	39
MISSOURI LIME AND MATERIAL CO., INC, EUREKA, MO										
Lab #0608	08-23-11	1.9	10.7	5.1	82.3	99.2	8.5	88.0	699	150
MFA AGRI SERVICE INC,-BULK PLANT, SALEM, MO MFA INC, COLUMBIA, MO										
Lab #0771	09-27-11	0.1	9.4	7.3	83.2	89.1	2.3	89.9	641	41
Lab #1150	12-14-11	0.2	8.6	9.9	81.3	90.3	2.1	89.4	646	38
MFA EXCHANGE, SALEM, MO WASHINGTON COUNTY AGGREGATES, INC., POTOSI, MO										
Lab #0781	09-27-11	5.1	32.9	15.0	47.0	96.9	11.4	64.2	498	146
Lab #1151	12-14-11	1.5	30.1	14.2	54.2	95.5	10.3	70.2	537	145
MFA EXCHANGE, SALEM, MO										
Lab #0770	09-27-11	0.0	2.8	3.9	93.3	91.8	11.2	96.3	708	216
MFA AGRI SERVICE, SALISBURY, MO KELLY LIMESTONE LLC, KIRKSVILLE, MO										
Lab #0989	11-08-11	0.0	9.7	10.3	80.0	90.0	2.3	88.6	638	41
MFA AGRI SERVICE, TRENTON, MO KELLY LIMESTONE LLC, KIRKSVILLE, MO										
Lab #1022	11-16-11	0.0	1.7	3.2	95.1	88.1	0.7	97.4	687	14
MK MINERALS INC., WATHENA, KS										
Lab #0580	08-18-11	0.0	1.1	4.2	94.7	87.7	0.6	97.5	684	12
Lab #0725	09-19-11	0.1	1.7	3.0	95.2	87.4	0.7	97.4	681	14
Lab #0829	10-06-11	0.0	1.1	3.1	95.8	87.9	0.6	97.9	689	12
LEO O'LAUGHLIN, MACON, MO CENTRAL STONE COMPANY - HUNTINGTON, HANNIBAL, MO										
Lab #0613	08-24-11	0.2	30.3	15.3	54.2	91.2	0.3	71.0	518	4
Lab #0659	09-06-11	0.2	30.4	13.9	55.5	91.3	0.3	71.4	522	4
Lab #0845	10-12-11	0.9	33.4	13.8	51.9	91.4	0.5	68.5	501	7
Lab #0947	10-28-11	1.0	39.0	13.9	46.1	92.6	0.9	64.2	476	12
Lab #1023	11-17-11	0.6	34.3	14.1	51.0	93.0	0.6	68.0	506	8
Lab #1115	12-05-11	0.4	31.8	14.1	53.7	91.7	0.7	70.1	514	10
Lab #1120	12-08-11	0.5	33.0	14.3	52.2	92.6	0.6	69.0	511	8
LEO O'LAUGHLIN INC, MARCELINE, MO CENTRAL STONE COMPANY - HUNTINGTON, HANNIBAL, MO										
Lab #0614	08-24-11	0.4	31.8	13.1	54.7	92.5	0.4	70.5	522	6
Lab #0658	09-06-11	0.3	32.0	15.6	52.1	91.9	0.3	69.5	511	4
Lab #0846	10-12-11	0.3	31.6	15.8	52.3	90.4	0.3	69.7	504	4
Lab #1024	11-17-11	0.9	38.4	12.4	48.3	91.4	0.8	65.3	478	10
Lab #1116	12-05-11	0.8	36.3	13.2	49.7	93.7	0.6	66.7	500	8
R & M FEED, POTOSI, MO FRED WEBER INC.-BLUFF CITY MINERALS, ALTON, IL										
Lab #0801	10-05-11	0.4	6.7	8.0	84.9	90.7	2.3	91.4	663	42
RICHLAND PLANT FOODS, RICHLAND, MO LANGE STEGMANN FERTILZIER, ST LOUIS, MO										
Lab #0562	08-16-11	0.1	8.9	13.8	77.2	96.7	0.2	87.7	678	4
SCHAEPERKOETTER STORE, MT STERLING, MO CONCO QUARRIES INC, SPRINGFIELD, MO										
Lab #0555	08-09-11	0.0	8.3	13.3	78.4	97.2	0.2	88.5	688	4
Lab #0712	09-20-11	0.0	10.6	13.3	76.1	96.4	0.1	86.7	669	2
Lab #0937	10-25-11	0.0	12.7	15.2	72.1	95.5	0.5	84.4	645	8
Lab #0985	11-10-11	0.0	12.5	14.9	72.6	97.2	0.2	84.7	658	3

