

**Missouri
Agricultural Liming
Materials Report**

July 1 to December 31, 2002

Agricultural Experiment Station

University of Missouri-Columbia

AGRICULTURAL LIMING MATERIALS REPORT

JULY 1 THROUGH DECEMBER 31, 2002

This bulletin is a detailed report of official samples obtained under the Missouri Agricultural Liming Materials Law collected from January 1 through June 30, 2002. There were 849 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. Twenty-eight deficient samples are reported, twenty-nine for excessive coarseness and two for low CCE. There were seven "stop sale" order's issued against producer stockpiles for excessive coarseness. Corrective actions taken by the producers have resulted in the release of three of the issued "stop sale" orders.

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	696,205	1,775,151	2,471,356
2003	500,000*	1,500,000*	2,000,000*

* PRELIMINARY ESTIMATE

TABLE 1

AGRICULTURAL LIMING MATERIALS SAMPLED FROM

JULY 1 THROUGH DECEMBER 31, 2002

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 #1100	09-05-02	0.1	42.4	8.6	48.9	87.3	10.2	64.7	452	132
Lab #1429	10-24-02	0.1	41.1	10.0	48.8	83.8	10.0	65.1	436	130
Lab #1643	11-25-02	0.0	43.5	8.7	47.8	89.2	10.4	63.9	456	133
ADRIAN ROCK, INC, ADRIAN, MO										
Stockpile #1										
Lab #1139	09-10-02	1.4	49.1	12.3	37.2	93.7	0.5	56.9	426	6
Lab #1747	12-27-02	0.1	44.2	11.5	44.2	88.2	0.5	62.2	439	6
AIRGAS - MID AMERICA, MOUNTAIN GROVE, MO										
Stockpile #1										
Lab #1152	09-11-02	0.1	0.5	0.6	98.8	118.0	0.1	99.3	937	2
Lab #1293	10-03-02	0.0	0.8	0.5	98.7	116.2	0.2	99.2	922	4
ALBY QUARRY, CARLINVILLE, IL										
ALLEN QUARRIES INC, LOCKWOOD, MO										
Stockpile #1										
Lab #1205	09-16-02	2.5	47.4	14.1	36.0	94.0	0.4	56.3	423	5
APAC-MISSOURI, INC. - BOONVILLE, COLUMBIA, MO										
Stockpile #1										
Lab #0902	08-07-02	4.3	46.7	12.4	36.6	93.1	0.2	55.7	415	2
Lab #1175	09-16-02	5.3	48.9	10.9	34.9	93.7	0.2	53.7	402	2
Lab #1340	10-09-02	2.3	47.8	13.0	36.9	93.7	0.2	56.7	425	2
Lab #1506	11-04-02	1.1	49.4	12.5	37.0	94.7	0.1	56.9	431	1
Lab #1593	11-19-02	1.0	46.7	12.9	39.4	92.3	0.3	58.8	434	4
Lab #1737	12-11-02	1.6	46.9	13.9	37.6	94.9	0.2	57.7	438	2
APAC-MISSOURI, INC., COLUMBIA, MO										
Stockpile #1										
Lab #0862	08-05-02	5.6	43.8	14.1	36.5	95.5	0.2	55.9	427	2
Lab #1126	09-09-02	3.6	38.8	15.3	42.3	92.3	0.2	61.2	452	2
Lab #1272	10-04-02	3.9	43.2	14.4	38.5	90.9	0.2	57.9	421	2
Lab #1486	11-04-02	2.7	41.2	16.2	39.9	91.8	0.2	59.9	440	2
Stockpile #3										
Lab #0861	08-05-02	8.7	47.3	11.5	32.5	91.8	0.2	51.2	376	2
APAC-MISSOURI, INC. - LANAGAN, SPRINGFIELD, MO										
Stockpile #1										
Lab #0904	08-05-02	0.3	46.2	15.0	38.5	89.2	0.7	59.1	421	8
Lab #1236	09-25-02	0.4	43.5	15.4	40.7	88.9	0.6	60.8	433	7
Lab #1521	11-04-02	0.3	41.4	15.8	42.5	88.1	0.7	62.3	439	9
Lab #1727	12-05-02	0.3	43.8	15.0	40.9	78.4	1.1	60.9	382	13
APAC-MISSOURI, INC. - LAURIE, COLUMBIA, MO										
APAC-MISSOURI, INC. - LINN CREEK, LINN CREEK, MO										
Stockpile #2										
Lab #1073	09-04-02	1.3	38.8	15.2	44.7	98.6	11.7	63.5	501	149
Lab #1465	10-30-02	0.8	43.6	14.7	40.9	82.0	9.6	60.6	398	116
APAC-MISSOURI, INC. - COLUMBIA, SPRINGFIELD, MO										
Stockpile #2										
Lab #1097	09-05-02	4.8	42.1	8.6	44.5	88.8	10.8	60.2	428	130
Lab #1427	10-24-02	6.7	43.9	8.1	41.3	87.4	10.2	57.1	399	117
Lab #1641	11-25-02	6.7	42.9	8.3	42.1	85.0	9.9	57.8	393	114
APAC-MISSOURI, INC. - MARSHALL, MARSHALL, MO										
Stockpile #1										
Lab #0898	08-06-02	3.4	51.2	9.9	35.5	79.5	0.7	54.2	345	8
Lab #1027	08-28-02	2.2	45.6	10.7	41.5	84.0	1.9	59.3	399	23
Lab #1194	09-18-02	2.6	42.6	11.3	43.5	84.8	2.5	60.9	413	30
Lab #1312	10-08-02	2.5	50.2	8.9	38.4	83.1	3.2	56.3	374	36
Lab #1457	10-31-02	4.8	45.6	8.3	41.3	83.3	3.5	57.7	384	40
Lab #1633	11-26-02	3.4	50.3	9.0	37.3	81.4	2.3	55.3	360	25
APAC-MISSOURI, INC. - NETTLETON, COLUMBIA, MO										
Stockpile #1										
Lab #1703	12-04-02	6.2	44.8	9.3	39.7	74.7	1.2	56.5	338	14
Stockpile #4										
Lab #1497	10-28-02	17.4*	42.2	6.9	33.5	80.5	0.9	48.2	0	0
APAC MO INC CENTRAL COMPANIES DYL, OSAGE BEACH, MO										

* Does not meet minimum specification for Agricultural Liming Material.

TABLE 1

AGRICULTURAL LIMING MATERIALS SAMPLED FROM

JULY 1 THROUGH DECEMBER 31, 2002

Distributor	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
APAC MISSOURI CENTRAL COMPANIES, OSAGE BEACH, MO										
Stockpile #1										
Lab #1074	09-04-02	3.6	43.8	14.3	38.3	91.2	10.9	57.8	422	126
Stockpile #2										
Lab #1075	09-04-02	4.3	48.4	12.2	35.1	83.3	10.1	54.5	363	110
Lab #1467	10-30-02	2.8	44.1	14.5	38.6	89.5	10.3	58.3	418	120
APAC-MISSOURI INC. - ROARK CREEK, SPRINGFIELD, MO										
Stockpile #1										
Lab #1099	09-05-02	0.9	38.8	10.0	50.3	92.9	10.7	66.0	491	141
Lab #1428	10-24-02	0.8	40.0	9.7	49.5	92.1	10.3	65.3	481	135
Lab #1642	11-25-02	0.5	40.3	9.9	49.3	91.8	10.6	65.3	480	138
ARKANSAS LIME COMPANY, INC., BATESVILLE, AR										
ASC MINERALS PROCESSING, ALLERTON, IL										
ASH GROVE AGGREGATES INC-APPLETON, BUTLER, MO										
ASH GROVE AGGREGATES-ELDORADO SPRINGS, BUTLER, MO										
Stockpile #1										
Lab #0880	08-05-02	0.3	45.9	12.4	41.4	93.2	0.2	60.3	450	2
Lab #0892	08-09-02	0.5	44.4	12.6	42.5	92.8	0.2	61.2	454	2
Lab #1039	08-28-02	0.6	44.1	12.9	42.4	93.3	0.2	61.2	457	2
Lab #1141	09-11-02	0.6	43.8	12.5	43.1	92.8	0.2	61.6	457	2
Lab #1416	10-24-02	0.3	45.0	13.0	41.7	92.3	1.0	60.8	449	12
Lab #1570	11-13-02	0.5	46.3	12.2	41.0	94.2	0.5	47.9	451	6
Lab #1689	12-06-02	0.6	46.5	13.7	39.2	94.2	0.4	59.0	445	5
ASH GROVE AGGREGATES INC-BUTLER, BUTLER, MO										
Stockpile #1										
Lab #1375	10-15-02	0.2	56.2	10.9	32.7	83.9	0.8	53.3	358	9
Lab #1389	10-17-02	0.2	54.5	11.4	33.9	84.0	0.8	54.4	365	9
Lab #1417	10-24-02	3.0	57.7	10.5	28.8	82.3	0.6	49.5	326	6
Lab #1445	10-29-02	2.6	58.0	10.6	28.8	84.4	0.5	49.7	335	5
Lab #1659	11-25-02	3.9	55.3	11.2	29.6	85.4	0.6	50.1	343	6
Lab #1668	11-27-02	2.5	56.9	10.2	30.4	82.4	1.4	50.7	335	14
Lab #1721	12-11-02	1.8	56.5	10.9	30.8	83.0	0.6	51.5	342	6
Stockpile #2										
Lab #1660	11-25-02	2.6	53.6	10.7	33.1	81.2	1.3	52.9	344	14
Lab #1669	11-27-02	2.1	53.5	11.5	32.9	82.9	0.6	53.2	353	6
Lab #1722	12-11-02	2.6	57.9	9.7	29.8	81.7	1.4	50.1	327	14
Stockpile #3										
Lab #0876	08-05-02	2.9	45.5	9.4	42.2	80.9	0.7	59.2	383	8
Lab #1252	09-26-02	4.1	46.6	8.8	40.5	81.1	0.6	57.4	373	7
ASH GROVE AGGREGATES INC-RICHHILL, BUTLER, MO										
Stockpile #1										
Lab #0856	07-30-02	4.9	54.4	9.1	31.6	84.2	0.5	50.7	341	5
Lab #0878	08-05-02	7.7	50.7	8.2	33.4	78.5	0.6	51.0	320	6
Lab #0890	08-09-02	5.8	50.2	9.0	35.0	81.0	0.7	53.0	343	7
Lab #1041	08-28-02	7.2	52.8	8.4	31.6	83.1	0.8	49.8	331	8
Lab #1247	09-25-02	4.7	53.8	9.1	32.4	80.3	0.8	51.3	330	8
Lab #1444	10-29-02	5.3	48.9	8.8	37.0	78.1	0.7	54.5	341	8
Lab #1573	11-15-02	7.0	53.5	8.8	30.7	80.0	0.7	59.7	316	7
Stockpile #2										
Lab #0879	08-05-02	13.1*	47.0	7.6	32.3	76.2	0.6	48.6	0	0
Lab #0891	08-09-02	10.3*	47.7	8.0	34.0	71.8	0.7	50.7	0	0
Lab #1248	09-25-02	7.5	48.4	9.3	34.8	69.6	0.7	52.5	292	7
ASH GROVE AGGREGATES INC-LACYGNE, BUTLER, MO										
Stockpile #3										
Lab #0998	08-19-02	4.0	42.7	9.3	44.0	80.0	0.9	60.3	386	11
Lab #1072	09-03-02	3.6	43.2	8.8	44.4	81.0	1.2	60.5	392	15
Lab #1251	09-26-02	3.7	41.7	9.8	44.8	92.6	1.4	61.1	453	17
Lab #1388	10-17-02	6.9	42.1	9.0	42.0	79.9	1.6	57.9	370	19
ASH GROVE AGGREGATES INC-MARSHFIELD, BUTLER, MO										
Stockpile #3										
Lab #1234	09-23-02	0.6	48.9	11.1	39.4	88.9	10.6	58.3	415	124
ASH GROVE AGGREGATES INC-MONTEVALLO, BUTLER, MO										
Stockpile #1										
Lab #1040	08-28-02	2.8	41.8	11.8	43.6	87.9	1.2	61.1	430	15
Lab #1245	09-24-02	3.9	41.5	10.5	44.1	87.7	1.5	60.8	426	18

* Does not meet minimum specification for Agricultural Liming Material.

TABLE 1

AGRICULTURAL LIMING MATERIALS SAMPLED FROM

JULY 1 THROUGH DECEMBER 31, 2002

Distributor	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
ASH GROVE AGGREGATES INC-MONTEVALLO, BUTLER, MO										
Stockpile #1										
Lab #1441	10-29-02	3.4	41.0	11.6	44.0	87.8	1.1	61.2	430	13
Lab #1663	11-26-02	3.6	42.1	11.4	42.9	89.5	2.0	60.3	431	24
ASH GROVE AGGREGATES INC-OSCEOLA, BUTLER, MO										
Stockpile #1										
Lab #0959	08-16-02	4.0	41.0	11.6	43.4	89.1	1.1	60.6	432	13
Lab #1144	09-13-02	3.2	44.0	11.3	41.5	86.2	0.7	59.3	409	8
Lab #1338	10-11-02	4.8	46.1	11.2	37.9	93.6	0.8	56.1	420	9
Lab #1519	11-08-02	4.4	47.4	10.7	37.5	90.1	0.8	55.8	402	9
ASH GROVE AGGREGATES INC-PITTSBURG, BUTLER, MO										
Stockpile #1										
Lab #1033	08-26-02	1.9	45.2	12.1	40.8	92.3	0.2	59.4	438	2
Lab #1203	09-18-02	2.0	43.8	12.8	41.4	93.5	0.2	60.0	449	2
Lab #1301	10-07-02	2.5	46.9	11.5	39.1	92.4	0.2	57.7	427	2
Lab #1569	11-12-02	1.8	45.2	11.8	41.2	91.4	0.2	46.8	436	2
ASH GROVE AGGREGATES INC-FT SCOTT, BUTLER, MO										
Stockpile #1										
Lab #0958	08-14-02	5.5	50.1	9.3	35.1	90.5	0.4	53.2	385	4
Lab #1442	10-29-02	4.2	52.8	10.6	32.4	92.2	0.4	52.0	383	4
Lab #1566	11-11-02	6.8	55.4	10.5	27.3	92.2	0.4	60.5	350	4
ASH GROVE AGGREGATES INC.-STOCKTON, BUTLER, MO										
Stockpile #1										
Lab #0950	08-12-02	2.9	44.6	13.4	39.1	94.4	0.3	58.3	440	3
Lab #1241	09-24-02	3.2	45.2	13.4	38.2	91.2	0.3	57.5	420	3
Lab #1302	10-08-02	3.4	46.8	12.4	37.4	92.9	0.2	56.5	420	2
Lab #1664	11-26-02	2.7	47.7	12.6	37.0	95.4	0.3	56.5	431	3
Stockpile #2										
Lab #0951	08-12-02	4.7	49.4	12.1	33.8	95.2	0.2	53.4	407	2
Lab #1242	09-24-02	3.9	50.1	12.3	33.7	95.6	0.2	53.6	410	2
Lab #1303	10-08-02	3.2	49.6	12.4	34.8	95.1	0.2	54.6	416	2
Lab #1665	11-26-02	3.4	48.7	12.9	35.0	95.5	0.1	54.9	420	1
Stockpile #3										
Lab #0952	08-12-02	1.8	43.6	11.9	42.7	88.7	0.3	60.7	431	4
Lab #1243	09-24-02	3.3	48.7	13.3	34.7	93.0	0.2	54.9	408	2
Lab #1304	10-08-02	2.9	48.1	13.2	35.8	92.2	0.2	55.7	411	2
Lab #1666	11-26-02	1.4	47.2	14.5	36.9	92.6	0.2	57.4	425	2
ASH GROVE AGGREGATES INC-WHEATLAND, BUTLER, MO										
Stockpile #2										
Lab #1031	08-26-02	6.8	45.9	10.2	37.1	96.3	0.5	54.7	421	5
Lab #1201	09-18-02	3.5	44.8	11.4	40.3	95.9	0.3	58.3	448	4
Lab #1299	10-07-02	5.2	45.0	11.0	38.8	91.7	0.2	56.7	416	2
Lab #1567	11-12-02	4.8	46.9	11.0	37.3	94.5	0.2	50.8	421	2
ASH GROVE AGGREGATES INC-FT SCOTT E, BUTLER, MO										
ASH GROVE AGGREGATES INC-BOLIVAR, BUTLER, MO										
Stockpile #1										
Lab #1574	11-18-02	2.5	49.3	10.3	37.9	95.6	2.4	56.4	431	27
Stockpile #4										
Lab #1034	08-27-02	5.4	49.9	9.0	35.7	94.1	1.0	53.6	403	11
Lab #1284	10-03-02	6.2	47.0	11.6	35.2	92.9	0.4	53.9	401	4
Lab #1575	11-18-02	11.6*	48.4	7.8	32.2	93.3	0.5	49.0	0	0
Stockpile #5										
Lab #1035	08-27-02	10.8*	47.0	8.0	34.2	92.6	0.9	50.8	0	0
Lab #1285	10-03-02	5.6	45.5	11.0	37.9	96.0	0.8	55.9	429	9
ASH GROVE AGGREGATES INC-BUFFALO, BUTLER, MO										
Stockpile #1										
Lab #0885	08-07-02	0.3	41.5	12.6	45.6	92.9	10.9	63.5	472	139
BAILEY QUARRIES INC-CHESAPEAKE Q., MT VERNON, MO										
Stockpile #4										
Lab #1096	09-04-02	2.4	34.0	10.0	53.6	91.0	10.9	68.1	496	148
Lab #1381	10-14-02	4.6	38.7	8.9	47.8	93.0	11.3	62.8	467	142
Lab #1725	12-02-02	2.4	39.3	7.9	50.4	89.3	12.1	65.0	464	157
BAILEY QUARRIES INC-JANE, JANE, MO										
Stockpile #2										
Lab #0903	08-05-02	0.3	41.2	9.9	48.6	93.1	11.2	64.8	483	145