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TABLE 2

AGRICULTURAL LIMING MATERIALS SAMPLED FROM
JULY 1 THROUGH DECEMBER 31, 2011

Dealer and Producer	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
SKYLINE MATERIALS, LA PLATA, MO										
SKYLINE MATERIALS - NEWARK, DECORAH, IA										
Lab #0534	08-11-11	8.1	42.8	7.4	41.7	90.6	2.3	56.8	412	26
Lab #0676	09-15-11	7.5	41.2	8.6	42.7	89.9	2.1	58.2	418	24
Lab #0843	10-12-11	6.4	41.9	8.0	43.7	90.7	2.4	59.0	428	28
Lab #0946	10-28-11	6.9	41.8	9.0	42.3	91.9	1.7	58.2	428	20
Lab #1076	11-28-11	3.7	37.5	7.2	51.6	90.6	3.6	65.3	473	47
Lab #1119	12-08-11	3.7	35.9	6.8	53.6	90.8	3.6	66.7	484	48
STOCKMAN FEED & FERTILIZER, JEFFERSON CITY, MO										
LANGE STEGMANN FERTILIZER, ST LOUIS, MO										
Lab #0549	08-08-11	0.2	7.6	7.3	84.9	87.3	1.8	91.2	637	33
Lab #0772	09-28-11	0.2	5.4	7.7	86.7	89.2	2.0	92.7	661	37
WORTHINGTON AG SERVICE, WORTHINGTON, MO										
KELLY LIMESTONE LLC, KIRKSVILLE, MO										
Lab #0493	08-04-11	0.1	8.2	8.9	82.8	88.3	2.2	90.2	637	40
Lab #0756	09-28-11	0.0	8.0	9.0	83.0	89.4	2.3	90.4	647	42

College of Agriculture, Food and Natural Resources
Fertilizer/Ag Lime Program
FY11 Income & Disbursements

	Ag Lime Fees	Fertilizer Fees	Other	Combined
CARRYFORWARD FY10				
Contingency			554,526.39	554,526.39
Other			<u>255,067.59</u>	<u>255,067.59</u>
Total Carryforward Available			809,593.98	809,593.98
REVENUE				
Tonnage Fees	106,103.52	1,018,557.49		1,124,661.01
Audits	0.00	133,161.85		133,161.85
Permit Fees	19,800.00	131,771.49		151,571.49
Deficiency Payments	0.00	26,887.50		26,887.50
Late Payment Fees	1,678.22	9,760.23		11,438.45
Total Revenue Available	<u>127,581.74</u>	<u>1,320,138.56</u>		<u>1,447,720.30</u>
Total Funds Available	<u>127,581.74</u>	<u>1,320,138.56</u>	809,593.98	<u>2,257,314.28</u>
DISBURSEMENTS				
Inspection Services				492,761.52
Analytical Services				416,701.79
Experiment Station Chem Lab Support ¹				59,117.19
Special Equipment Reserve ²				35,000.00
Annual Research Report				7,004.29
Research Proposals Funded				
FY09 Continuing Proposals				115,737.00
FY10 Continuing Proposals				135,638.00
FY11 New Proposals				169,758.00
Total Disbursements				<u>1,431,717.79</u>
CONTINGENCY				
Contingency Funds Held in Reserve				68,000.00
Unencumbered Funds ³				573,996.50
Funds Available in Expenditure Accounts				<u>183,599.99</u>
Total Contingency				825,596.49
Total Disbursements/Contingency				<u>2,257,314.28</u>

Footnotes:

¹ S&W support to Experiment Station Chem Lab administrative personnel

² Per June 30, 1998 Fertilizer/Ag Lime Committee meeting minutes, a \$50,000 (later changed to \$35,000) equipment reserve has been made available to T. Mawhinney for equipment upgrades in Analytical Services.

³ Held in reserve to fund second and third year of multi-year research proposals.



Agricultural Experiment Station

University of Missouri-Columbia

Office of the Director
Fertilizer Control Services

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April 4, 2012

TO: AG LIMING MATERIALS PRODUCERS AND DISTRIBUTORS
SUBJECT: PRODUCER PERMITS TO SELL AG LIMING MATERIALS
IN MISSOURI FOR FISCAL YEAR 2011-12.

The following producers have been issued permits to sell ag liming materials in Missouri for the fiscal year ending June 30, 2012. You will be notified when additional permits are issued.

Sales to other registered producers are exempt from inspection fee, but must be reported as a sales transaction semi-annually.

The &dLast&d@ producer selling agricultural liming materials to a &dNon&d@-producer is responsible for paying the tonnage inspection fee to the Director of the Missouri Agricultural Experiment Station, Columbia, Missouri (Missouri Agricultural Liming Materials Law 266.500 to 266.550).