* Does not meet minimum specification for Agricultural Liming Material.

TABLE 1

**AGRICULTURAL LIMING MATERIALS SAMPLED FROM
JULY 1 THROUGH DECEMBER 31, 2002**

Distributor	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
BAILEY QUARRIES INC-JANE, JANE, MO										
Stockpile #2										
Lab #1235	09-25-02	3.9	43.5	7.9	44.7	93.2	11.1	60.3	450	134
Lab #1520	11-04-02	1.4	41.4	8.8	48.4	92.4	11.2	64.0	473	143
Lab #1726	12-05-02	2.4	42.0	8.3	47.3	92.6	11.0	62.8	465	138
BAILEY QUARRIES, INC.-MADRY QUARRY, VERONA, MO										
Stockpile #2										
Lab #1005	08-19-02	0.2	39.5	11.8	48.5	78.4	1.6	65.5	411	21
Lab #1208	09-18-02	0.4	41.2	12.8	45.6	80.2	1.2	63.6	408	15
Lab #1383	10-15-02	0.2	41.4	12.0	46.4	79.9	1.6	64.0	409	20
BAILEY QUARRIES INC-STOCKTON, STOCKTON, MO										
Stockpile #2										
Lab #0949	08-12-02	0.7	42.6	15.3	41.4	94.7	0.2	61.2	464	2
Lab #1244	09-24-02	0.3	41.8	16.0	41.9	90.8	0.1	62.0	450	1
Lab #1305	10-08-02	0.3	40.9	16.4	42.4	91.3	0.1	62.5	456	1
Lab #1667	11-26-02	0.5	42.8	15.5	41.2	93.4	0.1	61.2	457	1
BARBER & SONS AGGREGATES, LEE'S SUMMIT, MO										
Stockpile #1										
Lab #0893	08-05-02	4.9	46.6	9.8	38.7	83.2	0.5	56.2	374	6
Lab #1079	09-04-02	7.8	46.4	8.8	37.0	83.3	0.4	53.9	359	4
Lab #1341	10-10-02	6.1	46.4	9.5	38.0	83.0	0.4	55.3	367	4
Lab #1553	11-12-02	7.6	47.8	7.9	36.7	83.8	1.2	53.6	358	13
Lab #1677	12-05-02	6.0	42.7	9.5	41.8	78.3	1.7	58.2	364	20
BARRETT MATERIALS INC, NEW HAVEN, MO										
Stockpile #1										
Lab #0847	07-03-02	2.6	40.1	6.9	50.4	81.8	10.0	64.6	423	129
Lab #0850	07-15-02	3.2	38.5	6.6	51.7	80.2	9.7	65.3	419	127
Lab #0867	08-05-02	2.9	40.1	6.5	50.5	81.2	9.7	64.4	419	125
Lab #1160	09-09-02	3.3	46.1	8.3	42.3	79.4	9.3	58.8	374	109
Lab #1307	09-30-02	5.1	46.5	7.2	41.2	78.7	9.3	57.1	360	106
Lab #1453	10-23-02	3.0	42.1	7.3	47.6	82.5	9.7	62.5	413	121
JAMES ELROD TRUCK SERVICE, BELLE, MO										
Stockpile #1										
Lab #0870	08-06-02	0.5	27.7	10.0	61.8	97.3	2.7	74.7	582	40
Lab #1133	09-05-02	0.5	26.1	10.3	63.1	97.7	2.4	75.8	592	36
Lab #1455	10-24-02	0.1	27.8	12.1	60.0	97.3	4.6	74.2	578	68
Lab #1515	11-07-02	0.1	25.9	12.3	61.7	99.0	3.1	75.6	598	47
Lab #1709	12-02-02	0.5	28.4	9.3	61.8	85.2	4.2	74.5	508	63
BLUFF CITY MINERALS CO., ALTON, IL										
Stockpile #1										
Lab #1211	09-17-02	0.3	5.2	9.0	85.5	90.5	1.6	92.2	668	30
Lab #1481	10-31-02	0.4	3.5	5.6	90.5	90.2	1.1	94.7	684	21
BOONE QUARRIES INC, COLUMBIA, MO										
Stockpile #1										
Lab #0864	08-05-02	0.4	28.9	10.0	60.7	98.5	1.8	73.9	583	27
Lab #1128	09-09-02	0.3	29.2	11.0	59.5	88.9	3.3	73.4	522	48
Lab #1274	10-04-02	0.3	24.3	12.7	62.7	99.3	1.8	76.4	607	28
Lab #1547	11-11-02	0.2	32.4	11.7	55.7	91.5	4.3	70.8	518	61
BOONE QUARRIES - EAST, COLUMBIA, MO										
Stockpile #1										
Lab #0863	08-05-02	7.0	47.3	10.4	35.3	92.2	3.2	53.4	394	34
Lab #1127	09-09-02	5.8	48.2	10.1	35.9	92.1	2.7	54.0	398	29
Lab #1273	10-04-02	3.6	52.0	9.3	35.1	88.4	3.2	53.7	380	34
Lab #1548	11-11-02	5.4	45.4	10.0	39.2	86.5	4.2	56.6	391	48
CALCIUM PRODUCTS, INC., GILMORE CITY, IA										
CAPITAL QUARRIES, INC-STADIUM WEST, JEFFERSON CITY, MO										
Stockpile #2										
Lab #0977	08-12-02	1.9	38.9	9.3	49.9	86.6	10.3	65.2	452	134
Lab #1134	09-06-02	0.6	35.0	10.6	53.8	86.3	10.5	68.9	476	145
Lab #1407	10-16-02	0.4	41.3	10.5	47.8	71.5	8.4	64.4	369	108
Lab #1713	12-04-02	1.1	40.5	8.5	49.9	84.2	10.2	65.1	439	133
CAPITAL QUARRIES INC-ROLLA Q #4, JEFFERSON CITY, MO										
Stockpile #1										
Lab #0978	08-15-02	8.9	44.8	5.9	40.4	87.2	10.3	55.1	385	114
Lab #1162	09-11-02	8.2	39.1	5.9	46.8	86.5	10.2	60.1	416	123

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JULY 1 THROUGH DECEMBER 31, 2002

Distributor	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
CAPITAL QUARRIES INC-ROLLA Q #4, JEFFERSON CITY, MO										
Stockpile #1										
Lab #1365	10-07-02	7.9	46.5	7.2	38.4	84.6	9.7	54.3	368	105
CAPITAL QUARRIES INC-CALIFORNIA Q#5, JEFFERSON CITY, MO										
CAPITAL QUARRIES INC-SULLIVAN, BOURBON, MO										
Stockpile #1										
Lab #1066	08-27-02	0.4	27.2	19.5	52.9	101.8	12.0	71.4	581	171
Lab #1176	09-09-02	0.3	25.1	18.8	55.8	102.2	12.1	73.4	600	178
CARROLL COUNTY STONE, INC., REPUBLIC, MO										
Stockpile #1										
Lab #0962	08-16-02	0.8	42.2	9.5	47.5	87.4	10.4	63.8	446	133
Lab #1209	09-20-02	0.7	41.8	9.9	47.6	88.3	10.4	64.0	452	133
Lab #1425	10-21-02	1.9	42.7	8.6	46.8	85.6	10.2	62.6	429	128
Lab #1629	11-13-02	1.2	40.5	10.9	47.4	90.6	10.7	64.1	464	137
CARTHAGE CRUSHED LIMESTONE, CARTHAGE, MO										
Stockpile #1										
Lab #1094	09-03-02	0.1	0.7	2.7	96.5	96.3	0.2	98.3	757	4
Lab #1647	11-26-02	0.0	0.9	2.9	96.2	96.8	0.1	98.2	760	2
CASPER'S QUARRY, HIGH HILL, MO										
Stockpile #1										
Lab #0865	08-08-02	11.8*	46.1	6.9	35.2	93.2	5.4	50.9	0	0
Lab #1044	08-19-02	7.3	46.6	7.9	38.2	95.7	7.0	54.6	418	76
Lab #1045	08-20-02	9.4	45.1	7.8	37.7	95.7	5.8	53.7	411	62
Lab #1277	09-17-02	10.1*	47.1	7.1	35.7	95.0	5.2	51.7	0	0
Lab #1409	10-17-02	11.5*	47.1	7.1	34.3	94.2	5.6	50.3	0	0
CENTRAL STONE COMPANY - HUNTINGTON, HANNIBAL, MO										
Stockpile #1										
Lab #0931	08-08-02	7.6	33.8	9.5	49.1	91.8	0.3	63.3	465	4
Lab #1113	09-04-02	4.2	33.6	11.7	50.5	96.7	0.3	65.9	510	4
Lab #1262	10-01-02	8.0	33.8	9.2	49.0	94.3	0.4	63.0	475	5
Lab #1531	11-05-02	4.1	33.2	11.3	51.4	96.4	0.3	66.5	513	4
Stockpile #2										
Lab #1114	09-04-02	0.3	33.8	13.6	52.3	91.6	0.3	68.9	505	4
Lab #1263	10-01-02	0.1	28.1	12.4	59.4	81.5	0.1	73.9	482	1
Lab #1532	11-05-02	0.3	30.5	12.1	57.1	79.0	0.1	72.0	455	1
Stockpile #3										
Lab #0932	08-08-02	0.3	25.3	10.9	63.5	93.1	0.5	76.4	569	8
Lab #1115	09-04-02	0.3	23.7	12.5	63.5	92.1	0.5	76.9	567	8
Lab #1264	10-01-02	0.2	29.5	12.5	57.8	92.6	0.4	72.7	538	6
Lab #1533	11-05-02	0.1	10.8	7.8	81.3	86.0	0.6	88.7	610	11
CENTRAL STONE COMPANY - BETHEL, BETHEL, MO										
Stockpile #1										
Lab #0990	08-15-02	5.5	45.9	10.0	38.6	94.1	1.3	56.1	422	15
Lab #1184	09-12-02	7.8	42.2	8.9	41.1	93.6	1.3	57.0	427	15
Lab #1350	10-07-02	6.3	42.3	9.1	42.3	92.3	1.6	58.3	431	19
Lab #1544	11-07-02	5.3	37.3	10.7	46.7	92.7	1.4	62.4	463	17
Lab #1685	12-05-02	5.8	38.8	9.3	46.1	93.9	1.7	61.4	461	21
CENTRAL STONE CO - FORT BELLE - #31, FLORISSANT, MO										
Stockpile #1										
Lab #0991	08-16-02	0.0	0.1	0.7	99.2	91.1	1.0	99.6	726	20
Lab #1210	09-17-02	0.1	0.1	2.7	97.1	81.9	1.9	98.7	647	38
Lab #1345	10-09-02	0.0	0.3	1.6	98.1	86.8	1.9	99.1	688	38
Lab #1482	10-31-02	0.1	0.3	4.6	95.0	88.5	1.4	97.8	693	27
CENTRAL STONE CO - FORT BELLE -WEST, FLORISSANT, MO										
CENTRAL STONE COMPANY - GREENSBURG, HANNIBAL, MO										
CENTRAL STONE COMPANY - PARIS, PARIS, MO										
Stockpile #1										
Lab #0984	08-09-02	7.5	45.6	11.3	35.6	77.2	0.3	53.8	332	3
Lab #1177	09-10-02	7.4	41.9	11.2	39.5	82.0	0.2	56.7	372	2
Lab #1394	10-10-02	9.0	42.1	10.6	38.3	77.3	0.2	55.2	341	2
Lab #1562	11-13-02	5.9	42.4	11.6	40.1	75.3	0.2	46.4	347	2
CENTRAL STONE COMPANY - NEW LONDON, NEW LONDON, MO										
CENTRAL STONE COMPANY - CURRYVILLE, CURRYVILLE, MO										
Stockpile #2										
Lab #1186	09-16-02	6.2	45.7	8.7	39.4	84.7	1.8	56.0	380	20