0010	76 QUARRY	1726 QUARRY ROAD	MANSFIELD MO 65704
0020	ADRIAN QUARRY LLC	PO BOX 240	ADRIAN MO 64720
0030	ALBY QUARRY	P.O. BOX 206	CARLINVILLE IL 62626
0050	ALLEN QUARRIES INC	PO BOX A	LOCKWOOD MO 65682
0060	AMERICAN ROCK, LLC	131 INDUSTRIAL PARK DR., STE 3	HOLLISTER MO 65672
0062	APAC - KANSAS, INC. - CAMERON	PO BOX 276	PLATTSBURG MO 64477
0063	APAC - KANSAS, INC. - GOWER	PO BOX 276	PLATTSBURG MO 64477
0064	APAC - KANSAS, INC. - KINGSTON	PO BOX 276	PLATTSBURG MO 64477
0065	APAC - KANSAS, INC. - LATHROP	PO BOX 276	PLATTSBURG MO 64477
0066	APAC - KANSAS, INC. - STANBERRY	PO BOX 276	PLATTSBURG MO 64477
0067	APAC-CENTRAL INC.-N.HARRISON QUARRY	755 E. MILLSAP RD	FAYETTEVILLE AR 72703
0068	APAC-CENTRAL INC. -VALLEY SPRINGS	755 E MILLSAP RD	FAYETTEVILLE AR 72703
0070	APAC-MISSOURI, INC - BAGNELL 13	PO BOX 23910	OVERLAND PARK KS 66283
0080	APAC-MISSOURI, INC. - BOONVILLE	PO BOX 23910	OVERLAND PARK KS 66283
0090	APAC - BRICKEY'S STONE	13588 BRICKEY'S ROAD	BLOOMSDALE MO 63627
0095	APAC - KANSAS & MISSOURI -DEFIANCE	PO BOX 23910	OVERLAND PARK KS 66283
0100	APAC-MISSOURI GALLATIN	23859 OTTER AVE	GALLATIN MO 64640
0110	APAC-MISSOURI, INC. - LINN CREEK	1410 BUSINESS PARK RD	LINN CREEK MO 65052
0120	APAC-CENTRAL, INC. - BUSIEK	755 E MILLSAP DR	FAYETTEVILLE AR 72703
0130	APAC-MISSOURI, INC. - MARSHALL	RT 1 BOX 33	MARSHALL MO 65340
0140	APAC-MISSOURI, INC.-MARSHALL (WEST)	PO BOX 23910	OVERLAND PARK KS 66213
0150	APAC-MISSOURI, INC - PETTIS QUARRY	PO BOX 23910	OVERLAND PARK KS 66283
0160	APAC-CENTRAL INC. - ROARK CREEK	755 E. MILSAP DR.	FAYETTEVILLE AR 72703
0170	ARKANSAS LIME COMPANY, INC.	P O BOX 2356	BATESVILLE AR 72503
0180	MINERALS PROCESSING	PO BOX 119	MAUMEE OH 43537
0200	ASH GROVES AGGREGATES-DEVER	P.O. BOX 70	BUTLER MO 64730
0210	ASH GROVE AGGREGATES-FAIR GROVE	P.O. BOX 70	BUTLER MO 64730
0220	ASH GROVE AGGREGATES-FAIR PLAY	PO BOX 70	BUTLER MO 64730
0240	ASH GROVE AGGREGATES INC-S&K	P.O. BOX 70	BUTLER MO 64730
0260	ASH GROVE AGGREGATES INC-LACYGNE	P.O. BOX 70	BUTLER MO 64730
0270	ASH GROVE AGGREGATES INC-MARSHFIELD	P.O. BOX 70	BUTLER MO 64730
0280	ASH GROVE AGGREGATES INC-MONTEVALLO	P.O. BOX 70	BUTLER MO 64730
0290	ASH GROVE AGGREGATES INC-OSCEOLA	P.O. BOX 70	BUTLER MO 64730
0300	ASH GROVE AGGREGATES, INC-SEAGRAVES	P.O. BOX 70	BUTLER MO 64730
0310	ASH GROVE AGGREGATES INC.-STOCKTON	P.O. BOX 70	BUTLER MO 64730
0320	ASH GROVE AGGREGATES INC-WHEATLAND	P.O. BOX 70	BUTLER MO 64730
0330	ASH GROVE AGGREGATES INC-BOLIVAR	P.O. BOX 70	BUTLER MO 64730
0340	ASH GROVE AGGREGATES - KIFER	P.O. BOX 70	BUTLER MO 64730
0350	ASH GROVE AGGREGATES INC-BUFFALO	P.O. BOX 70	BUTLER MO 64730
0360	BAILEY QUARRIES INC-CHESAPEAKE Q.	22699 HWY 174	MT VERNON MO 65712
0380	BAILEY QUARRIES INC-JANE	P.O. BOX 430	REPUBLIC MO 65738
0390	BAILEY QUARRIES, INC.-MADRY QUARRY	RT. #1 BOX 96AA	VERONA MO 65769
0400	BAILEY QUARRIES - SARCOXIE	P.O. BOX 430	REPUBLIC MO 65837
0410	BAILEY QUARRIES INC-STOCKTON	16370 S 1225 RD	STOCKTON MO 65785
0420	BARBER & SONS AGGREGATES	11400 S 7 HWY	LEE'S SUMMIT MO 64063
0430	BARRETT MATERIALS INC	3880 BOEUF CREEK RD	NEW HAVEN MO 63068
0440	BASE ROCK MINERALS	6801 VOTECH RD	BONNE TERRE MO 63628
0460	BOONE QUARRIES INC - WEST	2604 N. STADIUM BLVD.	COLUMBIA MO 65202

0470	BOONE QUARRIES INC - NORTH	2604 N STADIUM BLVD	COLUMBIA MO 65202
0480	BOONE QUARRIES - EAST	2604 N STADIUM BLVD	COLUMBIA MO 65202
0505	BUSSEN QUARRIES, INC.-ANTIRE QUARRY	5000 BUSSEN RD	ST LOUIS MO 63129
0510	CALCIUM PRODUCTS, INC.	P.O. BOX 281	GILMORE CITY IA 50541
0520	CAPITAL QUARRIES CO., INC.-ARCADIA	PO BOX 105050	JEFFERSON CITY MO 64110
0530	CAPITAL QUARRIES, INC.- DANVILLE	PO BOX 105050	JEFFERSON CITY MO 64110
0540	CAPTIAL QUARRIES CO., INC- EUGENE	PO BOX 105050	JEFFERSON CITY MO 65109
0550	CAPITAL QUARRIES CO., INC.-OWENSVIL	P.O. BOX 105050	JEFFERSON CITY MO 65110
0560	CAPITAL QUARRIES, INC-STADIUM WEST	PO BOX 105050	JEFFERSON CITY MO 64110
0570	CAPITAL QUARRIES INC-ROLLA Q #4	PO BOX 105050	JEFFERSON CITY MO 65110
0580	CAPITAL QUARRIES INC-CALIFORNIA Q#5	PO BOX 105050	JEFFERSON CITY MO 65110
0590	CAPITAL QUARRIES INC.-HERMANN #14	PO BOX 105050	JEFFERSON CITY MO 65110
0600	CAPITAL QUARRIES, INC - SALEM	PO BOX 105050	JEFFERSON CITY MO 65110
0610	CAPITAL QUARRIES INC-SULLIVAN	PO BOX 105050	JEFFERSON CITY MO 64110
0620	CARROLL COUNTY STONE, INC.	PO BOX 430	REPUBLIC MO 65738
0630	CARTHAGE CRUSHED LIMESTONE	P.O. BOX 1086	CARTHAGE MO 64836
0640	CENTRAL STONE COMPANY - HUNTINGTON	46445 SWEETBAY LANE	HANNIBAL MO 63401
0650	CENTRAL STONE COMPANY-ANTONIA	46445 SWEETBAY LANE	HANNIBAL MO 63401-7211
0660	CENTRAL STONE COMPANY - BETHEL	6015 SHELBY 2342	SHELBYVILLE MO 63469-2237
0670	CENTRAL STONE COMPANY - FARMINGTON	2339 HIGHWAY H	FARMINGTON MO 63640
0680	CENTRAL STONE CO - FORT BELLE - #31	14200 LEWIS & CLARK	FLORISSANT MO 63034
0690	CENTRAL STONE COMPANY - PARIS	16527 HWY 15	PARIS MO 65275
0700	CENTRAL STONE COMPANY - CURRYVILLE	15435 PIKE 27	CURRYVILLE MO 63339-2114
0710	CENTRAL STONE COMPANY - PERRY	46445 SWEETBAY LANE	HANNIBAL MO 63401-7211
0720	CENTRAL STONE COMPANY - EWING	46445 SWEETBAY LANE	HANNIBAL MO 63401-7211
0730	CENTRAL STONE COMPANY - TAYLOR	7040 COUNTY RD 344	TAYLOR MO 63471-0095
0745	CLAY COUNTY MATERIALS	17815 E FOSTER ROAD	LIBERTY MO 64068
0750	CLEVER STONE CO	1075 WISE HILL RD	CLEVER MO 65631
0780	CONCO QUARRIES INC Q US 160	P.O. BOX 172	WILLARD MO 65781
0790	COUNTY LINE QUARRY	58 BETHEL CHURCH RD	WELLSVILLE MO 63384
0800	COUNTY LINE STONE	BOX 542	CASSVILLE MO 65625
0810	CRAWFORD LIME & MATERIAL CO	63 WEBER RD	CUBA MO 65453
0820	CRIDER BROTHERS LIME CO., INC.	PO BOX 35	EMINENCE MO 65466
0840	D & D SUPPLY	14925 S. BYNUM RD	LONE JACK MO 64070-9508
0860	DOSS & HARPER STONE CO.	PO BOX 888	HOUSTON MO 65775
0870	DOSS & HARPER STONE CO	P O BOX 888	WEST PLAINS MO 65775
0880	DOUBLE EAGLE AGGREGATES	3850 LAWRENCE 1177	MILLER MO 65707
0890	DOUBLE EAGLE AGGREGATES CO., INC	3850 LAWRENCE 1177	MILLER MO 65707
0910	EVERETT QUARRIES #1-LATHROP	PO BOX 276	PLATTSBURG MO 64477
0920	EVERETT QUARRIES #6-KING	PO BOX 276	PLATTSBURG MO 64477
0930	EVERETT QUARRIES #53-CAMERON	PO BOX 276	PLATTSBURG MO 64477
0940	EVERETT QUARRIES #54-GOWER	PO BOX 276	PLATTSBURG MO 64477
0950	EVERETT QUARRIES #59-STANBERRY	P.O. BOX 276	PLATTSBURG MO 64477
0960	FALL VALLEY STONE, INC.	21954 HWY 174	MT. VERNON MO 65712