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		+8	-8+40	-40+60	-60				ENM	EMg
CENTRAL STONE COMPANY - CURRYVILLE, CURRYVILLE, MO										
Stockpile #2										
Lab #1265	10-03-02	5.2	42.0	7.6	45.2	83.7	2.0	60.3	404	24
Lab #1535	11-06-02	7.2	43.9	7.6	41.3	83.1	1.9	56.8	378	22
CENTRAL STONE COMPANY - PERRY, HANNIBAL, MO										
Stockpile #1										
Lab #0930	08-08-02	5.3	40.1	9.7	44.9	87.6	2.4	60.7	426	29
Lab #1261	10-01-02	5.0	42.2	8.3	44.5	85.0	1.6	60.0	408	19
CENTRAL STONE COMPANY - EWING, HANNIBAL, MO										
Stockpile #1										
Lab #1224	09-24-02	6.5	35.4	8.6	49.5	83.5	0.7	63.5	424	9
Lab #1546	11-08-02	2.1	41.7	12.1	44.1	93.4	0.4	61.8	462	5
CENTRAL STONE COMPANY - TAYLOR, TAYLOR, MO										
Stockpile #1										
Lab #0933	08-08-02	3.5	43.6	11.4	41.5	90.4	0.8	59.2	428	9
Lab #1116	09-04-02	2.6	43.1	12.4	41.9	89.5	0.8	60.1	430	10
Lab #1534	11-05-02	2.8	50.2	12.1	34.9	88.8	0.3	54.7	389	3
Lab #1682	12-04-02	15.5*	44.8	9.6	30.1	89.0	0.2	47.1	0	0
CLEVER STONE CO, CLEVER, MO										
Stockpile #1										
Lab #1151	09-09-02	0.3	51.5	14.6	33.6	96.7	0.2	55.2	427	2
Lab #1469	10-31-02	0.7	50.9	13.2	35.2	93.6	0.2	55.8	418	2
Lab #1732	12-12-02	0.9	49.7	14.4	35.0	94.1	0.2	56.1	422	2
COLONIAL LIMESTONE INC-PRINCETON, MILAN, MO										
Stockpile #1										
Lab #1327	10-09-02	2.9	49.2	10.7	37.2	89.9	0.2	55.9	402	2
Lab #1609	11-08-02	2.3	51.9	9.8	36.0	87.4	0.7	54.9	384	8
CONCO QUARRIES, SPRINGFIELD, MO										
CONCO QUARRIES INC Q US 160, WILLARD, MO										
Stockpile #1										
Lab #1001	08-22-02	0.0	11.0	17.2	71.8	98.1	0.1	84.9	666	2
Lab #1527	11-06-02	0.1	14.9	17.2	67.8	98.3	0.2	81.8	644	3
Stockpile #4										
Lab #1002	08-22-02	0.0	11.1	15.2	73.7	99.1	0.3	85.6	679	5
Lab #1528	11-06-02	0.0	9.1	14.3	76.6	99.2	0.2	87.5	694	3
COUNTY LINE QUARRY, WELLSVILLE, MO										
Stockpile #1										
Lab #1007	08-23-02	4.0	51.6	10.3	34.1	96.8	1.4	53.2	412	15
Lab #1185	09-13-02	3.0	43.3	9.4	44.3	96.2	3.0	60.8	468	36
Lab #1480	10-24-02	4.5	47.7	7.8	40.0	92.8	4.1	56.6	420	46
Lab #1686	12-06-02	3.3	40.5	10.0	46.2	91.4	4.0	62.3	456	50
CRAWFORD LIME & MATERIAL CO, CUBA, MO										
Stockpile #1										
Lab #0982	08-16-02	3.7	44.8	7.9	43.6	92.0	10.9	59.5	438	130
Lab #1130	09-04-02	2.2	36.1	8.2	53.5	90.8	11.1	67.4	490	150
Lab #1366	10-08-02	1.2	46.6	7.5	44.7	88.9	10.3	60.9	433	125
CRIDER BROTHERS LIME CO, EMINENCE, MO										
Stockpile #2										
Lab #1057	08-20-02	2.4	48.5	13.7	35.4	92.7	10.8	55.7	413	120
Lab #1431	10-23-02	3.6	48.9	12.5	35.0	92.9	10.4	54.7	407	114
DOSS & HARPER STONE CO., HOUSTON, MO										
Stockpile #6										
Lab #0909	08-07-02	5.6	42.7	7.2	44.5	89.2	10.6	59.5	425	126
DOSS & HARPER STONE CO, WEST PLAINS, MO										
Stockpile #1										
Lab #0910	08-07-02	0.4	39.0	8.4	52.2	83.7	9.9	67.0	449	133
Lab #1155	09-11-02	0.4	49.0	7.9	42.7	81.0	9.7	59.7	387	116
EVERETT QUARRIES #1-LATHROP, PLATTSBURG, MO										
Stockpile #2										
Lab #0972	08-14-02	5.4	50.0	9.4	35.2	87.6	1.2	53.3	374	13
Lab #1172	09-12-02	4.7	49.6	10.4	35.3	87.3	1.3	53.9	377	14
Lab #1436	10-22-02	4.4	52.1	8.8	34.7	85.4	1.1	53.0	362	12
Lab #1649	11-25-02	4.3	52.1	9.6	34.0	86.6	1.2	52.8	366	13

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		+8	-8+40	-40+60	-60				ENM	EMg
EVERETT QUARRIES #6-KING, PLATTSBURG, MO										
Stockpile #1										
Lab #1498	10-28-02	3.5	46.2	7.5	42.8	88.3	1.8	58.9	416	21
Lab #1704	12-04-02	4.7	47.4	9.0	38.9	87.7	1.8	56.2	394	20
Stockpile #2										
Lab #1499	10-28-02	9.1	47.2	8.2	35.5	88.6	1.8	52.2	370	19
Lab #1692	12-04-02	10.0	45.2	8.8	36.0	88.2	1.6	52.6	371	17
EVERETT QUARRIES #53-CAMERON, PLATTSBURG, MO										
EVERETT QUARRIES #54-GOWER, PLATTSBURG, MO										
Stockpile #3										
Lab #0973	08-16-02	7.7	49.8	8.8	33.7	81.8	1.4	51.4	337	14
Lab #1222	09-23-02	6.9	49.5	8.5	35.1	81.6	1.1	52.6	343	12
Lab #1437	10-22-02	8.7	47.6	9.4	34.3	80.9	1.1	51.8	336	11
Lab #1650	11-27-02	7.9	47.4	8.4	36.3	80.8	1.4	53.2	344	15
EVERETT QUARRIES #59-STANBERRY, PLATTSBURG, MO										
Stockpile #1										
Lab #1169	09-11-02	4.5	49.3	8.5	37.7	78.6	2.0	55.1	347	22
Lab #1223	09-27-02	4.7	51.6	8.4	35.3	80.6	1.5	53.2	343	16
Lab #1335	10-09-02	7.1	49.5	8.2	35.2	81.5	1.2	52.5	342	13
Lab #1624	11-21-02	4.4	49.4	8.1	38.1	77.1	1.7	55.3	341	19
FALL VALLEY STONE, INC., MT VERNON, MO										
Stockpile #1										
Lab #1095	09-04-02	0.3	41.3	11.8	46.6	103.9	11.8	64.0	532	151
Lab #1380	10-14-02	0.1	38.2	12.3	49.4	102.5	12.1	66.3	544	161
Lab #1724	12-02-02	0.2	46.2	11.5	42.1	104.1	12.1	60.6	504	147
FISCHER QUARRIES LLC, HUGHESVILLE, MO										
Stockpile #1										
Lab #0900	08-06-02	9.6	43.0	10.4	37.0	98.0	1.0	54.0	423	11
Lab #1028	08-28-02	8.4	47.3	9.3	35.0	97.8	1.1	52.4	410	12
Lab #1196	09-18-02	8.0	44.5	10.7	36.8	97.8	1.4	54.3	425	15
Lab #1314	10-08-02	8.0	45.4	10.7	35.9	97.2	1.2	53.7	417	13
Lab #1459	10-31-02	7.0	45.8	10.9	36.3	97.7	1.1	54.3	424	12
Lab #1635	11-26-02	7.3	38.8	15.4	38.5	97.4	1.0	57.4	448	11
FULLERTON STONE COMPANY INC, GRANBY, MO										
Stockpile #1										
Lab #0961	08-12-02	0.8	42.5	15.2	41.5	91.4	0.1	61.2	448	1
Lab #1237	09-25-02	2.3	47.7	13.2	36.8	91.4	0.1	56.6	414	1
Lab #1522	11-04-02	1.6	46.5	15.4	36.5	93.2	0.1	57.4	428	1
Lab #1728	12-05-02	2.3	48.9	13.0	35.8	85.2	0.2	55.8	381	2
GABEL STONE COMPANY INC., WILLOW SPRINGS, MO										
Stockpile #1										
Lab #1156	09-12-02	0.9	40.4	14.7	44.0	85.0	10.0	62.9	428	126
GLASGOW QUARRIES INC, GLASGOW, MO										
Stockpile #4										
Lab #0939	08-14-02	12.2*	41.8	6.7	39.3	88.8	5.4	53.8	0	0
GLASGOW QUARRIES-GILLIAM, GILLIAM, MO										
Stockpile #1										
Lab #0938	08-14-02	3.5	46.9	7.3	42.3	88.9	5.3	58.4	415	62
Lab #1077	09-03-02	3.6	46.2	7.4	42.8	89.2	5.9	58.8	420	69
Lab #1225	09-23-02	5.0	48.7	7.2	39.1	88.4	5.8	55.6	393	64
Lab #1378	10-15-02	3.5	45.3	8.9	42.3	88.0	5.8	59.0	415	68
Lab #1631	11-25-02	3.6	48.5	8.2	39.7	87.5	5.9	56.7	397	67
GLASGOW QUARRIES - MARCELINE, MARCELINE, MO										
Stockpile #4										
Lab #1702	12-03-02	4.2	47.9	7.2	40.7	89.1	6.2	57.0	406	71
HART LIME STONE, FARMINGTON, MO										
Stockpile #2										
Lab #1065	08-27-02	0.0	26.8	23.7	49.5	92.9	10.0	70.4	523	141
Lab #1369	10-09-02	0.0	32.0	25.2	42.8	94.8	9.5	65.9	500	125
HARVEY PRODUCTS INC, BLUE MOUNDS, WI										
HERZOG CONTRACTING CORP, ST JOSEPH, MO										
HIGGINS - MEEKER QUARRIES LLC, DEEPWATER, MO										
Stockpile #2										
Lab #0956	08-13-02	2.7	46.1	9.2	42.0	75.2	4.2	59.0	355	50
Lab #1339	10-11-02	6.4	40.7	9.8	43.1	78.9	3.8	59.2	373	45

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TABLE 1

AGRICULTURAL LIMING MATERIALS SAMPLED FROM

JULY 1 THROUGH DECEMBER 31, 2002

Distributor	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
HIGGINS - MEEKER QUARRIES LLC, DEEPWATER, MO										
Stockpile #2										
Lab #1611	11-21-02	4.4	52.9	9.4	33.3	83.0	3.3	52.2	346	34
HILTY QUARRIES, INC. - QUARLES, CLINTON, MO										
Stockpile #1										
Lab #0887	08-08-02	7.3	50.9	9.2	32.6	80.3	0.7	50.8	327	7
Lab #1239	09-23-02	0.9	44.4	11.0	43.7	92.8	0.6	61.4	456	7
Lab #1336	10-09-02	4.2	46.5	11.1	38.2	82.9	0.6	56.5	375	7
Lab #1571	11-14-02	10.5*	53.0	8.5	28.0	79.5	0.5	61.1	0	0
Lab #1612	11-21-02	15.7*	49.8	8.3	26.2	78.3	0.5	43.6	0	0
Lab #1687	12-03-02	9.6	49.8	9.3	31.3	75.2	0.5	49.3	297	5
Lab #1745	12-23-02	12.9*	47.3	8.4	31.4	77.5	0.5	48.3	0	0
Stockpile #2										
Lab #0888	08-08-02	0.4	43.8	11.9	43.9	72.6	0.8	62.0	360	10
Lab #1240	09-23-02	0.3	47.1	11.0	41.6	73.7	0.8	60.0	354	10
Lab #1337	10-09-02	0.7	46.3	11.2	41.8	73.8	1.2	60.1	355	14
Lab #1572	11-14-02	0.4	46.0	12.1	41.5	74.8	0.8	49.0	361	10
Lab #1613	11-21-02	0.0	42.4	13.3	44.3	73.4	0.4	62.9	369	5
Lab #1746	12-23-02	0.0	46.1	12.7	41.2	75.7	0.5	60.3	365	6
HILTY QUARRIES, INC. - MONTROSE, CLINTON, MO										
HILTY QUARRIES, INC. - MT. ZION, CLINTON, MO										
HILTY QUARRIES, INC. - SOUTH-DELL JCT, CLINTON, MO										
Stockpile #1										
Lab #0953	08-13-02	3.6	40.8	11.0	44.6	87.7	2.8	61.4	431	34
Lab #1142	09-12-02	0.1	41.7	14.6	43.6	93.8	1.4	62.8	471	18
Lab #1390	10-18-02	0.3	42.9	14.8	42.0	94.7	0.9	61.6	467	11
Lab #1615	11-21-02	2.2	43.1	14.6	40.1	93.3	1.1	59.6	445	13
HILTY QUARRIES, INC. - TIGHTWAD, CLINTON, MO										
Stockpile #1										
Lab #0954	08-13-02	0.2	42.5	12.8	44.5	96.7	0.3	62.8	486	4
Lab #1143	09-12-02	0.2	41.1	11.7	47.0	88.1	0.4	64.3	453	5
Lab #1391	10-18-02	0.1	42.0	12.9	45.0	94.4	0.3	63.2	478	4
Lab #1614	11-21-02	0.1	43.9	12.4	43.6	94.6	0.7	62.0	469	9
Stockpile #2										
Lab #0955	08-13-02	1.6	38.0	13.8	46.6	90.9	0.4	64.4	468	5
HILTY QUARRIES, INC. - URICH, CLINTON, MO										
Stockpile #1										
Lab #1440	10-28-02	0.0	44.9	13.2	41.9	79.9	0.8	61.0	390	10
Lab #1468	10-31-02	0.0	44.4	13.7	41.9	79.4	1.0	61.2	389	12
Lab #1518	11-04-02	0.0	43.3	13.2	43.5	80.4	0.9	62.2	400	11
Lab #1688	12-03-02	0.0	42.3	13.2	44.5	77.7	0.9	63.0	392	11
Stockpile #4										
Lab #0889	08-08-02	1.3	43.2	12.1	43.4	92.4	0.3	61.5	454	4
Lab #1140	09-10-02	1.3	45.8	11.7	41.2	92.7	0.4	59.7	443	5
HILTY QUARRIES INC. - WARRENSBURG, CLINTON, MO										
Stockpile #4										
Lab #0895	08-05-02	1.2	43.1	11.2	44.5	68.3	1.4	62.0	339	17
Lab #1555	11-12-02	3.7	51.5	10.2	34.6	72.6	1.4	53.7	311	15
Lab #1679	12-05-02	3.2	42.2	14.8	39.8	74.6	1.4	59.2	353	17
HUNT MIDWEST MINING-BLUE MOUND, DAWN, MO										
Stockpile #1										
Lab #0845	07-01-02	0.1	50.8	11.1	38.0	90.2	0.3	57.4	414	3
Lab #0852	07-18-02	1.6	51.8	10.2	36.4	91.7	0.4	55.5	407	4
Lab #0854	07-19-02	2.1	51.5	10.2	36.2	92.0	0.5	55.2	406	6
Lab #0920	08-05-02	0.6	51.5	11.2	36.7	88.9	0.4	56.3	400	5
Lab #1500	10-30-02	0.7	52.1	10.8	36.4	88.1	0.7	55.9	394	8
Stockpile #2										
Lab #0853	07-18-02	0.5	52.8	10.4	36.3	89.2	1.5	55.7	398	17
Lab #0855	07-19-02	0.2	50.9	10.9	38.0	88.9	1.5	57.3	407	17
Lab #0921	08-05-02	0.2	48.2	10.0	41.6	88.7	1.6	59.7	423	19
Lab #1501	10-30-02	0.3	50.0	11.5	38.2	88.8	1.5	57.6	409	17
HUNT MIDWEST MINING, INC. - TRENTON, EDINBURG, MO										
HUNT MIDWEST MINING - HWY 10 QUARRY, RAYVILLE, MO										
Stockpile #1										
Lab #1084	09-05-02	1.9	58.2	9.3	30.6	87.8	0.8	50.7	356	8

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JULY 1 THROUGH DECEMBER 31, 2002