0980	FISCHER QUARRIES LLC	21427 DUNHAM DR	HUGHESVILLE MO 65334
0990	FISCHER QUARRY & HAULING, LLC	25501 STATE RTE. Z	ST. MARY MO 63673
1005	GABEL STONE COMPANY, INC	1760 STATE RT A.M.	WILLOW SPRINGS MO 65793
1010	GABEL STONE COMPANY INC.	2092 COUNTY RD 5900	WILLOW SPRINGS MO 65793
1050	HIGGINS - MEEKER QUARRIES LLC	951 SW 51 RD	DEEPWATER MO 64740
1060	HIGGINS QUARRY, LLC	3857 HIGHWAY 50 W.	LOOSE CREEK MO 65054
1080	HILTY QUARRIES, INC. - QUARLES	PO BOX 407	CLINTON MO 64735
1090	HILTY QUARRIES, INC - LEETON	PO BOX 407	CLINTON MO 64735
1100	HILTY QUARRIES, INC. - MONTROSE	PO BOX 407	CLINTON MO 64735
1110	HILTY QUARRIES, INC - SOUTH DELL	PO BOX 407	CLINTON MO 64735
1120	HILTY QUARRIES, INC - TIGHTWAD	PO BOX 407	CLINTON MO 64735
1130	HILTY QUARRIES, INC. - URICH	PO BOX 407	CLINTON MO 64735
1140	HILTY QUARRIES INC.- WARRENSBURG	P.O. BOX 407	CLINTON MO 64735
1150	HOSTETLER QUARRY, LLC	63 STERLING LN	BUFFALO MO 65622
1160	HORN QUARRY, LLC	BOX 152	BRECKENRIDGE MO 64625
1170	HUNT-MARTIN MATERIALS	PO BOX 12111	PARKVILLE MO 64152-0111
1190	HUNT-MARTIN MATERIALS - STAMPER	13500 NW INTERURBAN RD	KANSAS CITY MO 64163-1314
1200	HUNTER STONE CO	RT 2 BOX 2348	ELLSINORE MO 63937
1210	HUTCHENS CONSTRUCTION-PURDY	1007 MAIN	CASSVILLE MO 65625
1220	HUTCHENS CONSTRUCTION-EAGLE ROCK	1007 MAIN	CASSVILLE MO 65625
1230	HUTCHENS CONSTRUCTION CO-SHELL KNOB	1007 MAIN ST	CASSVILLE MO 65265
1240	HUTCHENS CONSTRUCTION-WASHBURN	1007 MAIN	CASSVILLE MO 65625
1245	IDEKER INC	PO BOX 7140	ST JOSEPH MO 64507
1250	JASPER STONE LLC	13275 THORN RD	JASPER MO 64755
1260	JENKINS QUARRY	P.O. BOX 542	CASSVILLE MO 65625-0542
1270	JIMMY SANDERS, INC	PO BOX 197	LEACHVILLE AR 72438
1280	JOPLIN STONE CO Q DUENWEG	4378 COUNTY RD 190	JOPLIN MO 64801
1290	LEO JOURNAGAN CONSTRUCTION CO, INC	3003 E. CHESTNUT EXPY	SPRINGFIELD MO 65802
1300	KELLY LIMESTONE LLC	PO BOX 725	KIRKSVILLE MO 63501
1310	KELLEY QUARRY	19695 N HWY 133	CROCKER MO 65452
1320	KEMP STONE, INC	P.O. BOX 949	PRYOR OK 74362
1340	KERFORD LIMESTONE CO	PO BOX 449	WEEPING WATER NE 68463
1360	KNOX COUNTY STONE CO	PO BOX 39	EDINA MO 63537-0039
1390	L & W QUARRIES, INC - CLARKDALE #8	PO BOX 335	CENTERVILLE IA 52544
1400	L & W QUARRIES, INC - WALNUT CITY	PO BOX 335	CENTERVILLE IA 52544
1410	L & W QUARRIES INC.	P.O. BOX 335	CENTERVILLE IA 52544
1440	LILE QUARRY INC.	P.O. BOX 489	STRAFFORD MO 65757
1460	MAGRUDER LIMESTONE CO-ASHLEY	13614 PIKE 496	BOWLING GREEN MO 63334
1470	MAGRUDER LIMESTONE CO, INC.-BOWLING	13614 PIKE 496	BOWLING GREEN MO 63334
1480	MAGRUDER LIMESTONE CO-FRANKFORD	13614 PIKE 496	BOWLING GREEN MO 63334
1490	MAGRUDER LIMESTONE CO. - SHELBYNA	255 WATSON RD	TROY MO 63379
1500	MAGRUDER LIMESTONE - SILEX QUARRY	255 WATSON RD	TROY MO 63379
1510	MAGRUDER LIMESTONE CO Q TROY	255 WATSON ROAD	TROY MO 63379
1520	MANSFIELD LIME & STONE	1726 QUARRY ROAD	MANSFIELD MO 65704
1560	MARTIN MARIETTA AGG - APPLETON	521 QUARRY LN	PERRYVILLE MO 63775
1570	MARTIN MARIETTA AGGREGATE-FREDONIA	297 FREDONIA QUARRY ROAD	FREDONIA KY 42411
1580	MARTIN MARIETTA AGG-PERRYVILLE	521 QUARRY LANE	PERRYVILLE MO 63775