Distributor	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
HUNT MIDWEST MINING - HWY 10 QUARRY, RAYVILLE, MO										
Stockpile #1										
Lab #1228	09-25-02	1.5	55.0	10.2	33.3	88.6	0.7	53.2	377	7
Lab #1280	10-02-02	2.2	56.8	10.0	31.0	87.0	1.0	51.2	356	10
Lab #1507	11-05-02	1.1	54.7	10.6	33.6	88.6	0.6	53.6	380	6
Lab #1626	11-21-02	1.2	54.8	10.6	33.4	88.0	0.6	53.5	376	6
Stockpile #2										
Lab #0937	08-13-02	5.8	57.8	9.9	26.5	90.2	0.6	46.9	338	6
Lab #1229	09-25-02	7.6	59.1	8.2	25.1	90.4	0.7	44.8	324	6
Lab #1627	11-21-02	6.7	58.1	22.4	12.8	89.8	0.6	40.8	293	5
HUNT MIDWEST QUARRY - STET QUARRY, RICHMOND, MO										
Stockpile #1										
Lab #0851	07-18-02	12.6*	54.3	6.5	26.6	87.2	0.6	44.1	0	0
Lab #0922	08-05-02	9.8	48.6	8.1	33.5	89.7	0.7	50.5	362	7
Lab #1191	09-20-02	9.9	50.3	7.5	32.3	88.0	0.6	49.4	348	6
Lab #1217	09-23-02	7.4	49.0	8.9	34.7	87.3	0.6	52.3	365	6
Lab #1219	09-24-02	9.2	51.0	7.3	32.5	88.3	0.6	49.6	351	6
Lab #1502	10-30-02	10.9*	49.9	7.1	32.1	88.3	0.6	48.8	0	0
Lab #1693	12-04-02	9.3	48.6	7.4	34.7	87.7	0.6	51.3	360	6
Lab #1739	12-10-02	7.8	51.0	7.8	33.4	86.8	0.6	50.8	353	6
Lab #1742	12-13-02	7.4	51.1	7.2	34.3	87.2	0.7	51.4	359	7
Stockpile #2										
Lab #1190	09-20-02	1.7	50.4	10.0	37.9	90.5	1.3	56.5	409	15
Lab #1218	09-23-02	1.5	51.1	9.8	37.6	89.4	1.0	56.3	402	11
Lab #1220	09-24-02	1.6	53.5	9.2	35.7	90.6	1.3	54.6	396	14
Lab #1503	10-30-02	0.7	55.5	10.3	33.5	85.3	0.3	53.6	365	3
Lab #1694	12-04-02	4.6	51.2	8.5	35.7	89.3	0.9	53.6	383	10
Lab #1740	12-10-02	2.0	53.2	8.8	36.0	88.8	0.9	54.6	388	10
Lab #1743	12-13-02	2.3	52.4	9.5	35.8	90.1	1.0	54.6	394	11
HUTCHENS CONSTRUCTION-PURDY, CASSVILLE, MO										
Stockpile #2										
Lab #1000	08-19-02	0.2	39.1	14.9	45.8	81.2	0.1	64.5	419	1
Lab #1384	10-15-02	0.5	43.7	13.9	41.9	81.5	0.1	61.2	399	1
HUTCHENS CONSTRUCTION-EAGLE ROCK, CASSVILLE, MO										
Stockpile #2										
Lab #0905	08-06-02	1.6	40.8	9.2	48.4	89.4	10.6	64.1	459	136
Lab #1102	09-06-02	1.4	39.7	9.9	49.0	89.5	10.5	64.9	464	136
Lab #1354	10-09-02	1.6	43.3	9.1	46.0	89.1	10.4	62.3	444	130
Lab #1471	11-01-02	2.0	41.4	9.9	46.7	89.2	10.6	63.0	449	134
Lab #1648	11-27-02	1.4	39.7	10.0	48.9	89.5	10.3	64.8	464	134
HUTCHENS CONSTRUCTION-WASHBURN, CASSVILLE, MO										
IDEKER INC. - NEW POINT QUARRY, ST JOSEPH, MO										
Stockpile #1										
Lab #0919	08-09-02	0.0	46.0	13.0	41.0	88.5	0.5	60.3	427	6
Lab #1168	09-10-02	0.0	48.2	11.5	40.3	88.3	0.5	59.3	419	6
Lab #1399	10-15-02	0.0	47.3	11.9	40.8	88.9	0.6	59.8	425	7
Lab #1618	11-20-02	0.1	44.6	13.4	41.9	88.2	0.5	61.1	431	6
Stockpile #2										
Lab #1619	11-20-02	0.4	51.3	9.0	39.3	83.9	0.4	57.5	386	5
IDEKER INC. - AMAZONIA, ST JOSEPH, MO										
Stockpile #1										
Lab #0969	08-15-02	2.2	49.4	11.5	36.9	87.9	0.7	56.2	395	8
Lab #1170	09-13-02	1.4	47.9	11.0	39.7	89.0	0.7	58.3	415	8
Lab #1401	10-17-02	1.8	47.9	10.9	39.4	85.2	1.2	57.9	395	14
Lab #1621	11-21-02	1.7	42.8	10.0	45.5	69.6	2.5	62.2	346	31
IOWA LIMESTONE CO-WEEPING WATER NE, WEEPING WATER, NE										
Stockpile #1										
Lab #1019	08-19-02	0.0	0.9	3.4	95.7	98.0	0.2	98.0	768	4
Lab #1652	11-26-02	0.0	0.7	1.9	97.4	97.0	0.2	98.7	766	4
Stockpile #2										
Lab #1020	08-19-02	0.0	28.8	36.2	35.0	98.0	0.2	63.9	501	3
Lab #1653	11-26-02	0.0	27.6	31.7	40.7	97.8	0.2	66.6	521	3
Stockpile #3										
Lab #1021	08-19-02	0.1	68.3	15.8	15.8	97.9	0.2	42.4	332	2
Lab #1654	11-26-02	0.1	68.1	15.4	16.4	97.6	0.2	42.7	333	2

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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
IOWA LIMESTONE CO-WEeping WATER NE, WEeping WATER, NE										
Stockpile #4										
Lab #1022	08-19-02	0.0	96.7	2.2	1.1	98.1	0.2	26.6	209	1
Lab #1655	11-26-02	0.0	91.3	7.0	1.7	97.7	0.2	28.7	225	1
Stockpile #5										
Lab #1023	08-19-02	3.6	95.1	0.6	0.7	97.2	0.2	24.8	193	1
Lab #1656	11-26-02	4.5	94.4	0.7	0.4	97.6	0.2	24.4	191	1
IOWA MINERAL PROCESSING, INC., ALDEN, IA										
JENKINS QUARRY, CASSVILLE, MO										
Stockpile #1										
Lab #1004	08-19-02	0.1	43.7	9.3	46.9	89.5	10.7	63.4	454	136
Lab #1206	09-18-02	0.3	45.5	8.9	45.3	88.3	10.5	62.0	438	130
Lab #1382	10-15-02	0.2	44.7	9.2	45.9	89.0	10.8	62.6	446	135
Stockpile #2										
Lab #1207	09-18-02	4.4	46.6	8.3	40.7	82.8	7.7	57.3	380	88
LEO JOURNAGAN CONST CO-GAINESVILLE, SPRINGFIELD, MO										
Stockpile #1										
Lab #1238	09-26-02	0.3	35.0	9.4	55.3	85.0	10.1	69.7	474	141
LEO JOURNAGAN CONST CO-HOLLISTER SO, SPRINGFIELD, MO										
Stockpile #1										
Lab #1101	09-05-02	1.0	45.3	13.5	40.2	81.7	0.7	59.6	390	8
Lab #1430	10-24-02	2.0	52.6	11.4	34.0	81.3	0.4	54.0	351	4
Lab #1644	11-25-02	2.3	50.4	11.1	36.2	81.9	0.5	55.5	363	6
LEO JOURNAGAN CONST CO INC-OZARK, SPRINGFIELD, MO										
LEO JOURNAGAN CONST CO INC-AVA, SPRINGFIELD, MO										
LEO JOURNAGAN CONST. - SHELL KNOB, SHELL KNOB, MO										
Stockpile #1										
Lab #0906	08-06-02	4.6	42.5	7.6	45.3	94.1	11.2	60.5	455	135
Lab #1103	09-06-02	3.4	39.2	7.9	49.5	92.0	11.3	64.0	471	145
Lab #1355	10-09-02	3.2	41.1	8.3	47.4	91.1	11.0	62.7	457	138
Lab #1470	11-01-02	3.9	39.7	7.9	48.5	92.1	10.9	63.2	465	138
Lab #1729	12-06-02	3.7	39.9	7.6	48.8	92.2	10.6	63.3	467	134
JOPLIN STONE CO Q DUENWEG, JOPLIN, MO										
Stockpile #2										
Lab #0960	08-12-02	0.1	19.6	20.8	59.5	91.5	0.1	76.9	563	2
Lab #1157	09-13-02	0.1	16.1	22.1	61.7	92.4	0.2	79.0	584	3
Lab #1291	10-02-02	0.2	18.4	20.8	60.6	96.5	0.1	77.7	600	2
Lab #1426	10-23-02	0.0	17.4	22.3	60.3	90.3	0.1	78.0	564	2
Lab #1630	11-20-02	1.2	20.4	20.0	58.4	95.0	0.1	75.5	574	2
KELLY LIME & ROCK CO., INC., KIRKSVILLE, MO										
Stockpile #1										
Lab #0923	08-06-02	4.9	40.9	8.1	46.1	92.1	2.2	61.2	451	27
Lab #0987	08-15-02	4.3	43.8	8.4	43.5	91.3	2.3	59.5	435	27
Lab #1181	09-12-02	5.1	39.2	8.7	47.0	91.4	1.8	62.0	453	22
Lab #1347	10-07-02	4.0	40.5	9.2	46.3	91.6	1.9	61.9	454	24
Lab #1542	11-07-02	3.8	40.1	9.4	46.7	91.4	1.9	62.4	456	24
Stockpile #3										
Lab #0988	08-15-02	0.3	0.6	0.5	98.6	87.0	0.8	99.1	689	16
Lab #1182	09-12-02	0.3	1.0	0.7	98.0	96.8	0.8	98.7	764	16
Lab #1348	10-07-02	0.0	0.8	0.7	98.5	97.6	0.7	99.1	774	14
Lab #1541	11-07-02	0.3	4.8	2.3	92.6	96.7	0.8	95.2	736	15
Stockpile #4										
Lab #0989	08-15-02	2.5	15.8	3.9	77.8	88.7	1.3	84.1	597	22
Lab #1183	09-12-02	2.5	15.1	3.9	78.5	90.0	1.2	84.6	609	20
Lab #1349	10-07-02	2.4	15.0	3.9	78.7	89.9	1.2	84.8	610	20
Lab #1543	11-07-02	2.2	18.1	4.6	75.1	90.5	1.2	82.4	596	20
KELLEY QUARRY, CROCKER, MO										
Stockpile #2										
Lab #1048	08-21-02	3.4	36.3	13.0	47.3	88.2	10.5	64.2	453	135
Lab #1231	09-24-02	4.9	39.6	11.5	44.0	85.8	10.4	60.8	417	126
Lab #1489	10-30-02	8.2	46.7	8.5	36.6	90.2	10.7	53.4	385	114
KERFORD LIMESTONE CO, WEeping WATER, NE										
Stockpile #1										
Lab #1024	08-19-02	0.1	0.3	0.4	99.2	93.1	0.4	99.5	741	8
Lab #1657	11-26-02	0.0	0.2	0.1	99.7	94.1	0.4	99.8	751	8

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			-8+40	-40+60	-60				ENM	EMg	
KEYSTONE QUARRY, WARRENSBURG, MO											
Stockpile #1											
Lab #0896	08-05-02	0.3	49.5	12.6	37.6	67.6	1.4	57.5	311	16	
Lab #1082	09-04-02	1.3	46.9	12.1	39.7	72.4	1.3	58.7	340	15	
Lab #1227	09-24-02	0.6	50.3	12.2	36.9	73.4	0.8	56.8	334	9	
Lab #1377	10-14-02	0.5	47.0	13.3	39.2	72.0	1.4	58.9	339	17	
Lab #1556	11-12-02	0.7	49.9	13.3	36.1	68.1	1.4	53.8	308	16	
Lab #1680	12-05-02	0.1	58.7	11.7	29.5	73.0	0.4	51.2	299	4	
KNOX COUNTY STONE CO, EDINA, MO											
Stockpile #1											
Lab #1008	08-19-02	4.0	46.1	9.9	40.0	81.7	2.3	57.5	376	26	
Lab #1213	09-19-02	7.1	43.8	9.4	39.7	91.5	2.7	56.3	412	30	
Lab #1421	10-21-02	5.5	41.3	9.4	43.8	95.2	3.6	59.8	455	43	
Lab #1594	11-18-02	4.7	46.8	10.9	37.6	95.2	0.6	55.8	425	7	
L & W QUARRIES INC., KAHOKA, MO											
Stockpile #1											
Lab #1009	08-20-02	0.8	41.0	11.6	46.6	89.2	0.2	63.8	455	3	
Lab #1214	09-20-02	0.5	37.0	12.8	49.7	86.9	0.2	66.6	463	3	
Lab #1422	10-22-02	0.4	37.9	12.4	49.3	85.8	0.3	66.2	454	4	
Lab #1595	11-19-02	0.8	38.9	11.6	48.7	84.6	0.2	65.4	443	3	
Stockpile #2											
Lab #1215	09-20-02	7.4	43.2	11.2	38.2	92.9	0.2	55.7	414	2	
Lab #1423	10-22-02	9.2	43.6	9.9	37.3	92.5	0.2	54.1	401	2	
Lab #1597	11-19-02	9.0	43.1	10.6	37.3	92.8	0.2	54.4	404	2	
Stockpile #3											
Lab #1010	08-20-02	0.3	43.2	10.7	45.8	83.7	1.9	63.0	422	24	
Lab #1216	09-20-02	0.3	41.6	11.0	47.1	84.7	1.8	64.1	434	23	
Lab #1424	10-22-02	0.5	39.3	12.1	48.1	81.8	1.6	65.2	427	21	
Lab #1596	11-19-02	1.8	47.4	9.7	41.1	84.7	2.6	58.8	398	31	
LAFARGE QUARRY, SEDALIA, MO											
Stockpile #1											
Lab #0897	08-06-02	12.8*	48.5	6.4	32.3	81.8	5.1	48.3	0	0	
Lab #1026	08-28-02	8.5	49.2	7.6	34.7	86.5	4.5	51.6	357	46	
Lab #1193	09-18-02	9.5	50.8	9.2	30.5	82.6	2.1	48.7	322	20	
Lab #1311	10-08-02	8.6	52.0	7.5	31.9	82.5	3.1	49.4	326	31	
Lab #1456	10-31-02	8.9	49.0	8.9	33.2	84.3	2.3	50.8	343	23	
Lab #1632	11-26-02	8.1	45.5	8.6	37.8	84.1	3.4	54.3	366	37	
LAFARGE CORPORATION, SEDALIA, MO											
LAFARGE CONSTRUCTION MATERIALS, ST CHARLES, MO											
LAFARGE CONSTRUCTION MATERIALS, WARRENTON, MO											
Stockpile #1											
Lab #0866	08-09-02	4.2	47.5	7.7	40.6	96.8	4.2	57.1	442	48	
Lab #1410	10-17-02	4.8	50.4	8.0	36.8	97.0	3.7	54.2	421	40	
Lab #1510	11-05-02	8.8	54.0	7.5	29.7	94.6	3.1	47.7	361	30	
LEAD BELT MATERIALS CO INC, FLAT RIVER, MO											
Stockpile #1											
Lab #1064	08-27-02	0.0	3.4	11.9	84.7	92.1	10.3	92.7	683	191	
Lab #1368	10-09-02	0.2	11.2	16.9	71.7	89.6	10.0	84.6	607	169	
Lab #1586	11-12-02	0.1	15.4	23.0	61.5	87.1	9.9	79.2	552	157	
LILE QUARRY INC., STRAFFORD, MO											
Stockpile #1											
Lab #1233	09-23-02	0.7	51.6	6.7	41.0	92.7	11.1	57.9	430	129	
LIMPUS QUARRIES, INC. (BATES CITY), BATES CITY, MO											
Stockpile #3											
Lab #0935	08-09-02	12.3*	59.5	6.0	22.2	87.7	0.4	40.7	0	0	
Lab #1078	09-04-02	8.2	51.4	7.4	33.0	76.1	0.6	50.3	306	6	
Lab #1281	10-03-02	6.1	48.6	8.4	36.9	86.7	0.6	54.1	375	6	
Lab #1411	10-22-02	12.1*	57.9	6.0	24.0	86.3	0.5	42.1	0	0	
Stockpile #4											
Lab #1192	09-17-02	6.4	47.6	8.6	37.4	89.3	0.3	54.5	389	3	
Lab #1282	10-03-02	6.8	46.9	8.6	37.7	88.8	0.3	54.6	388	3	
Lab #1412	10-22-02	6.9	48.8	8.2	36.1	90.1	0.2	53.2	384	2	
Lab #1676	12-03-02	4.9	47.3	8.6	39.2	90.5	0.2	56.2	407	2	