1610 MERTENS CONST CO-AUXVASSE
 1620 MERTENS CONST CO-Q-REFORM
 1630 MFA INC
 1640 MID-COUNTY MATERIALS
 1645 MID-MISSOURI LIMESTONE, INC-BIG SPR
 1650 MID-MISSOURI LIMESTONE INC-MBQ
 1660 MID-MISSOURI LIMESTONE, INC.-HOUSTO
 1670 MID-MISSOURI LIMESTONE-RIGGS
 1690 MIDWEST MINERALS, INC - FORT SCOTT
 1700 MIDWEST MINERALS INC - JASPER
 1720 MIDWEST STONE LLC-WHITewater
 1730 MISSISSIPPI LIME COMPANY
 1750 MISSOURI LIME AND MATERIAL CO., INC
 1770 MK MINERALS INC.
 1790 MO VALLEY GRAIN & PELLETIZING
 1800 MORRIS ROCK
 1810 MOUNTAIN GROVE QUARRY
 1820 KEITH MURRAY
 1840 NEMO SAND & GRAVEL, QUARRY
 1971 NORRIS QUARRIES, LLC-AMAZONIA
 1972 NORRIS QUARRIES, LLC-BARNARD
 1973 NORRIS QUARRIES, LLC-BETHANY
 1974 NORRIS QUARRIES, LLC - BREIT
 1975 NORRIS QUARRIES, LLC-BLUE MOUND
 1976 NORRIS QUARRIES, LLC-GALLATIN
 1977 NORRIS QUARRIES, LLC- GOODEN
 1979 NORRIS QUARRIES, LLC - EAST
 1981 NORRIS QUARRIES, LLC-JEFFRIES
 1982 NORRIS QUARRIES, LLC-MAITLAND
 1984 NORRIS QUARRIES, LLC-PRINCETON
 1985 NORRIS QUARRIES, LLC- TRENTON
 1986 NORRIS QUARRIES, LLC-NEW POINT
 1995 OAKLEY FERTILIZER, INC
 2000 OSAGE QUARRIES, INC
 2010 PELLETIZING COMPANY INC
 2020 PHENIX ROCK
 2060 PRESTAGE QUARRIES INC
 2080 PRAIRIE CREEK TERMINAL SERVICES INC
 2100 RAY COUNTY STONE
 2140 S & A CONSTRUCTION LTD
 2170 SHILDBERG CONST. CO.-DECATUR QUARRY
 2180 SCHILDBERG CONST. CO.-GRAHAM MO Q
 2190 SCHILDBERG CONST. CO.-SHAMBAUGH Q
 2200 SCHILDBERG CONST. CO.-WATTERSON
 2210 SHAWNEE STONE - CYPRESS PLANT
 2220 SHAWNEE STONE - JONESBORO PLANT
 2240 SIEGEL GRAVEL & EXCAVATING
 2250 SCAGGS ROCK-N-LIME, INC.
 2260 SKYLINE MATERIALS - NEWARK
 2270 SKYLINE MATERIALS-GLASGOW
 2280 SOUTH CENTRAL COOP
 2290 SMASAL AGGREGATE
 2310 SPRINGFIELD UNDERGROUND, INC.
 2320 S-S-S INC
 2330 STOCKMAN QUARRY, LLC
 2340 STRACK STONE
 2350 STRACK STONE CO. - LODI, LLC
 2365 T&M STONE QUARRY, LLC
 2370 TABLE ROCK ASPHALT CONST CO INC
 2390 TAYLOR QUARRIES
 2410 TOWER ROCK STONE CO
 2420 TOWER ROCK STONE CO
 2450 TRAGER LIMESTONE-NETTLETON
 2460 TRAGER LIMESTONE LLC-GALLATIN
 2470 TWIN LAKES QUARRIES INC
 2500 UEHLIN QUARRY
 2510 UNITED SUPPLIERS
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 2540 WADE AG PRODUCTS Q DREXEL
 2550 WASHINGTON COUNTY AGGREGATES, INC.
 2560 FRED WEBER INC.-AUBURN QUARRY
 2570 FRED WEBER INC.-BLUFF CITY MINERALS
 2580 FRED WEBER, INC - FESTUS STONE
 2590 FRED WEBER, INC - FOLEY QUARRY
 2600 FRED WEBER, INC.-NEW MELLE STONE
 2610 FRED WEBER INC-NORTH QUARRY
 2620 FRED WEBER, INC. - SOUTH STONE
 2630 WHITE ROCK QUARRIES OF LINCOLN CO
 2640 WILKERSON BROS QUARRY
 2650 WILLARD ASPHALT - #18 SLEEPER
 2660 WILLARD ASPHALT PAVING,- #19
 2670 WILLARD QUARRY-SLEEPER
 2680 WILLARD QUARRIES- ST ROBERT
 2690 WILLIAMSVILLE STONE CO
 P.O. BOX 52
 PO BOX 52
 201 RAY YOUNG DR
 503 HISTORIC 66 WEST
 PO BOX 52
 P O BOX 52
 PO BOX 52
 PO BOX 52
 709 N. LOCUST, PO BOX 412
 PO BOX 412
 329 JOSEPHVILLE ROAD
 16147 HWY US 61
 6800 BUSSEN RD
 1025 VERNON RD
 122 S. 1ST ST.
 18100 S 200 ROAD
 2504 LIMESTONE DR
 9599 HWY M
 HC 77 BOX 651
 9355 STATE ROUTE T
 36714 JET ROAD
 29365 OUTER RD
 16298 BUSINESS HWY 71
 24049 HWY Z
 21901 STATE HWY 13
 38139 230th STREET
 PO BOX 142
 EAST BAY PORT RD
 34635 HOLT 190
 RR1 BOX 245
 38 NW HWY 146
 23351 HWY B
 PO BOX 17880
 PO BOX 52
 248 ROGER RD
 12940 W FARM ROAD 34
 P O BOX 787
 PO BOX 9
 17279 MADDUX RD
 P.O. BOX 20
 P.O. BOX 358
 P O BOX 358
 P.O. BOX 358
 PO BOX 358
 8395 STATE RT 37 SOUTH
 1275 JONESBORO QUARRY ROAD
 9175 BLUE BIRD DR
 PO BOX 106
 PO BOX 127
 821-CO RD 317
 1301 MAIN STREET
 PO BOX 172
 P.O. BOX 2240
 PO BOX 474
 3918 STOCKMAN LANE
 5120 STATE HWY 74
 5120 ST HWY 74
 1211 STATE HWY OO
 PO BOX 1165
 670 N DADE 1
 2249 E STATE HIGHWAY AB
 ROUTE 2-LOWER FRENCHMAN RD-BOX 111
 6468 ST HWY Y
 6468 HWY Y
 PO BOX 705
 P.O. BOX 214
 PO BOX 538
 PO BOX 38
 P O BOX 38
 PO BOX 399
 3903 HWY B
 4007 COLLEGE AVE
 838 VFW DRIVE
 399 OLD HWY 79
 2710 HIGHWAY F
 2320 CREVE COEUR MILL RD-BOX 2501
 4200 NEW BAUMGARTNER
 40 WHITE ROCK LANE
 20429 MONROE RD 962
 PO BOX 869
 PO BOX 869
 PO BOX 1183
 P.O. BOX 1183
 PO BOX 234
 KINGDOM CITY MO 65262
 KINGDOM CITY MO 65252
 COLUMBIA MO 65201-3599
 WAYNESVILLE MO 65583
 KINGDOM CITY MO 65262
 KINGDOM CITY MO 65262
 KINGDOM CITY MO 65262
 KINGDOM CITY MO 65262
 PITTSBURG KS 66762
 PITTSBURG KS 66762
 WENTZVILLE MO 63385
 STE. GENEVIEVE, MO 63670
 EUREKA MO 63025
 WATHENA KS 66090
 MISSOURI VALLEY IA 51555
 DEERFIELD MO 64741
 MOUNTAIN GROVE MO 65711
 PLATO MO 65552
 PITTSBURG MO 65724
 AMAZONIA MO 64421
 BARNARD MO 64423
 BETHANY MO 64424
 SAVANNAH MO 64485
 DAWN MO 64638
 GALLATIN MO 64640
 RAVENWOOD MO 64479
 HUNTSVILLE MO 65259
 BLYTHEDALE MO 64426
 MAITLAND MO 64466
 PRINCETON MO 64673
 TRENTON MO 64683
 OREGON MO 64473
 NORTH LITTLE ROCK AR 72117
 KINGDOM CITY MO 65262
 GORDONSVILLE TN 38563
 ASH GROVE MO 65604
 TIPTON MO 65081
 ELWOOD IL 60421
 RICHMOND MO 64085
 ALLENDALE MO 64420
 GREENFIELD IA 50849
 GREENFIELD IA 50849
 GREENFIELD IA 50849
 GREENFIELD IA 50849
 CYPRESS IL 62923
 ANNA IL 62906
 VERSAILLES MO 65084
 PATTERSON MO 63956
 DECORAH IA 52101
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 CAINSVILLE MO 64632
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 SPRINGFIELD MO 65801
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 JEFFERSON CITY MO 65109
 CAPE GIRARDEAU MO 63701
 CAPE GIRARDEAU MO 63701
 WHITEWATER MO 63785
 BRANSON MO 65615
 LOCKWOOD MO 65682
 SCOTT CITY MO 63780-7140
 STE GENEVIEVE MO 63670
 CHILLICOTHE MO 64601
 CHILLOTHIE MO 64601
 MOUNTAIN HOME AR 72653
 AMAZONIA MO 64421
 ELDORA IA 50627
 LACYGNE KS 66040
 LACYGNE KS 66040
 POTOSI MO 63664
 ELSBERRY MO 63343
 ALTON IL 62002
 FESTUS MO 63028
 FOLEY MO 63347-2607
 NEW MELLE MO 63365
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 PARIS MO 65275
 LEBANON MO 65536
 LEBANON MO 65536
 LEBANON MO 65536
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 POPLAR BLUFF MO 63902

Why is Fineness of Grind Important in Liming Materials?

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Agricultural limestone or liming material is used by Missouri farmers and homeowners to eliminate the bad effects of excess soil acidity. The value of liming material in reducing soil acidity depends upon the properties of the liming material as well as field factors such as rate of application, means of incorporation into the soil, and soil characteristics such as kind and amount of clay. Two important measures of the acid neutralizing value of liming material are calcium carbonate equivalent (CCE) and the distribution of particle sizes or fineness of grind. All vendors of liming material sold in Missouri are required by law to provide the buyer quality information based upon CCE and fineness of grind.

Calcium carbonate equivalent expresses the purity of the liming material relative to that of pure CaCO_3 and is determined by measurement of the amount of strong acid neutralized by a known quantity of finely ground liming material. The purity (CCE) does not indicate effectiveness in the field but only that amount of neutralizing ability present in the material. The rules adopted for implementing the Missouri Agricultural Liming Materials Law specify a minimum CCE of 65% (6 CSR 250.10.020(2)).

Liming materials vary in solubility with quick lime (CaO) being very soluble relative to CaCO_3 . Magnesium carbonate (MgCO_3) or materials containing MgCO_3 , such as dolomitic limestone, are even more insoluble (slower to dissolve) than CaCO_3 .

Particle size considerations are included in the lime law to indicate the potential reactivity of the limestone. A minimum of 90% passing the 8-mesh sieve is required by the Missouri lime law [MoRS 266.505 (1)] for the material to be sold as agricultural limestone. Much of the field research done in calibrating limestone applications to plant growth indicated that limestone particles larger than 8-mesh have relatively little effect in changing soil acidity in a 3 to 4 year period (Barber, 1984).