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AGRICULTURAL LIMING MATERIALS SAMPLED FROM

JULY 1 THROUGH DECEMBER 31, 2002

Distributor	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
LIMPUS QUARRIES, INC. (GARDEN CITY), HARRISONVILLE, MO										
Stockpile #1										
Lab #0884	08-06-02	5.2	52.3	8.1	34.4	75.5	0.9	52.3	316	9
LIMPUS QUARRIES, INC. (GALLATIN), HARRISONVILLE, MO										
Stockpile #2										
Lab #0966	08-13-02	7.6	51.8	7.6	33.0	84.5	0.8	50.5	341	8
Lab #1495	11-01-02	8.2	51.3	6.5	34.0	81.9	0.5	50.7	332	5
Lab #1695	12-05-02	9.6	50.0	7.0	33.4	79.6	0.7	50.1	319	7
LIMPUS QUARRIES, INC. (HARRISONVILLE), HARRISONVILLE, MO										
Stockpile #1										
Lab #1580	11-19-02	6.2	51.6	8.6	33.6	86.9	0.5	51.7	359	5
Lab #1616	11-22-02	5.6	50.5	8.6	35.3	86.7	0.6	53.1	368	6
Lab #1661	11-25-02	5.4	49.4	9.3	35.9	88.1	0.5	53.8	379	5
Lab #1671	11-27-02	6.0	52.4	9.0	32.6	90.1	0.5	51.1	368	5
Stockpile #2										
Lab #0882	08-06-02	8.5	48.1	8.3	35.1	86.6	0.6	52.1	361	6
Lab #1199	09-16-02	11.0*	51.2	7.8	30.0	90.7	0.5	47.5	0	0
Lab #1439	10-28-02	11.4*	51.2	6.9	30.5	89.7	0.4	47.4	0	0
Lab #1517	11-04-02	5.4	54.6	9.9	30.1	85.9	0.5	49.7	341	5
Lab #1662	11-25-02	6.6	51.3	8.5	33.6	86.6	0.4	51.5	357	4
Lab #1670	11-27-02	5.6	52.2	8.6	33.6	87.0	0.5	51.8	361	5
LIMPUS QUARRIES, INC. (HOLDEN), HARRISONVILLE, MO										
Stockpile #2										
Lab #0894	08-05-02	6.0	38.5	13.0	42.5	74.9	2.6	59.9	359	31
Lab #1080	09-04-02	8.2	43.2	8.9	39.7	77.7	3.2	55.8	347	36
Lab #1226	09-24-02	4.9	48.9	8.1	38.1	73.4	2.4	55.2	324	26
Lab #1413	10-22-02	7.6	46.8	8.2	37.4	75.7	2.4	54.0	327	26
Lab #1554	11-12-02	5.4	47.4	8.3	38.9	75.8	2.6	57.9	338	29
Lab #1678	12-05-02	5.8	42.4	10.7	41.1	76.0	2.5	58.1	353	29
LIMPUS QUARRIES, INC.-SUGAR CREEK, HARRISONVILLE, MO										
Stockpile #1										
Lab #1628	11-21-02	4.2	46.7	8.9	40.2	76.9	1.5	57.2	352	17
Stockpile #2										
Lab #1738	12-12-02	4.8	56.4	8.7	30.1	89.0	0.3	49.4	352	3
MAGRUDER LIMESTONE CO-ASHLEY, BOWLING GREEN, MO										
Stockpile #1										
Lab #1025	08-27-02	0.3	45.2	12.3	42.2	96.9	0.6	60.9	472	7
Lab #1212	09-18-02	0.3	42.0	12.7	45.0	97.4	1.0	63.1	492	13
Lab #1268	10-03-02	0.2	46.3	12.0	41.5	96.9	0.8	60.3	467	10
Lab #1538	11-06-02	0.1	43.6	11.7	44.6	98.0	0.9	62.5	490	11
MAGRUDER LIMESTONE CO, INC.-BOWLING, BOWLING GREEN, MO										
Stockpile #1										
Lab #1013	08-22-02	0.1	46.5	10.7	42.7	93.4	1.3	60.7	454	16
Lab #1189	09-16-02	0.5	45.5	10.8	43.2	94.6	1.5	61.1	462	18
Lab #1269	10-03-02	0.6	46.2	11.1	42.1	94.8	1.3	60.3	457	16
Lab #1539	11-06-02	0.4	50.3	10.4	38.9	95.1	1.2	57.7	439	14
MAGRUDER LIMESTONE CO-FRANKFORD, BOWLING GREEN, MO										
Stockpile #1										
Lab #1011	08-22-02	0.4	34.9	14.0	50.7	98.9	2.0	67.8	537	27
Lab #1187	09-16-02	2.2	40.1	11.7	46.0	98.5	1.8	63.0	497	23
Lab #1266	10-03-02	0.5	40.9	12.2	46.4	97.9	1.8	63.9	501	23
Lab #1536	11-06-02	0.5	38.9	13.3	47.3	98.7	1.8	65.0	513	23
MAGRUDER LIMESTONE - SILEX QUARRY, TROY, MO										
Stockpile #1										
Lab #0926	08-07-02	4.4	46.1	8.7	40.8	96.5	3.3	57.5	444	38
Lab #1118	09-06-02	4.4	47.2	8.5	39.9	95.1	2.8	56.8	432	32
Lab #1343	10-09-02	4.8	48.7	8.0	38.5	95.5	2.8	55.5	424	31
Lab #1558	11-12-02	5.0	46.0	8.4	40.6	95.6	3.5	57.5	437	40
MAGRUDER LIMESTONE CO Q TROY, TROY, MO										
Stockpile #1										
Lab #0928	08-07-02	2.4	50.7	8.0	38.9	86.9	3.5	56.4	392	39
Lab #1120	09-06-02	1.9	50.6	7.6	39.9	86.7	3.5	57.1	396	40
Lab #1419	10-18-02	2.7	51.5	8.4	37.4	86.1	3.6	55.3	381	40
Lab #1560	11-12-02	2.6	52.9	9.3	35.2	84.9	3.0	64.5	367	32

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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
MAGRUDER LIMESTONE CO Q TROY, TROY, MO										
Stockpile #2										
Lab #0929	08-07-02	4.1	52.2	7.9	35.8	84.9	3.0	53.6	364	32
Lab #1121	09-06-02	5.4	43.5	9.4	41.7	87.4	2.1	58.2	407	24
Lab #1420	10-18-02	8.6	52.1	6.9	32.4	83.8	2.7	49.6	332	27
Lab #1561	11-12-02	4.3	50.5	8.0	37.2	84.7	3.1	60.1	370	34
MANSFIELD LIME & STONE, MANSFIELD, MO										
Stockpile #2										
Lab #1294	10-03-02	0.1	44.6	8.1	47.2	84.1	9.7	63.2	425	123
Lab #1731	12-09-02	0.5	43.9	8.6	47.0	82.9	9.8	63.1	419	124
MARTIN MARIETTA AGGREGATES-JEFFRIES, DAVIS CITY, IA										
Stockpile #3										
Lab #1638	11-27-02	9.8	45.3	7.9	37.0	88.1	1.1	53.1	374	12
Stockpile #4										
Lab #1639	11-27-02	8.7	48.4	7.8	35.1	88.9	0.9	51.9	369	9
MARTIN MARIETTA AGGREGATES-MERCER, MERCER, MO										
Stockpile #1										
Lab #1015	08-23-02	10.1*	44.8	7.4	37.7	80.0	0.9	53.3	0	0
Lab #1324	10-09-02	8.1	47.1	9.1	35.7	80.3	0.8	52.9	340	8
Lab #1606	11-08-02	7.2	48.1	8.6	36.1	79.5	0.8	53.3	339	9
Stockpile #3										
Lab #1016	08-23-02	4.2	40.9	7.6	47.3	76.0	1.1	62.1	377	14
Lab #1325	10-09-02	6.2	42.6	7.1	44.1	75.5	1.1	59.0	356	13
Stockpile #4										
Lab #1017	08-23-02	3.7	39.2	8.6	48.5	74.0	1.2	63.5	376	15
Lab #1326	10-09-02	3.5	39.0	8.9	48.6	73.9	1.2	63.7	377	15
Lab #1607	11-08-02	4.5	39.8	8.5	47.2	73.0	1.1	62.3	364	14
Stockpile #5										
Lab #1608	11-08-02	2.5	43.7	11.1	42.7	82.3	1.1	60.3	397	13
MARTIN MARIETTA MATERIALS-WATTERSON, MT AYR, IA										
MARTIN MARIETTA AGGREGATES-GOODEN, RAVENWOOD, MO										
Stockpile #1										
Lab #0913	08-05-02	0.9	41.1	10.2	47.8	79.4	1.9	64.2	408	24
Lab #1087	09-05-02	0.9	41.8	11.1	46.2	81.7	2.0	63.3	414	25
Lab #1329	10-07-02	1.3	41.6	9.5	47.6	80.5	1.9	63.7	410	24
Lab #1551	11-08-02	1.3	47.2	10.8	40.7	83.7	1.6	59.0	395	19
Lab #1673	12-02-02	0.9	51.4	9.5	38.2	83.9	1.6	56.8	381	18
MARTIN MARIETTA AGG - APPLETON, PERRYVILLE, MO										
Stockpile #1										
Lab #0944	08-14-02	0.4	55.3	14.5	29.8	98.8	3.6	52.3	414	38
Lab #1359	10-09-02	1.5	47.1	12.3	39.1	98.6	3.9	58.3	460	45
MARTIN MARIETTA AGGREGATES-BARNARD, BARNARD, MO										
Stockpile #1										
Lab #0975	08-12-02	6.7	43.9	8.1	41.3	75.4	1.6	57.1	345	18
Lab #1173	09-10-02	4.8	46.4	8.3	40.5	79.0	1.6	57.1	361	18
Lab #1397	10-15-02	5.8	45.0	8.5	40.7	77.2	1.6	57.1	352	18
Lab #1617	11-20-02	4.2	44.1	8.0	43.7	76.2	1.6	59.5	363	19
MARTIN MARIETTA AGGREGATES-BETHANY, BETHANY, MO										
Stockpile #3										
Lab #1640	11-27-02	4.1	50.7	9.2	36.0	85.9	1.2	54.2	372	13
MARTIN MARIETTA AGGREGATES - BREIT, SAVANNAH, MO										
Stockpile #1										
Lab #1623	11-21-02	1.9	42.3	11.2	44.6	83.8	1.2	61.9	415	15
Stockpile #2										
Lab #0970	08-13-02	7.1	46.6	9.7	36.6	84.7	1.4	54.1	366	15
Lab #1171	09-13-02	0.7	47.1	11.2	41.0	85.5	1.0	59.5	407	12
Lab #1400	10-17-02	5.0	47.7	11.1	36.2	85.2	1.1	54.8	373	12
Lab #1622	11-21-02	1.7	45.5	11.8	41.0	85.9	0.8	59.5	409	10
MARTIN MARIETTA AGGREGATES-GALLATIN, GALLATIN, MO										
Stockpile #1										
Lab #0965	08-13-02	7.6	51.7	8.5	32.2	79.5	1.0	50.2	319	10
Lab #1494	11-01-02	5.3	52.7	9.4	32.6	82.0	0.9	51.4	337	9
MARTIN MARIETTA-GREENWOOD, GREENWOOD, MO										

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		+8	-8+40	-40+60	-60				ENM	EMg
MARTIN MARIETTA AGGREGATES-MAITLAND, SAVANNAH, MO										
Stockpile #1										
Lab #1068	08-26-02	0.8	50.5	11.0	37.7	88.5	0.8	56.9	403	9
Lab #1167	09-10-02	0.6	46.9	10.4	42.1	85.8	1.2	60.1	412	14
Lab #1398	10-15-02	0.6	45.7	12.0	41.7	84.9	1.6	60.3	410	19
Lab #1620	11-20-02	0.6	46.5	12.7	40.2	89.7	1.3	59.4	427	15
MARTIN MARIETTA, PATTONSBURG, MO										
Stockpile #1										
Lab #0914	08-06-02	7.8	53.2	8.0	31.0	88.8	0.8	49.1	349	8
Lab #1089	09-06-02	5.8	50.5	9.2	34.5	89.1	0.8	52.6	375	8
Lab #1332	10-08-02	6.5	54.8	8.1	30.6	88.8	0.7	49.2	349	7
Lab #1674	12-05-02	3.4	52.6	9.6	34.4	88.6	0.7	53.3	378	7
Stockpile #2										
Lab #0915	08-06-02	6.2	51.7	9.1	33.0	83.0	0.7	51.4	341	7
Lab #1090	09-06-02	6.8	50.2	9.6	33.4	83.3	0.7	51.7	345	7
Lab #1333	10-08-02	5.8	52.0	9.3	32.9	81.7	0.8	51.5	336	8
Lab #1675	12-05-02	6.2	50.5	9.2	34.1	84.0	0.6	52.2	351	6
MARTIN MARIETTA MATERIALS-PECULIAR, PECULIAR, MO										
Stockpile #1										
Lab #0881	08-06-02	6.1	56.7	7.7	29.5	92.0	0.5	48.3	355	5
Lab #1198	09-16-02	7.0	52.6	8.3	32.1	91.4	0.6	50.2	367	6
Lab #1438	10-28-02	5.1	56.5	7.8	30.6	90.3	0.5	49.4	357	5
Lab #1581	11-19-02	1.6	47.3	10.0	41.1	91.9	0.9	58.9	433	11
MARTIN MARIETTA AGG-PERRYVILLE, PERRYVILLE, MO										
Stockpile #1										
Lab #1063	08-26-02	0.2	8.5	6.2	85.1	95.4	1.8	90.9	694	33
Lab #1374	10-10-02	0.2	10.7	7.7	81.4	94.6	1.8	88.7	671	32
Lab #1591	11-13-02	0.3	10.5	10.6	78.6	94.5	1.7	87.6	662	30
MARTIN MARIETTA AGGREGATE-PRINCETON, MERCER, MO										
MARTIN MARIETTA AGGREGATES- TRENTON, TRENTON, MO										
Stockpile #3										
Lab #0924	08-07-02	3.5	45.3	8.7	42.5	82.9	1.3	59.0	392	15
Lab #1070	08-27-02	4.1	45.4	8.5	42.0	75.4	1.5	58.5	353	18
Lab #1316	10-02-02	7.8	49.0	8.3	34.9	81.2	1.4	52.1	339	15
Lab #1504	10-31-02	7.6	47.1	7.8	37.5	79.2	1.3	54.0	342	14
Lab #1598	11-13-02	6.9	48.2	8.9	36.0	83.1	1.4	53.4	355	15
Stockpile #4										
Lab #1071	08-27-02	7.7	47.5	8.7	36.1	75.7	1.3	53.2	322	14
Lab #1317	10-02-02	8.8	47.7	7.8	35.7	77.3	1.2	52.3	323	13
Lab #1505	10-31-02	7.9	46.2	7.8	38.1	78.3	1.1	54.3	340	12
Lab #1599	11-13-02	10.0	46.1	7.3	36.6	76.8	1.2	52.5	323	13
MARTIN MARIETTA AGGREGATES INC, WEEPING WATER, NE										
Stockpile #1										
Lab #1658	11-26-02	1.8	57.6	9.2	31.4	90.5	0.4	51.3	372	4
MERTENS CONST CO-AUXVASSE, KINGDOM CITY, MO										
Stockpile #1										
Lab #0857	08-05-02	11.5*	51.6	7.2	29.7	92.4	1.5	46.9	0	0
Lab #1122	09-09-02	9.4	47.5	9.4	33.7	87.5	0.8	51.2	359	8
Lab #1270	10-04-02	8.7	46.5	9.2	35.6	94.9	2.3	52.7	400	24
Lab #1483	11-04-02	8.9	45.2	9.3	36.6	94.9	2.3	53.5	406	25
Stockpile #3										
Lab #0858	08-05-02	2.4	45.4	8.8	43.4	85.1	5.0	60.0	409	60
Lab #1123	09-09-02	4.7	37.5	9.9	47.9	84.8	4.0	63.2	429	51
Lab #1271	10-04-02	4.2	44.6	10.8	40.4	87.5	2.0	58.0	406	23
Lab #1484	11-04-02	4.5	44.5	10.5	40.5	87.5	2.5	57.9	405	29
Stockpile #4										
Lab #0859	08-05-02	1.7	43.8	9.4	45.1	95.1	4.7	61.7	469	58
Lab #1124	09-09-02	1.9	42.3	10.2	45.6	94.8	3.9	62.3	472	49
MERTENS CONST CO-Q-REFORM, KINGDOM CITY, MO										
Stockpile #1										
Lab #1043	08-19-02	8.1	55.1	8.4	28.4	90.7	1.5	47.2	343	14
Lab #1276	09-16-02	7.4	52.4	8.2	32.0	90.0	1.7	50.0	360	17
Lab #1230	09-23-02	8.3	53.8	7.7	30.2	90.8	1.6	48.3	351	15
Lab #1487	10-28-02	10.0	54.1	7.7	28.2	90.0	1.2	46.3	334	11
Lab #1714	12-05-02	6.8	52.4	9.5	31.3	91.3	1.1	50.1	366	11

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		+8	-8+40	-40+60	-60				ENM	EMg
MFA INC, COLUMBIA, MO										
MID-MISSOURI LIMESTONE INC-MBQ, KINGDOM CITY, MO										
Stockpile #1										
Lab #0976	08-12-02	6.5	48.7	12.0	32.8	91.6	0.3	52.2	382	3
Lab #1275	09-16-02	3.7	46.5	11.2	38.6	97.4	2.6	56.9	444	30
Lab #1408	10-16-02	4.9	52.3	9.4	33.4	98.0	2.0	52.1	409	21
Lab #1516	11-08-02	4.5	53.8	10.3	31.4	98.1	2.4	51.0	400	24
Lab #1715	12-09-02	6.0	48.9	10.3	34.8	99.3	2.2	53.2	423	23
MID-MISSOURI LIMESTONE, INC.-HOUSTO, KINGDOM CITY, MO										
Stockpile #1										
Lab #0899	08-06-02	9.4	46.4	10.4	33.8	92.6	0.4	51.6	383	4
Lab #1029	08-28-02	10.7*	46.1	10.1	33.1	93.1	0.3	50.7	0	0
Lab #1195	09-18-02	9.4	45.8	10.6	34.2	92.2	0.3	52.0	384	3
Lab #1313	10-08-02	6.5	46.4	11.7	35.4	88.9	0.2	54.0	384	2
Lab #1342	10-11-02	6.3	48.0	11.0	34.7	89.3	0.1	53.3	381	1
Lab #1458	10-31-02	7.0	47.7	11.3	34.0	91.1	0.2	52.7	384	2
Lab #1634	11-26-02	7.8	47.4	10.5	34.3	89.7	0.9	52.5	376	9
MID-MISSOURI LIMESTONE-RIGGS, KINGDOM CITY, MO										
Stockpile #2										
Lab #0860	08-05-02	7.7	42.8	8.1	41.4	95.8	2.4	57.0	437	27
Lab #1125	09-09-02	7.3	45.0	9.6	38.1	96.8	2.4	55.1	427	26
Lab #1485	11-04-02	5.4	45.8	10.4	38.4	94.3	1.9	56.1	423	21
MIDWEST MINERALS INC, JASPER, MO										
Stockpile #1										
Lab #1092	09-03-02	1.2	31.7	15.5	51.6	98.8	0.2	68.8	544	3
Lab #1352	10-08-02	3.4	35.4	15.2	46.0	97.8	0.1	64.0	501	1
Lab #1645	11-26-02	2.7	33.8	16.0	47.5	98.1	0.1	65.6	514	1
MISSISSIPPI LIME COMPANY, STE GENEVIEVE, MO										
Stockpile #1										
Lab #1061	08-26-02	0.0	0.2	0.3	99.5	99.1	0.3	99.7	791	6
Lab #1370	10-10-02	0.0	0.3	0.5	99.2	98.9	0.3	99.6	788	6
Lab #1587	11-13-02	0.1	0.2	0.4	99.3	98.7	0.3	99.6	786	6
Stockpile #3										
Lab #1062	08-26-02	0.0	40.6	25.2	34.2	99.1	0.2	59.5	471	2
Lab #1371	10-10-02	0.0	45.4	27.5	27.1	98.9	0.2	55.0	435	2
Lab #1588	11-13-02	0.0	44.9	28.1	27.0	98.7	0.2	55.1	435	2
MISSOURI LIME AND MATERIAL CO., INC, EUREKA, MO										
MISSOURI VALLEY MATERIALS, WASHINGTON, MO										
Stockpile #1										
Lab #0869	08-05-02	3.9	39.4	11.3	45.4	67.9	8.2	62.0	337	102
Lab #1161	09-10-02	4.5	42.4	10.6	42.5	66.1	8.0	59.5	314	95
MK MINERALS INC., MANHATTAN, KS										
Stockpile #1										
Lab #0971	08-15-02	0.0	0.8	2.5	96.7	86.7	0.7	98.4	683	14
Lab #1221	09-23-02	0.1	0.1	2.0	97.8	82.6	1.2	99.0	654	24
Lab #1435	10-23-02	0.1	0.1	1.6	98.2	84.2	0.6	99.2	668	12
Lab #1708	12-10-02	0.1	0.9	2.5	96.5	82.6	0.9	98.2	649	18
Stockpile #2										
Lab #0974	08-16-02	0.0	0.7	2.5	96.8	85.3	0.4	98.5	672	8
MORRIS ROCK, DEERFIELD, MO										
Stockpile #1										
Lab #0957	08-14-02	4.5	56.5	9.9	29.1	94.4	0.6	49.2	371	6
Lab #1283	10-01-02	3.6	52.6	9.9	33.9	92.3	0.7	53.0	391	7
Lab #1565	11-11-02	3.9	55.9	9.3	30.9	93.5	0.8	59.7	377	8
MOUNTAIN GROVE QUARRY, MOUNTAIN GROVE, MO										
Stockpile #1										
Lab #1153	09-11-02	0.1	40.0	8.4	51.5	89.3	10.6	66.5	475	141
Lab #1292	10-03-02	0.4	43.7	8.2	47.7	89.1	10.4	63.5	453	132
Lab #1730	12-09-02	0.1	42.8	7.9	49.2	90.0	10.6	64.6	465	137
Stockpile #2										
Lab #1154	09-11-02	0.6	46.6	4.9	47.9	87.7	10.5	62.5	438	131
MUENKS BROS. QUARRY, LOOSE CREEK, MO										
Stockpile #2										
Lab #0875	08-07-02	2.7	48.2	7.7	41.4	92.2	11.1	58.1	428	129
Lab #1164	09-12-02	0.8	44.3	10.1	44.8	85.6	10.4	61.9	424	129

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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
MUEKNS BROS. QUARRY, LOOSE CREEK, MO										
Stockpile #2										
Lab #1364	10-07-02	4.5	49.8	7.6	38.1	87.1	10.1	55.1	384	111
Lab #1511	11-06-02	0.3	32.9	11.5	55.3	96.6	10.7	70.4	544	151
NELSON BROS. QUARRIES, JASPER, MO										
Stockpile #1										
Lab #1093	09-03-02	3.6	47.5	13.9	35.0	97.6	0.5	55.2	431	6
Lab #1353	10-08-02	4.4	49.2	13.9	32.5	96.3	0.5	53.1	409	5
Lab #1646	11-26-02	3.9	50.4	12.4	33.3	97.3	0.3	53.3	415	3
NEMO SAND & GRAVEL QUARRY - BUFFALO, HERMITAGE, MO										
NEMO SAND & GRAVEL, QUARRY, HERMITAGE, MO										
Stockpile #1										
Lab #1032	08-26-02	2.6	41.9	8.8	46.7	88.1	10.2	62.5	440	127
Lab #1202	09-18-02	5.3	47.8	7.3	39.6	81.6	9.9	55.9	365	111
Lab #1300	10-07-02	3.3	44.6	6.5	45.6	86.5	10.2	60.7	420	124
Lab #1568	11-12-02	3.6	42.5	7.7	46.2	83.4	9.8	74.9	410	120
NORRIS AGGREGATE PRODUCTS CO - EAST, MOBERLY, MO										
Stockpile #3										
Lab #1705	12-09-02	6.6	49.0	11.5	32.9	94.5	1.0	52.1	393	10
Lab #1697	12-11-02	5.6	45.5	12.2	36.7	93.9	1.0	55.4	416	11
Stockpile #4										
Lab #1706	12-09-02	4.1	49.2	11.0	35.7	81.9	0.9	54.6	358	10
Lab #1699	12-11-02	4.5	49.2	10.6	35.7	86.7	1.2	54.4	377	13
NORRIS AGGREGATE PRODUCTS CO - WEST, MOBERLY, MO										
Stockpile #1										
Lab #1707	12-09-02	4.1	50.7	12.3	32.9	86.7	0.2	53.0	367	2
Lab #1698	12-11-02	3.9	51.8	12.3	32.0	86.5	0.2	52.3	362	2
NUTRI-JECT SYSTEMS INC., HUDSON, IA										
Stockpile #1										
Lab #1117	09-04-02	0.1	0.1	0.1	99.7	20.4	0.6	99.8	163	12
Lab #1179	09-11-02	0.0	0.2	0.2	99.6	28.1	0.9	99.8	224	18
LEO O'LAUGHLIN INC, SHELBYNA, MO										
Stockpile #1										
Lab #0986	08-15-02	7.5	50.3	8.6	33.6	86.5	1.4	51.3	355	14
Lab #1180	09-12-02	6.1	46.1	10.1	37.7	87.1	1.4	55.3	385	15
Lab #1346	10-07-02	11.6*	49.3	7.7	31.4	92.0	1.3	48.3	0	0
Lab #1540	11-07-02	7.2	48.4	10.0	34.4	87.8	1.3	52.5	369	14
Lab #1683	12-05-02	7.3	47.1	9.1	36.5	90.5	1.8	53.7	389	19
Lab #1723	12-10-02	6.4	44.8	10.7	38.1	86.9	1.2	55.7	387	13
Stockpile #2										
Lab #1684	12-05-02	9.0	48.3	8.1	34.6	89.8	1.6	51.5	370	16
PHENIX ROCK, ASH GROVE, MO										
Stockpile #1										
Lab #1379	10-14-02	10.1*	42.4	11.3	36.2	93.9	0.2	53.6	0	0
PRESTAGE QUARRIES INC, TIPTON, MO										
Stockpile #1										
Lab #0936	08-12-02	0.0	36.9	8.8	54.3	72.4	5.8	68.8	399	80
Lab #1135	09-09-02	0.1	39.0	10.1	50.8	77.1	6.7	66.6	411	89
Lab #1260	10-01-02	0.1	40.8	8.4	50.7	67.9	5.5	65.9	358	73
Lab #1418	10-23-02	0.2	44.2	9.1	46.5	75.5	6.2	63.0	381	78
Lab #1736	12-11-02	0.1	18.3	11.0	70.6	63.7*	4.1	81.8	0	0
ROCK QUARRIES, LLC, MOUNTAIN GROVE, MO										
RUBLE ROCK & LIME INC, PIEDMONT, MO										
Stockpile #1										
Lab #0940	08-12-02	7.5	9.8	23.9	58.8	101.8	12.2	75.6	616	184
Lab #1105	09-04-02	4.5	8.8	20.2	66.5	96.3	11.5	80.8	623	186
Lab #1432	10-21-02	5.4	10.1	24.7	59.8	99.6	11.9	77.1	615	184
S & A CONSTRUCTION LTD, ALLENDALE, MO										
Stockpile #1										
Lab #1351	10-02-01	0.2	40.5	8.1	51.2	59.7*	1.4	66.2	0	0
Lab #1677	11-28-01	0.7	40.9	8.2	50.2	65.5	1.6	65.3	342	21
Stockpile #2										
Lab #1331	10-07-02	0.1	53.7	11.0	35.2	78.1	0.7	55.2	345	8
Lab #1550	11-08-02	1.3	55.2	10.5	33.0	84.1	0.8	53.1	357	8