Particle size and solubility determines the rate of reaction of liming materials when placed in acid soil. **Small particle sizes are most effective in neutralizing soil acidity; because, the finer the particles, the more surface area exposed per weight of material.** For example, if one has a 1' x 1' x 1' solid cube of liming material it would have 864 sq. in. of surface area (6 sides times 144 sq. in. per side). Cut that cube into 8 solid cubes each 0.5' x 0.5' x 0.5' doubles the exposed surface area of the material. Finer particles expose more surface area per given weight of limestone.

The particle size distribution of liming material is determined by screening a sample through one or more sieves of varying mesh size. In Missouri, the sieve sizes used are 8-, 40-, and 60-mesh meaning that there are 8, 40, and 60 openings per linear inch. The sieves are nested with the coarsest sieve at the top where the sample is placed. The nest of sieves is covered and a collection pan is placed below the 60-mesh sieve. After shaking the nest of sieves the material held on each screen is weighed and expressed as a percentage of the weight of the entire sample. These percentages are expressed as a value of the effectiveness of each as shown in the table below. The cumulative total of these values makes up the term Fineness Factor.

Screen size	Example Effectiveness	Quantity Weighting	Fineness Factor
Held on the 8-mesh sieve	0%	2%	0
Passed the 8-mesh, held on the 40-mesh	25%	14%	3.5%
Passed the 40-mesh, held on the 60-mesh	60%	34%	20.4%
Passed the 60-mesh	100%	50%	50.0%
Total		100%	73.9%

The weightings placed on the different particle size groups were selected based upon research reports published in literature and extension publications principally from the north central states in the United States. The material included Missouri results. In general, particle size weightings were selected that provided an estimate of the effect of particle size on the neutralizing ability of limestone over a 3 to 4 year period after application **when incorporated** into the upper 6 or so inches of soil in crop production fields. A review by Barber (1984) provided much of the availability information and would be a good reference to use to understand the complexity of providing an broad based estimate of the neutralizing ability of agricultural limestones.

Surface area is important in liming material because dissolution of sparingly soluble materials occurs from the particle surface inward. Furthermore, the solution products of liming materials will move away from the liming material particle only a small distance regardless of size of particle (Stevens, 1990). Thus, to counteract reserve soil acidity many small particles in a volume of soil will be more effective than a few larger particles of the same weight per unit of soil. In actual practice there are some negatives to very finely ground materials. First, the added grinding to get very fine particles adds to the cost of the limestone. Also, care must be taken in transporting and spreading dry fine material because wind easily transports finely ground solids and may cause accidents on highways to the field and will result in unequal spreading over the field.

The purity factor (CCE) and the fineness factor are combined to provide an index of the quality of a given sample of agricultural liming material and are reported in Missouri as Effective Neutralizing Material per ton (ENM/ton). In the fineness sample given above the total fineness factor was 73.9% which is the estimate of the fraction of neutralizing ability of the example limestone that will be effective over a 3 to 4 year period. If we assume that the CCE of the example is 92% the calculation of the ENM/ton is

$$\text{ENM/ton} = 0.92 \times 0.739 \times 800 = 544.$$

Note: the 800 in the equation is the pounds of calcium in 1 ton (2,000 pounds) of pure CaCO_3 .

One of the earliest guides to proper liming of acid soils was to mix the liming materials with the soil months ahead of planting an acid intolerant crop to allow acid neutralization to occur. The finer portion of the liming material (<60-mesh) would be expected to fully dissolve in a few weeks when mixed with acid soil. The larger particle sizes would provide staying power; that is, they would continue to dissolve over time to maintain the target level of acidity for 3 to 4 years. Now that minimum tillage is widely used the rates of limestone likely need to be reduced and the frequency of application increased. This would be especially true if fertilizers are surface applied and not incorporated to plow depth (6 to 8 inches).

At this writing the lime requirements based upon Missouri soil tests are reported in terms of ENM per acre and assume application and incorporation of agricultural lime into a plow layer of 6 to 7 inches. Adjustments to this base value are needed for reduced tillage in crop production and pasture and meadow forage programs. Use of liming materials completely passing a 60-mesh sieve requires more frequent testing for soil acidity buildup because there are no larger particles of liming material to counteract slow acidity build up from acidic precipitation, crop removal and fertilization. Also, increasing the soil pH above 7.0 is undesirable as nutrient availability and herbicide effectiveness may be adversely affected.

In conclusion, agronomists recognize that for most quarry operators aggregate is the product of interest and agricultural limestone is, at best, a sideline and, at worst, a waste product. However, particle size of liming materials is important in Missouri agriculture. Crop production is an acidifying activity which accelerates the natural tendency of soils to become more acid in humid regions. Good liming practices are based upon proper weighting of both fine (<60-mesh) and coarser (8 to 60-mesh) agricultural limestone particles to prevent both under- and over-liming soils.

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Barber, S. A. 1984. Liming materials and practices. Chapter 4 in F. Adams. Soil Acidity and Liming, Second Edition. Agronomy Monograph 12. American Society of Agronomy. Madison, WI.

Stevens, J. J. 1990. Limestone dissolution and pH gradients in soil. Unpublished MS Thesis, Library, University of Missouri, Columbia, MO.

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