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		+8	-8+40	-40+60	-60				ENM	EMg
S & A CONSTRUCTION LTD, ALLENDALE, MO										
Stockpile #3										
Lab #0911	08-05-02	2.4	43.5	8.5	45.6	67.0	1.3	61.6	330	16
Lab #1085	09-04-02	1.0	42.5	8.6	47.9	68.1	1.5	63.7	347	19
Lab #1328	10-07-02	0.0	39.7	13.7	46.6	78.7	1.1	64.7	408	14
Lab #1549	11-08-02	0.5	43.6	8.4	47.5	67.2	1.5	63.4	341	19
Lab #1672	12-02-02	4.1	50.6	9.4	35.9	77.9	1.1	54.2	338	12
SCHILDBERG CONST. CO.-BEDFORD Q., GREENFIELD, IA										
Stockpile #1										
Lab #0912	08-09-02	0.5	43.3	9.2	47.0	82.9	0.9	63.3	420	11
Lab #1086	09-04-02	0.0	38.8	11.4	49.8	83.0	0.7	66.3	440	9
Lab #1395	10-10-02	1.5	44.3	11.1	43.1	84.7	0.8	60.8	412	10
Lab #1584	11-14-02	0.0	38.5	10.8	50.7	82.6	0.7	66.8	441	9
SCHILDBERG CONST. CO.-GRAHAM MO Q, GREENFIELD, IA										
Stockpile #1										
Lab #0918	08-09-02	0.7	49.1	12.0	38.2	89.3	0.6	57.7	412	7
Lab #1166	09-10-02	5.9	50.5	9.2	34.4	86.7	0.6	52.5	364	6
SCHILDBERG CONST. CO.-SHAMBAUGH Q, GREENFIELD, IA										
Stockpile #1										
Lab #0917	08-07-02	1.8	45.6	8.9	43.7	74.3	5.4	60.4	359	65
Lab #1088	09-05-02	9.8	51.1	7.6	31.5	85.0	0.9	48.8	332	9
Lab #1396	10-11-02	3.2	48.1	9.8	38.9	84.5	1.3	56.8	384	15
Lab #1585	11-14-02	2.0	48.0	10.2	39.8	84.3	0.8	57.9	391	9
SCHILDBERG CONST. CO.-THURMAN, GREENFIELD, IA										
Stockpile #1										
Lab #1018	08-19-02	1.4	42.6	10.9	45.1	78.9	0.7	62.3	393	9
Lab #1651	11-26-02	0.4	43.2	12.4	44.0	81.7	0.7	62.2	407	9
SOUTHWEST QUARRY & MATERIAL INC, ROLLA, MO										
Stockpile #3										
Lab #0979	08-15-02	3.7	38.2	8.0	50.1	87.4	10.4	64.5	451	134
SPRINGFIELD UNDERGROUND, INC., SPRINGFIELD, MO										
Stockpile #1										
Lab #1003	08-22-02	0.8	15.7	13.5	70.0	97.9	0.2	82.0	642	3
Lab #1289	09-30-02	1.0	10.6	14.4	74.0	98.4	0.2	85.3	671	3
Lab #1524	11-05-02	0.2	12.8	13.6	73.4	98.1	0.2	84.8	665	3
Stockpile #2										
Lab #1290	09-30-02	0.6	17.0	13.2	69.2	98.1	0.2	81.4	639	3
Lab #1525	11-05-02	0.5	12.4	9.4	77.7	97.9	0.1	86.4	677	2
S-S-S INC, LOUISIANA, MO										
Stockpile #1										
Lab #1012	08-22-02	4.4	46.5	10.9	38.2	97.6	0.1	56.4	440	1
Lab #1188	09-16-02	6.0	45.2	10.6	38.2	97.6	0.2	55.9	436	2
Lab #1267	10-03-02	14.4*	51.5	5.6	28.5	95.3	0.2	44.7	0	0
Lab #1537	11-06-02	5.0	47.0	9.8	38.2	97.0	0.2	55.8	433	2
STANPHILL STONE, PIERCE CITY, MO										
T & M STONE LLC, FAIR PLAY, MO										
Stockpile #1										
Lab #1038	08-27-02	0.1	43.2	15.6	41.1	97.8	0.1	61.3	479	1
Lab #1286	10-03-02	0.1	45.8	15.4	38.7	97.3	0.1	59.4	462	1
Lab #1578	11-18-02	0.0	44.6	14.9	40.5	97.2	0.1	60.6	471	1
Stockpile #2										
Lab #1306	10-08-02	0.0	34.7	18.9	46.4	97.9	0.1	66.4	520	1
Lab #1415	10-24-02	0.0	31.6	18.6	49.8	98.0	0.1	68.9	540	1
Lab #1579	11-18-02	0.2	34.8	19.0	46.0	97.8	0.1	66.1	517	1
TABLE ROCK ASPHALT CONST CO INC, BRANSON, MO										
Stockpile #1										
Lab #1098	09-05-02	11.4*	43.0	6.7	38.9	85.8	10.1	53.7	0	0
TABLE ROCK ASPHALT CONST CO INC-KIM, BRANSON, MO										
TAYLOR QUARRIES, LOCKWOOD, MO										
Stockpile #1										
Lab #1351	10-07-02	3.8	48.1	12.6	35.5	92.9	1.3	55.1	409	14
TOWER ROCK STONE CO, SCOTT CITY, MO										
Stockpile #2										
Lab #0943	08-14-02	3.8	43.2	13.1	39.9	97.6	1.1	58.6	457	13
Lab #1150	09-13-02	4.4	42.8	14.0	38.8	97.6	0.9	57.9	452	10

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		+8	-8+40	-40+60	-60				ENM	EMg
TOWER ROCK STONE CO, SCOTT CITY, MO										
Stockpile #2										
Lab #1529	11-04-02	1.5	40.0	14.3	44.2	97.2	1.0	62.8	488	13
TOWER ROCK STONE CO, STE GENEVIEVE, MO										
Stockpile #1										
Lab #1059	08-26-02	3.5	42.5	14.5	39.5	97.6	0.9	58.8	459	11
Lab #1373	10-10-02	4.0	41.7	12.5	41.8	97.4	1.9	59.7	465	23
Lab #1589	11-13-02	0.9	40.3	14.2	44.6	96.7	1.7	63.2	489	21
Stockpile #2										
Lab #1060	08-26-02	0.8	52.5	9.2	37.5	99.6	8.9	56.1	447	100
Lab #1372	10-10-02	0.6	41.3	11.3	46.8	97.6	7.1	63.9	499	91
Lab #1590	11-13-02	0.5	46.7	11.1	41.7	100.9	10.5	60.0	485	126
TRAGER LIMESTONE, CHILLICOTHE, MO										
Stockpile #1										
Lab #0967	08-13-02	0.1	49.9	9.3	40.7	70.8	1.3	58.8	333	15
Lab #1496	11-01-02	0.2	47.9	8.3	43.6	69.0	1.1	60.6	334	13
Lab #1696	12-05-02	0.2	50.0	9.8	40.0	67.5	1.2	58.4	315	14
TWIN LAKES QUARRIES INC, MOUNTAIN HOME, AR										
UEHLIN QUARRY, AMAZONIA, MO										
UNITED SUPPLIERS, ELDORA, IA										
VULCAN MATERIALS, JONESBORO, IL										
Stockpile #1										
Lab #1530	11-04-02	4.1	43.6	12.1	40.2	99.2	0.3	58.4	463	4
WADE AG PRODUCTS-MAIN OFC, LACYGNE, KS										
Stockpile #1										
Lab #0996	08-19-02	6.7	45.5	9.8	38.0	88.5	1.0	55.3	391	11
Lab #1386	10-17-02	4.9	47.0	9.8	38.3	85.7	0.9	55.9	383	10
Stockpile #2										
Lab #0997	08-19-02	3.1	44.6	9.9	42.4	81.8	1.2	59.5	389	14
Lab #1250	09-26-02	3.2	46.1	9.2	41.5	80.3	1.2	58.5	376	14
Lab #1387	10-17-02	3.0	44.6	10.0	42.4	81.2	1.3	59.6	387	15
WADE AG PRODUCTS Q DREXEL, LACYGNE, KS										
Stockpile #1										
Lab #0995	08-19-02	3.4	49.1	8.6	38.9	75.1	1.4	56.3	338	16
Lab #1249	09-26-02	3.3	46.9	9.9	39.9	75.9	1.4	57.6	350	16
Lab #1385	10-17-02	2.9	49.8	8.3	39.0	74.1	1.3	56.4	335	15
WADE AG PRODUCTS Q PLEASANTON, LACYGNE, KS										
Stockpile #1										
Lab #0877	08-05-02	6.0	51.4	7.8	34.8	86.6	0.9	52.3	363	9
Lab #1443	10-29-02	4.5	49.6	8.3	37.6	83.3	0.8	55.0	366	9
FRED WEBER INC.-AUBURN QUARRY, ELSBERRY, MO										
FRED WEBER, INC - FOLEY QUARRY, FOLEY, MO										
Stockpile #2										
Lab #0927	08-07-02	7.2	50.7	7.9	34.2	91.7	2.8	51.6	379	29
Lab #1119	09-06-02	9.7	51.3	7.4	31.6	91.1	2.8	48.9	356	27
Lab #1344	10-09-02	7.0	51.4	7.8	33.8	90.0	2.7	51.3	370	28
Lab #1559	11-12-02	7.9	51.1	7.8	33.2	90.3	2.7	62.8	366	27
FRED WEBER INC-NORTH QUARRY, MARYLAND HEIGHTS, MO										
Stockpile #1										
Lab #1046	08-20-02	0.5	1.2	1.8	96.5	82.4	1.5	97.9	645	29
Lab #1552	10-02-02	2.0	3.6	2.5	91.9	90.8	1.4	19.6	685	26
Lab #1508	11-04-02	0.9	2.0	2.6	94.5	94.3	0.6	96.6	728	12
Lab #1716	12-10-02	0.3	1.6	4.1	94.0	92.2	1.2	96.9	714	23
FRED WEBER, INC. - TROY QUARRY, TROY, MO										
WIELAND HAULING INC - PRINCETON, BETHANY, MO										
WILKERSON BROS QUARRY, PARIS, MO										
Stockpile #1										
Lab #0985	08-09-02	0.8	50.1	11.7	37.4	81.2	0.3	56.9	370	3
Lab #1178	09-10-02	0.1	50.1	12.1	37.7	83.7	0.1	57.5	385	1
Lab #1393	10-10-02	0.4	48.8	12.9	37.9	79.5	0.3	57.8	368	3
Lab #1563	11-13-02	9.1	46.4	9.7	34.8	87.0	0.2	52.4	363	2
Lab #1681	12-02-02	9.1	48.0	10.7	32.2	83.9	0.1	50.6	340	1
Stockpile #2										
Lab #1564	11-13-02	10.1*	49.0	10.2	30.7	79.2	0.1	55.1	0	0
WILLIAMSVILLE STONE CO, POPLAR BLUFF, MO										

* Does not meet minimum specification for Agricultural Liming Material.

TABLE 2

AGRICULTURAL LIMING MATERIALS SAMPLED FROM

JULY 1 THROUGH DECEMBER 31, 2002

Dealer and Producer	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
AG COOP SERVICES INC, OTTERVILLE, MO LAFARGE QUARRY, SEDALIA, MO	Lab #1259 10-01-02	2.9	43.2	11.0	42.9	98.2	1.0	60.3	474	12
AG DISTRIBUTORS, CATRON, MO VULCAN MATERIALS, JONESBORO, IL	Lab #0947 08-16-02	3.4	34.6	12.2	49.8	98.8	0.4	65.8	520	5
AGRI SERVICES OF LEBANON, LEBANON, MO CONCO QUARRIES INC Q US 160, WILLARD, MO	Lab #1463 10-30-02	0.1	10.5	16.0	73.4	97.9	0.2	85.6	671	3
BACKES & TOLKE, NEW HAVEN, MO BARRETT MATERIALS INC, NEW HAVEN, MO	Lab #0868 08-05-02	2.2	35.6	10.6	51.6	87.8	4.4	66.9	470	59
BARTLETT & CO, HIGGINSVILLE, MO LAFARGE QUARRY, SEDALIA, MO	Lab #1557 11-14-02	5.2	46.7	9.5	38.6	95.0	1.5	52.8	425	17
BEAUFORT FEED STORE, BEAUFORT, MO BUSSEN QUARRIES INC-EUREKA/ANTIRE, EUREKA, MO	Lab #1159 09-09-02	0.6	39.3	13.8	46.3	85.6	3.2	64.4	441	41
BOLIVAR FARMERS EXCHANGE, BOLIVAR, MO CONCO QUARRIES INC Q US 160, WILLARD, MO	Lab #1037 08-27-02	0.1	10.9	14.9	74.1	98.2	0.2	85.8	674	3
BOOTHEEL LIMESTONE, KENNETT, MO RUBLE ROCK & LIME INC, PIEDMONT, MO	Lab #1055 08-19-02	5.3	9.1	23.2	62.4	102.0	12.3	78.6	641	193
BOOTHEEL LIMESTONE - SENATH, KENNETT, MO RUBLE ROCK & LIME INC, PIEDMONT, MO	Lab #1056 08-19-02	5.5	9.6	19.7	65.2	100.5	12.3	79.4	639	195
CENTRAL MISSOURI AGRISERVICES LLC, BLACKBURN, MO MID-MISSOURI LIMESTONE, INC.-HOUSTO, KINGDOM CITY, MO	Lab #0994 08-19-02	11.1*	45.4	9.1	34.4	89.8	1.8	51.2	0	0
CENTRAL MISSOURI AGRISERVICE LLC, SLATER, MO BLUFF CITY MINERALS CO., ALTON, IL	Lab #1076 09-03-02	0.5	4.6	6.9	88.0	90.1	2.1	93.3	672	39
DELTA GROWERS ASSN-EAST PRAIRIE, CHARLESTON, MO VULCAN MATERIALS, JONESBORO, IL	Lab #1108 09-06-02	3.7	33.2	11.9	51.2	98.4	0.8	66.6	525	11
EAKIN LIME SERVICE, BELL CITY, MO RUBLE ROCK & LIME INC, PIEDMONT, MO	Lab #1357 10-08-02	6.4	11.5	21.0	61.1	97.7	12.0	76.6	599	184
FARMERS COOPERATIVE ASSN #301, SULLIVAN, MO BUSSEN QUARRIES INC-EUREKA/ANTIRE, EUREKA, MO	Lab #1452 10-22-02	2.6	38.2	12.1	47.1	90.6	3.1	63.9	463	40
FARMERS PRODUCERS EXCHANGE-CONWAY, LEBANON, MO CONCO QUARRIES INC Q US 160, WILLARD, MO	Lab #0886 08-07-02	0.0	11.5	15.0	73.5	97.4	0.4	85.4	665	7
FOWLER ELEVATOR, UNIONVILLE, MO KELLY LIME & ROCK CO., INC., KIRKSVILLE, MO	Lab #1603 11-20-02	3.2	14.2	5.4	77.2	90.1	1.1	84.0	605	18
GIBSON LIME CO-DEXTER, DEXTER, MO RUBLE ROCK & LIME INC, PIEDMONT, MO	Lab #1104 09-03-02	5.0	8.5	19.4	67.1	100.3	11.9	80.9	649	192
GRAY'S FARM SERVICE, NAYLOR, MO RUBLE ROCK & LIME INC, PIEDMONT, MO	Lab #1356 10-07-02	7.3	11.1	19.3	62.3	100.5	12.1	76.7	616	186
HAWK FERTILIZER, BOLIVAR, MO CONCO QUARRIES INC Q US 160, WILLARD, MO	Lab #1036 08-27-02	0.2	10.9	14.9	74.0	98.6	0.2	85.7	676	3
HEIMSOOTH AG SERVICE, CORDER, MO LAFARGE QUARRY, SEDALIA, MO	Lab #1392 10-18-02	3.3	50.0	8.8	37.9	87.1	3.4	55.7	388	38
LOUIS HERZTING JR, FREEBURG, MO LEAD BELT MATERIALS CO INC, FLAT RIVER, MO	Lab #0983 08-16-02	0.2	4.2	13.5	82.1	92.6	10.3	91.3	676	188

* Does not meet minimum specification for Agricultural Liming Material.

TABLE 2

AGRICULTURAL LIMING MATERIALS SAMPLED FROM
JULY 1 THROUGH DECEMBER 31, 2002

Dealer and Producer	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
KEENEY FERTILIZER, OWENSVILLE, MO										
MISSOURI LIME AND MATERIAL CO., INC, EUREKA, MO										
Lab #0872	08-06-02	0.3	33.5	16.4	49.8	90.5	1.6	68.0	492	22
KELLY LIME & ROCK, LA PLATA, MO										
KELLY LIME & ROCK CO., INC., KIRKSVILLE, MO										
Lab #1069	08-26-02	3.7	41.0	9.4	45.9	89.8	2.0	61.8	444	25
KEN MO AG CENTER, KENNETT, MO										
RUBLE ROCK & LIME INC, PIEDMONT, MO										
Lab #1146	09-12-02	4.4	6.5	24.0	65.1	101.1	12.0	81.1	656	195
KINDER PLANT FOOD, LICKING, MO										
LEAD BELT MATERIALS CO INC, FLAT RIVER, MO										
Lab #0907	08-07-02	0.3	5.2	9.4	85.1	90.6	10.5	92.0	667	193
AGRI ENTERPRISES, LICKING, MO										
SPRINGFIELD UNDERGROUND, INC., SPRINGFIELD, MO										
Lab #0908	08-07-02	0.7	19.6	13.8	65.9	98.0	0.2	79.1	620	3
JERRY LINHART, FAYETTE, MO										
JERRY LINHART, FAYETTE, MO										
Lab #0934	08-14-02	5.1	47.8	10.7	36.4	93.0	2.7	54.8	407	30
LINNEMAN LIME & FERT, SALISBURY, MO										
NORRIS AGGREGATE PRODUCTS CO - WEST, MOBERLY, MO										
Lab #1006	08-21-02	0.6	30.1	17.2	52.1	95.2	1.0	69.9	533	14
MAITLAND GRAIN & FEED, MAITLAND, MO										
MK MINERALS INC., MANHATTAN, KS										
Lab #1461	11-01-02	0.0	0.3	1.5	98.2	80.4	0.9	99.2	638	18
MFA AGRI SERVICE, KIRKSVILLE, MO										
KELLY LIME & ROCK CO., INC., KIRKSVILLE, MO										
Lab #1446	10-18-02	2.3	16.5	3.7	77.5	92.1	1.4	83.8	618	23
MFA EXCHANGE, CHAMMOIS, MO										
MID-MISSOURI LIMESTONE INC-MBQ, KINGDOM CITY, MO										
Lab #1042	08-19-02	4.6	50.0	12.9	32.5	90.8	0.2	52.7	383	2
MFA EXCHANGE, META, MO										
MUENKS BROS. QUARRY, LOOSE CREEK, MO										
Lab #1067	08-30-02	0.7	45.4	9.3	44.6	92.1	11.2	61.5	453	138
MFA AGRI SERVICES, ADVANCE, MO										
RUBLE ROCK & LIME INC, PIEDMONT, MO										
Lab #1106	09-04-02	5.0	8.5	21.2	65.3	101.2	12.0	80.1	649	192
MFA AGRI SERVICE, ALBANY, MO										
MK MINERALS INC., MANHATTAN, KS										
Lab #1330	10-07-02	0.0	0.4	1.0	98.6	80.8	1.1	99.3	642	22
MFA AGRI SERVICE, BROOKFIELD, MO										
KELLY LIME & ROCK CO., INC., KIRKSVILLE, MO										
Lab #0968	08-15-02	2.6	15.8	4.1	77.5	92.4	1.4	83.9	620	23
AGRISERVICE OF BRUNSWICK, L.L.C., BRUNSWICK, MO										
KELLY LIME & ROCK CO., INC., KIRKSVILLE, MO										
Lab #0993	08-15-02	0.0	0.1	0.8	99.1	79.6	1.0	99.6	634	20
MFA AGRI SERVICE, CENTERVIEW, MO										
AMPEL, INC.-WEEPING WATER NE PLANT, DES MOINES, IA										
Lab #1081	09-04-02	0.3	4.0	5.8	89.9	90.1	2.3	94.4	680	43
MFA AGRI SERVICE, ELSBERRY, MO										
KELLY LIME & ROCK CO., INC., KIRKSVILLE, MO										
Lab #1083	08-30-02	2.4	14.2	4.5	78.9	89.2	1.3	85.2	608	22
MFA AGRI SERVICE, HIGGINSVILLE, MO										
BLUFF CITY MINERALS CO., ALTON, IL										
Lab #1258	09-30-02	0.6	4.4	5.5	89.5	89.7	1.2	93.9	674	23
MFA AGRI SERVICE, LANCASTER, MO										
KELLY LIME & ROCK CO., INC., KIRKSVILLE, MO										
Lab #0925	08-08-02	2.1	18.4	3.4	76.1	91.8	1.4	82.7	608	23
FARMERS PRODUCE EXCHANGE, LEBANON, MO										
CONCO QUARRIES INC Q US 160, WILLARD, MO										
Lab #1137	09-09-02	0.1	11.2	14.6	74.1	98.3	0.2	85.7	674	3
MFA AGRI SERVICE, MACON, MO										
KELLY LIME & ROCK CO., INC., KIRKSVILLE, MO										
Lab #1448	10-23-02	2.7	17.0	3.8	76.5	90.0	1.2	83.0	598	20

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TABLE 2

AGRICULTURAL LIMING MATERIALS SAMPLED FROM

JULY 1 THROUGH DECEMBER 31, 2002

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, MILAN, MO KELLY LIME & ROCK CO., INC., KIRKSVILLE, MO	Lab #1014 08-21-02	2.6	13.3	3.9	80.2	93.2	1.4	85.9	640	24
MFA AGRI SERVICE, OWENSVILLE, MO CENTRAL STONE COMPANY - HUNTINGTON, HANNIBAL, MO	Lab #0871 08-06-02	0.6	25.6	11.8	62.0	92.5	1.0	75.5	559	15
MFA AGRI SERVICE, ST CLAIR, MO MISSOURI LIME AND MATERIAL CO., INC, EUREKA, MO	Lab #1158 09-09-02	0.4	36.8	14.0	48.8	88.1	3.4	66.4	468	45
MFA EXCHANGE, SALEM, MO LEAD BELT MATERIALS CO INC, FLAT RIVER, MO	Lab #0980 08-15-02	0.0	28.8	19.6	51.6	95.5	9.8	70.6	539	138
MFA AGRI SERVICE, SALISBURY, MO KELLY LIME & ROCK CO., INC., KIRKSVILLE, MO	Lab #1735 12-10-02	0.2	2.8	5.1	91.9	91.5	1.7	95.7	700	33
MRM AG SERVICE INC, EAST PRAIRIE, MO RUBLE ROCK & LIME INC, PIEDMONT, MO	Lab #0945 08-15-02	6.1	10.9	21.2	61.8	101.5	12.1	77.2	627	187
NODAWAY HOLT FERTILIZER, SKIDMORE, MO MK MINERALS INC., MANHATTAN, KS	Lab #1174 09-13-02	0.0	1.0	2.4	96.6	85.2	0.6	98.3	670	12
LEO O'LAUGHLIN, MACON, MO CENTRAL STONE COMPANY - HUNTINGTON, HANNIBAL, MO	Lab #1321 10-04-02	0.4	25.9	12.5	61.2	92.5	0.3	75.2	556	5
LEO O'LAUGHLIN INC, MARCELINE, MO CENTRAL STONE COMPANY - HUNTINGTON, HANNIBAL, MO	Lab #0963 08-12-02	1.4	29.7	11.5	57.4	91.9	0.6	71.7	527	9
OLD MILL GRAIN & SEED CO, HARRISONVILLE, MO MK MINERALS INC., MANHATTAN, KS	Lab #1200 09-16-02	0.0	0.6	1.6	97.8	77.6	0.6	98.9	614	12
RAY CARROLL CO-CARROLLTON, RICHMOND, MO MK MINERALS INC., MANHATTAN, KS	Lab #0992 08-15-02	0.1	0.2	1.0	98.7	80.4	0.9	99.4	639	18
RICHLAND PLANT FOODS, RICHLAND, MO CONCO QUARRIES INC Q US 160, WILLARD, MO	Lab #1050 08-22-02	0.1	10.3	16.3	73.3	96.0	0.3	85.7	658	5
SCHAEPERKOEETTER STORE, MT STERLING, MO MID-MISSOURI LIMESTONE INC-MBQ, KINGDOM CITY, MO	Lab #0874 08-07-02	5.8	49.6	11.3	33.3	92.1	0.3	52.5	387	3
S & S BEGGS LIME SERVICE-JACKSON, JACKSON, MO RUBLE ROCK & LIME INC, PIEDMONT, MO	Lab #1107 09-05-02	2.2	42.4	13.2	42.2	96.8	1.6	60.7	470	19
SEHLKE TRUCK SERVICE, KEYTESVILLE, MO NORRIS AGGREGATE PRODUCTS CO - EAST, MOBERLY, MO	Lab #1583 11-18-02	1.3	31.5	17.3	49.9	92.4	1.8	68.2	504	25
SOUTHEAST COOP SERVICE, PUXICO, MO RUBLE ROCK & LIME INC, PIEDMONT, MO	Lab #1111 09-03-02	4.1	8.5	19.7	67.7	99.6	11.9	81.6	651	194
JOE SPALDING, BENTON, MO RUBLE ROCK & LIME INC, PIEDMONT, MO	Lab #0941 08-14-02	3.7	11.7	24.5	60.1	101.5	12.1	77.7	631	188
STOVER MILLING, STOVER, MO STOVER MILLING, STOVER, MO	Lab #0999 08-22-02	0.2	10.1	11.9	77.8	91.0	1.4	87.5	637	24
SUR-GRO PLANT FOOD, APPLETON CITY, MO MK MINERALS INC., MANHATTAN, KS	Lab #1204 09-20-02	0.0	0.4	0.9	98.7	73.4	1.4	99.3	583	28
WEST CENTRAL AGRISERVICE, LLC, HARRISONVILLE, MO MK MINERALS INC., MANHATTAN, KS	Lab #0883 08-06-02	0.2	8.0	7.6	84.2	90.5	2.0	90.8	657	36
WEST CETRAL AGRISERVICES, RICH HILL, MO MK MINERALS INC., MANHATTAN, KS	Lab #1246 09-25-02	0.0	0.6	1.6	97.8	79.7	0.8	98.9	631	16

* Does not meet minimum specification for Agricultural Liming Material.

TABLE 2

**AGRICULTURAL LIMING MATERIALS SAMPLED FROM
JULY 1 THROUGH DECEMBER 31, 2002**

Dealer and Producer	Date Sampled	U.S. Sieve Fraction, %				%CCE	%Mg	Fineness Factor	Pounds/Ton	
		+8	-8+40	-40+60	-60				ENM	EMg
WEST LIME & FERTILIZER, STEELVILLE, MO										
LEAD BELT MATERIALS CO INC, FLAT RIVER, MO										
Lab #0981	08-16-02	0.1	7.6	14.6	77.7	92.9	10.4	88.4	657	184
WETHINGTON LIME SERVICE, BLOOMFIELD, MO										
RUBLE ROCK & LIME INC, PIEDMONT, MO										
Lab #1112	09-03-02	6.0	10.5	19.9	63.6	100.7	12.1	78.2	630	189
WOODY BOGLER LIME-ROSEBUD, ROSEBUD, MO										
MID-MISSOURI LIMESTONE INC-MBQ, KINGDOM CITY, MO										
Lab #0873	08-07-02	6.3	47.7	11.6	34.4	92.2	0.4	53.3	393	4
ZWEERINK-AGRI SERVICES, CROCKER, MO										
CONCO QUARRIES INC Q US 160, WILLARD, MO										
Lab #1049	08-21-02	0.0	10.1	14.7	75.2	98.2	0.4	86.5	680	7

* Does not meet minimum specification for Agricultural Liming Material.

EXAMPLES OF FINENESS FACTOR CALCULATION, ENM, AND EMgDERIVATION OF FINENESS FACTOREXAMPLE

<u>US Standard Sieve Fractions</u>	<u>Efficiency Index</u>		<u>% Found in sample</u>	<u>Fineness Components</u>
Retained on 8	0	x	<u>4.0</u>	= <u>0</u>
Pass. 8-Ret. on 40	.25	x	<u>34.0</u>	= <u>8.5</u>
Pass. 40-Ret. on 60	.60	x	<u>10.0</u>	= <u>6.0</u>
Passing 60	1.00	x	<u>52.0</u>	= <u>52.0</u>

Sum of fineness components = FINENESS FACTOR = 66.5

EFFECTIVE NEUTRALIZING MATERIALS (pounds per ton)

$$\text{Formula: ENM} = \frac{\% \text{ CCE}}{100} \times \frac{\text{FINENESS FACTOR}}{100} \times 800$$

DRY AG LIME

	<u>FINENESS FACTOR</u>						
<u>% CCE</u>	<u>100</u>	<u>90</u>	<u>80</u>	<u>70</u>	<u>60</u>	<u>50</u>	<u>40</u>
100	800	720	640	560	480	400	320
90	720	648	576	504	432	360	288
80	640	576	512	448	384	320	256
70	560	504	448	392	336	280	224
65*	520	468	416	364	312	260	208

* 65% is minimum % CCE allowed for dry lime

FLUID AG LIME

60	480	432	384
50	400	360	320
40	320	288	256
30	240	216	192
20	160	144	128
10	80	72	64

EFFECTIVE MAGNESIUM (pounds per ton)

$$\text{Formula: EMg} = \frac{\% \text{ Mg}}{100} \times \frac{\text{FINENESS FACTOR}}{100} \times 2000$$

	<u>FINENESS FACTOR</u>						
<u>% Mg</u>	<u>100</u>	<u>90</u>	<u>80</u>	<u>70</u>	<u>60</u>	<u>50</u>	<u>40</u>
13	260	234	208	182	156	130	104
11	220	198	176	154	132	110	88
9	180	162	144	126	108	90	72
7	140	126	112	98	84	70	56
5	100	90	80	80	70	60	40
3	60	54	48	42	36	30	24
1	20	18	16	14	12	10	8

**Combined Fertilizer/Ag lime Budget
FY02 income & Disbursements**

	Ag Lime Fees	Fertilizer Fees	Other	Combined
CARRYFORWARD FY01			300,234	300,234
REVENUE:				
Tonnage Fees	109,475	995,778		1,105,253
Audits	1,195	28,423		29,618
Permit Fees	22,600	94,500		117,100
Deficiency Payments	0	7,543		7,543
Late Payment Fees	1,133	7,881		9,014
Total Revenue Available	134,402	1,134,125		1,268,527
 Total Funds Available	134,402	1,134,125	300,234	<u>1,568,761</u>
DISBURSEMENTS:				
Inspection Services				520,839
Analytical Services				350,340
Experiment Station Chem Lab Support ¹				43,314
Special Equipment Reserve ²				35,000
FY00 Continuing Proposals				49,424
FY01 Continuing Proposals				68,766
FY02 New Proposals				79,985
Total Expenditures				1,129,704
COMMITMENT:				
Contingency				68,000
Non-committed Research Funds				368,757
Annual Research Report				2,300
Total Commitments				439,057
 Total Expenditures/Commitments				<u>1,568,761</u>

Footnotes:

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

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

Fertilizer & Ag Lime Funded Research Topics

<http://aes.missouri.edu/pfcs/research>

FY00 Fertilizer/Ag Lime funded proposals, progress reports

Estimating the need for agricultural liming material
Refining soil test recommendations for corn
Refining soil test recommendations for soybean
Refining soil test recommendations for wheat
P and K fixation by Missouri Soils'
No-till lime management and soil pH effects on herbicide carryover
Soil-specific phosphorus rates

FY01 Fertilizer/Ag Lime funded proposals, progress reports

Increasing the magnesium concentration of tall fescue leaves with phosphorus
and boron fertilization
Improved nitrogen fertilization recommendations for soils incorporating a simple
measurement of soil physical properties
Effect of potassium fertilization on leafhopper tolerance and persistence of alfalfa
Cotton response to midseason potassium applications and bronze wilt
Spectral radiometer to control variable-rate N applications for corn
Evaluating grain sorghum nitrogen fertilization recommendations

FY02 Fertilizer/Ag Lime funded proposals, progress reports

Refining the Soil test procedure for potassium to improve the K recommendations for
Missouri soils
Nitrogen fertilization strategies and annual ryegrass pasture
The influence of nitrogen rate and pasture composition on the toxicity, quality and
yield of stockpiled tall fescue
Conservation tillage systems and liming materials
Evaluating fall N applications for corn

FY03 Fertilizer/Ag Lime funded proposals

Soil pH effects on atrazine carryover damage to no-till soybean
Soft red winter wheat replant decision aid based on spring nitrogen recommendations
and % winterkill
Soil specific phosphorus and potassium recommendations - critical values
Development of grain sorghum ratoon cropping system for SE Missouri
Rescue N applications for corn: yield response, leaf burn and yield loss
Increasing phosphorus and magnesium concentrations in stockpiled tall fescue
Plant mapping potassium in rice tissue. What part to sample, when?
Determining the correct nitrogen rate for cotton following soybeans

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This report also available on the web at:

[HTTP://aes.missouri.edu/pfcs](http://aes.missouri.edu/pfcs)

Agricultural Liming Materials
Control Services
University of Missouri-Columbia
Columbia, MO 65211-8080

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